Interactive Technology & Institutional Change: A Case Study of Gallery One and the Cleveland Museum of Art

THESIS

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By

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Abstract

This research focuses on the implementation of participatory and interactive digital media in the museum setting and the impact on different parts of the museum which react and change differently. This qualitative case study aims to explore the inclusion of educational technology in the Cleveland Museum of Art and how the implementation affects different departments within the museum differently. Rather than using traditional institutional change theory which references the institution as a whole, this research shows that an institution as the sum of various moving parts. This research will serve to fill a hole in the current literature of nonprofit arts and be available as a resource to those in the field. By understanding how the different parts are affected in different ways, a greater understanding of “institutional change” as a changing of parts rather than the whole can be gained.
Dedication

This thesis is dedicated to my supportive partner, wonderful family, and my sassy cat for supporting me through this process.
Acknowledgments

I would like to first thank my advisor Dr. Margaret J. Wyszomirski for always challenging and pushing me forward in my research. Her guidance has been invaluable to this process. Even when theory overwhelmed me or I lost my way, Dr. Wyszomirski was able to guide me back to my path. Without her, this thesis would be much less thorough and reasoned.

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Chapter 1: Introduction

*Museums, Change, & Digital Media*

Museums can be intimidating. Stone steps and tall, impressive pillars often mark the entrance to these significant cultural institutions. Visitors are then met with hushed voices in marble halls filled with priceless objects. This environment can alienate even the most art-savvy visitor. As an undergraduate, I visited many museums where I found connecting with and understanding the work presented challenging even with my background in artistic practice and art history.

The ways we play and learn are evolving so rapidly the tech companies can barely keep up. Museums have more options than ever in terms of tools to reach their audiences both in the museum and outside the museum. This begs the questions, how can museums keep up in an ever evolving world? How can museums reach their audiences while still staying true to their missions?

The evolution of digital media has given rise to a generation of technology literate museum goers who are ready for museums to embrace technology. Museums must tread carefully, however. There is a fine line between simple fun and creative learning. The past fifteen years have allowed for dramatic growth in terms of museums embracing technology and understanding how to use it effectively. New media firms which specialize in technology for creative or social
spaces have developed to guide museums towards interactive learning in a way that makes sense for them as institutions. The Cleveland Museum of Art (CMA) seems to have found the perfect middle ground for today’s audience.

Why Cleveland? Why now?

The Cleveland Museum of Art took a chance on an expensive and expansive project called Gallery One. Gallery One is a gallery space in the museum which blends technology and art together in an interactive experience for all visitors regardless of museum experience. Using touch screens and works of art, CMA created a space that can help break down the intimidation visitors feel going into a museum. When I first visited Gallery One, I was engaged during my entire visit. The technology was informative, interactive, and fun. Visitors of all ages were having fun in the gallery.

By focusing on the visitor, Gallery One was created. It is important to study Gallery One because I believe it is unique. It is able to make an old and historic museum like the Cleveland Museum of Art into a new and revolutionary experience. While there is a good amount of literature on the inclusion of technology in the museum, Gallery One was only implemented in 2013 so there is an opportunity to add to the scholarly discourse about this topic. The second part to this research considers what happened once Gallery One was implemented. Traditional theory suggests that the institution changes. I am interested in exploring the concept of institutional change. By using Kingdon’s Three Policy Streams idea and Wyzsomirski’s Triple Bottom Line (as it pertains to
the arts) one can see that the museum is full of moving pieces that while all impacted by something like Gallery One, but react in different ways.

Scope, Limitations, and Bias

This research will use qualitative methods and one case study. Literature from various sources and of varying lengths and importance will be used to provide the groundwork for what a museum is, how digital technology came into the museum, and the theories used as a lens to view change in the museum. This research will be conducted with the use of a questionnaire which aims to explore the impact of the educational technology on different departments within the Cleveland Museum of Art. While this research is important in understanding the evolution and impact of digital technology in the museum, it is not a survey of all best practices or a comprehensive analysis of the field. This research aims to highlight Cleveland’s Gallery One as an example which could be used as a model for other institutions.

While only focusing on one case is limiting, a Master’s thesis only provides so much space for investigation. There is certainly more to be examined with multiple cases or more in depth research in Cleveland, however, that cannot be done here. In terms of bias, I am not affiliated with the Cleveland Museum of Art in any way nor do I have any vested interest in Gallery One. I am, however, passionate about interactive learning in the museum. As an avid museum goer, I was immediately impressed with Cleveland’s Gallery One when I first experienced it before this research began. I have worked to set aside my first
impression of Gallery One and listen to the critiques and criticisms of Gallery One and other technology initiatives in an effort to provide a more balanced viewpoint.

Research Questions

This research aims to answer the following questions:

- How does the implementation of a large scale digital media program affect different parts of the institution?
- How does this bring about institutional change?

In order to tackle these questions this research first explores the ways that museums have evolved over time including the paradigm shift in museums, which shifted museums towards visitor experience over purely academic collecting, as well as the inclusion of digital media in the museum. By combining a literature review and the Cleveland Museum of Art case study, I will demonstrate that different parts of the museum react and change differently to some extent. This research aims to explore the inclusion of educational technology in the Cleveland Museum of Art and how the implementation affects different departments within the museum differently. Rather than using traditional institutional change theory, which references the institution as a whole, I will view the institution as the sum of various moving parts. This research will serve to fill a hole in the current literature of nonprofit arts and be available as a resource to those in the field. By understanding how the different parts are affected in different ways, a greater understanding of “institutional change” as a changing of
parts rather than the whole can be gained.
Chapter 2: Literature Review

The Museum

Roots of the Museum

It cannot be denied that the museum is rooted in power. In The Birth of the Museum, Tony Bennett cites the mid-nineteenth century development in Britain of relations between culture and the government in an effort to reform the public as the beginning of the modern museum. Museums functioned to reform behavior and “to distinguish the bourgeois public from the rough and raucous manners of the general populace” (Bennett, 1995, p. 28). Museums were a place where men could seek out intellectual discussion, bear witness to the wealth and power of their nation, and learn how to be a part of the new enlightened society. The museum provided a way for the elite, in a post-industrial revolution era, to show the working-class public the cultural norms and level of civility now expected in the Age of Enlightenment (Bautista, 2014). At this time, the museum was not focused on the education of the public, but on the self-reformation of the visitor. Conveying art historical or culturally significant information was not yet the focus of the museum. As Eilean Hooper-Greenhill explains, galleries were “spaces of controlled behavior, guarded and surveyed by warders who would eject those who behaved in an unruly fashion” (Hooper-Greenhill, 2004) Evidence of this time in museums can still often be seen in contemporary museums. The
meditative silence and hushed voices act as a social code telling visitors how to behave in the museum.

As Harold Skramstad explains in his chapter, “An Agenda for Museums in the Twenty-first Century,” at the same time that British museums were focused on reforming behavior, early American museums such as the Peale Museum in Philadelphia or B.T. Barnum's American Museum in New York City focused on entertainment and education. Moving toward the turn of the century, large cities with booming commerce centers sought to display their economic and cultural power by creating large and conservative art museums. These large and powerful institutions were founded in a more formalized way and as a result relied more heavily on their wealthy donor base rather than on earned income. The collections of these new museums grew quickly as they were funded by some of the wealthiest Americans. Gradually, the museums began to focus on caring for their new and valuable collections and less on caring for their visitors (Skramstad, 2004). As Skramstad accurately states, “the great art museums of New York, Chicago, Cleveland, and Detroit set the dominant tone of this inward movement of museum culture” (2004). He also notes that the increasing reliance on schools to be the providers of public education aided in the shift inward.

This shift inward was problematic. It created museums who cared little about the experience of those who traveled to see the wonderful works of art in their collection and cared much more about protecting the collection. This created a generation of museum workers and curators who were not aware of
the experience or learning of the average visitor and who thought that the building and the artwork is what created the museum and the visitors were “seen as a distraction from the study of the collection, the ‘real work’ of the museum” (Skramstad, 2004). Skramstad then cites 'blockbuster’ exhibitions as an example showing how museums often felt about the public. These exhibitions were seen as essentially dumbing down the museum to the level of the public to bring in revenue rather than a way of connecting to a wider audience. While this inward focus in the museum would be the predominant way of functioning in art museums for decades, not everyone was of the same opinion.

*Beginning the Paradigm Shift*

As early as 1917, writer, librarian, and founding director of the Newark Museum in Newark, New Jersey, John Cotton Dana (1856-1929) was writing to express his opposition to the inward trends of museums. Dana was quick to emphasize the importance of teaching in the museum and equally quick to criticize the display of only works hard to relate to for the average visitor. Emphasizing the fact that a collection did not make a museum, Dana said that the museum had to use the collection for it to be a museum, not just simply collect objects (Weil, 2002). He acknowledges the role of the museum in preserving history and building notoriety for a city, but expressed a desire for museums to serve the public by diversifying there interests and to act with restraint (Dana, 2004). Dana was an early critic of a system that he claimed only benefited the elite glaze and left the general public without any benefit (Bennett,
Later, in the 1960s, Pierre Bourdieu (1930-2002) with Dominique Schapper, Alain Darbel, Francine Dreyfus, and many others, conducted a survey which found that there were significant differences between different classes of people when it came to their views on and visiting of museums (Barrett, 2012). Barrett explains that Bourdieu linked the inability to gain cultural capital for some with the inaccessibility of museums and then goes on to explain that while Bourdieu is viewed as significant, there are critics who state that he places too much emphasis on class (2012).

Moving towards the 21st century, new theories began to emerge and take shape regarding the role of museums. Museums began the process of welcoming new and diverse voices. Hilde Hein points out that in moving into the 1980s, the American Association of Museums was recommending the move towards populism as the palace of the white, upper-class citizen began to seek out new visitors of varying genders, ethnicities, and classes (among others) (H. S. Hein, 2000). Hein goes on to point out that while the museum began to work towards a more inclusive environment by bringing in more diverse visitors and staff, it was not until the museum began to change the message and way of communicating that new visitors really began to visit the museum (2000). For decades, museums operated using a transmission model. Hooper-Greenhill explains, “the transmission model sees communication as a process of imparting information and sending messages, transmitting ideas across space from a
knowledgeable information source to a passive receiver” (Hooper-Greenhill, 1999). In this model, the curator or museum professional is the knower of all information providing glimpses of carefully selected bits of knowledge to the lower and less knowledgable visitor. The transmission model does not consider what context or knowledge the visitor might bring to the museum, but focuses inward on the museum and collection itself.

The Constructivist Postmodern Museum

Moving out of the modernist museum and into the postmodern museum in the 1990s and early 2000s, a paradigm shift occurred. Constructivism was introduced to the museum community by George Hein in the early 1990s (Bautista, 2014). Constructivism is essentially in opposition to transmission. Constructivism suggests that museum visitors are not passive in learning and absorbing information, but rather active learners and participants who bring their own knowledge and experience to the museum which influences the meaning making that happens there (Bautista, 2014; G. E. Hein, 1998, 1999; Hooper-Greenhill, 2004; Speight, 2010). Teachers are seen as learners in the process of education rather than all-knowing and the process of learning is emphasized over the process of teaching (Hooper-Greenhill, 2004). This model allows visitors to connect to the museum on a personal level. It encouraged the museum to recognize multiple points of view and to create less narrow and linear exhibitions where thoughts outside of the curators’ intent are dismissed. New theories on learning developed to include a more transformative and communicative way of
learning. Hooper-Greenhill writes about the process of interpretation and meaning making stating, "Meaning is constructed through and in culture. Perception (what we see), memory (what we choose to remember), and logical thinking (that sense we choose to attribute to things) differ culturally because they are cultural constructs (2004). John H. Falk and Lynn D. Dierking introduced the Contextual Model of Learning which lists eight factors that influence meaning-making in the museum. They divide these eight factors into three categories: personal context, sociocultural context, and physical context (Falk & Dierking, 2004). The introduction of constructivism into the museum is seen as the beginning of the paradigm shift which, while lacking formal definition, essentially means museums shifting from inward collecting to an institution focused on the educational value of museums and the ways in which visitors learn (Speight, 2010).

While the term paradigm shift is used widely in reference to this educational and visitor-centric shift in museums, there are critics of the term. George Hein, arguably one of the sparks for this educational shift, writes, “I believe that drawing such a stark contrast between the past and the present missions of museums is simplistic, and also misses the opportunity for advocates to benefit from the long tradition of the practice of education in general and progressive education in particular in museums” (G. E. Hein, 2012). Essentially, Hein argues that there have always been those in museums who view the museum’s central function to be education and there have also always been
those who view the museum’s central function to be collecting and preserving the cultural and artistic artifact and the tension between these two viewpoints still exists and will most likely not change in the near future (2012).

*What does this mean for museums in the twenty-first century?*

As the twenty-first century progresses, museums are faced with the decision to move with the times, or be left behind in the competitive field of nonprofits where the public has more choices than ever in terms of where they spend their leisure time. In the early 1990s, Stephen Weil brought up several questions that have still yet to be answered. In context of the evolving realization of the link between interpretation and exhibitions in the museum, Weil questioned if the educational functions of the museum should still be a separate department or more integrated within the museum as well as how aware museum professionals are of the context and assumptions underlying exhibitions and how able are they to express that context to visitors (Weil, 2004). While Weil's questions are still being considered by museums, some clearer statements have evolved as well.

Many museums have come to the realization that for a long period of time they knew very little about why members of the public visited museums and very little about the type of experience they hoped to have or needed to have in order to learn. As Judith Mastai emphasized, “There is no such thing as a visitor. The people who visit museums bear difference of many sorts. Our task is to talk to them in person, through comment cards, and over the world wide web, and to
design multiple possible entry points for their interest” (Mastai, 2007). In the past, the linear narratives not only limit the scope of the exhibition by leaving out points that fall outside the curator’s narrow view, but also reinforce the traditional authority of the museum, often alienating and intimidating visitors (Witcomb, 2003). Jocelyn Dodd highlights a central question to museum education moving forward, “Whose museum is it anyway? How can we begin to define what we do in terms of education unless we know whom we are educating?” (Dodd, 1999). I think this is an important question. Often times museums that want to expand and include more diverse visitors forget that while visitor surveys are an important tool for understanding existing visitors, they do not necessarily communicate why others are not visiting the museum. Dodd goes on to emphasize that building community in and around the museum requires a thorough understanding of the community and the ability to empower them (1999).

Understanding the visitor is the first step in creating the experiences they want and need from a museum. Active participation and interactivity is expected from most Americans and as Skramstad writes, “Museums need to recognize that they are in the experience business and that it is the distinctive theme, context and value of the experience they bring to a particular audience that will increasingly define their success” (2004). While visitors tend to remember little about the information provided, they do remember the experience. (2004). Most visitors do not go to the museum as a student ready to absorb all the information
provided on text panels and in gallery guides, but rather visitors seek out social and creative experiences (Munley, 2004). Munley writes that museum education is evolving towards the museum as a community center with the museum acting as an educator, public forum, community center, provocateur, and catalyst (2004).

As museums take on this role of community education center, effective informal learning becomes more important. The museum must take on internal changes such as acknowledging twenty-first century skills, embracing the change from authority figure to partner, and begin to pose questions rather than provide answers (Black, 2012). There are many tools that can be used to achieve this atmosphere in the museum ranging from special participatory events, to hands on activities, to interactive digital media. The next section will explore how digital media has developed in the museum used to expand and engage audiences in new ways.

*Museums & Technology*

Modern interactives are seen as effective counters to Bennett’s ‘sequential locomotion’ with its didactic objectives.

Andrea Witcomb

*Positioning & Definition of Terms*

When discussing technology use in the museum, it is important to note the scope as technology is such a vague and all-encompassing term. This research is limited to the use of technology for interactive educational purposes. That is to say, I will not explore or consider the developments in the field of archiving,
digitizing of collections, website or social media development, or other such fields. These are important developments unto themselves, but due to time and space constraints, they will not be explored here. I am primarily concerned with fixed digital media displays (digital kiosks, computer stations, touch screens, etc.) and portable devices primarily used within the museum (iPads, smart phone applications, etc.). While there have been numerous developments in online learning and interactivity which extends beyond the walls of the museum, I will focus on developments in learning with digital technology within the museum. As many scholars use different terms for digital technology, unless otherwise noted, the terms digital technology, digital media, interactive media, and new media will be used here interchangeably.

*Why incorporate technology?*

The evolution of digital media has given rise to a generation of technology literate museum goers who are ready for museums to embrace technology. In fact, as Skramstad writes, “More and more Americans expect that their social, economic, and cultural activities, though shaped by a variety of sources, will engage them in a way that is vivid, distinctive, and out of the ordinary. This is even more the case for children who are being brought up in a world of interactive media, which sets up new expectations of active participation” (Skramstad, 2004). The past fifteen years have allowed for dramatic growth in terms of museums embracing digital technology and understanding how to use it effectively to best serve their visitors. This growth is so much so that technology
and interactivity is expected in the museum and missed when it is not present.

This section will explore several of the multitude of reasons why museum incorporate technology. By exploring how new audiences can be reached and the importance of interactivity and participation, one can better understand the ways in which digital technology are being used in an effective way and when the use of digital technology is simply for show and does not deepen the experience.

While digital technology is an important part of museum evolution, that is not to say that interactivity and participation cannot be achieved without use of technology and in her book *The Participatory Museum*, Nina Simon does an excellent job of showing how that is possible (Simon, 2010). It is also important to remember that simply adding digital technology to the museum without the proper support system or goals does not inherently create a more interactive or participatory environment. As Skramstad writes, “The key is that whatever is presented must offer an opportunity to go beyond passive learning to active involvement in the experience itself” (2004).

This section will also address challenges that institutions face when incorporating new media as well as critiques from those who view digital technology as a distraction rather than an asset. Finally, this section will briefly look to the future to attempt to imagine where the incorporation of new digital technology will lead museums in the future.

*Integration of Educational Technology in the Museum*

To understand how much progress has been made in the past 20 years
regarding digital media in the museum, it is important to understand the process of development and integration in a very broad way. In 2000, Slavko Milekic argued in a article titled “Designing Digital Environments for Art Education/Exploration” that computers were not built for humans in that evolution of computers that had happened in the 20 years since computers were created did nothing to enhance user experience (2000). Instead, Milekic coins the term digital environment saying, “…[digital environments] should be able to offer experiences that come close to real-world experiences in terms of richness of stimulation, manipulability, and possibility of creative expression” (2000).

In the same article, Milekic is innovative in his thinking, especially when he begins discussing what he calls “informations appliances” or devices such as PDAs, MIDI music devices, or electronic organizers. He writes, “The most important characteristic of these appliances is their ability to share information. With their specialization for certain tasks, portability, and simplicity of use, the information appliances radically departed from the traditional concept of a personal computer” (Milekic, 2000). Essentially, Milekic is anticipating devices we have today such as smart phones, iPads, and other tablets.

Milekic, full of good critiques, offers an explanation as to why touch screens had not been successful saying, “failure of touchscreens to gain popularity illustrates how changes in one domain of digital environments (like the change in interaction device) have to be accompanied by adequate changes in other domains (software interface design) to be practically usable” (2000). This is
an important piece to understand when considering technological development. Not all development happens at the same pace. Since this article was published nearly 14 years ago, touchscreens have become so common that they are carried in peoples' pockets on a regular basis. However, in 2000 when this article was written, the technology of being able to touch a screen was available but the design and software side had not caught up yet. The evolution of the technology from barely imagined to completely common has had a dramatic impact on the way technology is used in the museum.

As can be seen in the Milekic piece, around this time theoretical shifts were starting to happen. In Stephen Weil's 2002 book *Making Museums Matter*, he introduces the idea of museums shifting “from being about something to being for somebody” (Weil, 2002). This shift puts the emphasis on visitor experience and education where learning in the museum is key. As explained in section one of this paper, at this time museums were changing their focus to focus more outward on visitor engagement and education rather than on inward growth (2002). This shift in ideology is important in considering the ways that museums use digital technologies in the next years.

*Interactives & Visitor Learning*

The shift towards museums becoming more focused on visitor experience and education caused more interactive exhibitions to be developed. In a 2004 study about interactive experiences as learning tools in the museum, they concluded that “...visitors enter the museum with pre-existing knowledge,
experience, interest, motivation and established social/cultural relationships, and that these pre-existing conditions strongly influence their in-museum learning” (Falk, Scott, Dierking, Rennie, & Jones, 2004). Traditional linear exhibitions did not always provide an opportunity for visitors to incorporate their own personal context into their experience in an active way. The transactional experience to receiving information and processing it without discussion or engagement assumes there is one model of “the visitor” when in reality, all visitors are different. Falk et al. also found that different types of experiences resulted in different types of learning and visitors walked away with different results. This is contradictory to what type of visit many curators imagine the visitors having. Rather than all walking away with the same information and experience, visitors ended their visits with varying experiences.

In 2005, Michela Addis wrote, “multimedia applications, connectivity, and interactivity make technology a variable (not a means) whose effects enrich the experience and its value. The application of new technologies to edutainment in fact reinforces the convergence between education and entertainment” (Addis, 2005). The term edutainment is essentially the combination of “it’s fun and educational!” New technologies can make information easier to understand and digest by the audience, however, information should not be watered down, but rather made available in a way that accommodates visitors who learn in different ways. Many museum professionals shy away from talking about visiting a museum as entertainment because the word feels cheap – movies and
amusement parks are entertainment and museums are educational. This way of thinking still prevents some institutions from being truly innovative in an era where, like it or not, museums are competing for visitors who want to be entertained as well as educated. Asking what would seem like an obvious question, Falk and Dierking write, “learning and fun are not opposite ends of a single continuum but independent dimensions; it’s as possible to be educational and boring as it is to be educational and enjoyable—which should we choose?” (Falk & Dierking, 2013).

Not all museums shy away from the entertaining and enjoyable spaces. At the same time that museums were making experiences more engaging and using more technology, artists began to do the same. By creating works that are themselves more interactive the museum becomes more engaging overall. “It remains unclear how the further imaginative fusing of digital and analogue space will continue to reconstruct the social model museums and galleries represent as places of cultural authority towards one of a more participative nature” (Bullivant, 2007). One development can be seen in Nina Simon’s The Participatory Museum, is that museums are taking on more of the role of a third space. A third space is a place separate from home (the first space) or work (the second space), where people can come together on a regular basis and essentially build community (Oldenburg, 1999). While museums undoubtedly have a perspective and a third space is supposed to be relatively neutral, museums or cultural centers can help full this role. Participatory and interactive activities facilitated by
digital media are just part of a third space. Gardens and cafes provide spaces to reflect on all of the interaction and experience that the visitors enjoy with their peers. Personal connections are formed via these interactive experiences and providing a way for visitors to continue that experience is vital for institutions. In *The Participatory Museum*, Simon writes, “the growth of social Web technologies in the mid-2000s transformed participation from something limited and infrequent to something possible anytime, for anyone, anywhere” (Simon, 2010). This development of interconnectedness brings together people from all walks of life and provides them the opportunity to connect with each other during a shared experience. Digital technology facilitates this interaction thus making it an important part of any organization's plan in the coming years.

*Reaching New and Existing Audiences in a More Effective Way*

“In museums, the term 'community' often refers to that audience whose needs we are not meeting: the poor, or in some instances specific ethnic groups. In truth, a community is any group of individuals who have the potential of being members of an institution's visiting public” (C. Brown, 2004). In her chapter, “The Museum's Role in a Multicultural Society,” Claudine Brown makes an important point regarding how museums use the word 'community.' A more holistic view of the term community allows for discussing varying needs within the museum community. Brown emphasizes that communities can be diverse with varying voices and that it is important for the institution to consider the diversity rather than focusing on targeting a specific population within the larger 'community.'
Technological tools within the museum are perfect for providing resources and opportunities for the community as a whole – including those who are most often underserved as well as those who are the traditional museum audience.

Two examples of audiences which are often underserved in art museums are the disabled and young children. Disability is an important consideration when implementing new media. The vast majority of people who are disabled in some way are not in wheelchairs and therefore are often less visible to the museum. In fact, only around 2% of people with disabilities use wheelchairs (McGinnis, 1999). Visitors who are deaf and/or blind require accommodations much in the same way as those in wheelchairs require ramps. Rebecca McGinnis, writing regarding the state of disability accommodations in the UK, states that “Although there are one million people who could be registered blind and partially sighted in the UK, an additional 750,000 people with severe visual impairments, only about 1% of museums offer information in braille and only about 25 provide information in large print” (1999). This gap in services for those with disabilities is the perfect opportunity for new media – especially handheld devices – to provide a more independent and accessible museum space for everyone, regardless of physical disabilities.

Historically, technological advances have greatly benefited those with disabilities through the creation of audio guides as well as subtitled multimedia and ASL interpretation (Giusti, 2008). Audio guides have gone through a development process where they initially followed a strict path with little
variability. Audio guides then evolved so that numbers could be entered in any order so that one could move freely around the gallery and have even further progressed to include multiple voices with different points of view and types of information (Giusti, 2008).

While audio guides have been vital to the blind community, they are limited in their offerings. Blind visitors often have trouble navigating the museum galleries alone as there are not often directions from one piece to another. This restriction of mobility is problematic. The inclusion of handheld devices such as iPads and smartphones which can give directions around the museum in real-time with the GPS function, give blind visitors much more mobility. This allows those with disabilities to participate much more actively in the museum rather than being passively guided around via an audio guide. As Giusti points out, “Young people are not interested in the boring drone that has tended to dominate audio tours. They want to hear their peers, or some less institutional voice and they want an engaging story to go with the art, something that makes it memorable by virtue of its humanity, not its historicity.

Technology can also improve the way that children interact with information within the museum and increase the attention and active participation of younger visitors. While it might not seem like young children are underserved in art museums as many institutions have programmatic offerings for children, families with young children as independent visitors are often left to interpret scholarly wall labels for their disengaged children. One early example of a
multimedia project, which had the end result of reaching children who were too young to read, is a collaborative project from the University of Nebraska State Museum. They worked with five other natural history institutions to create a multimedia project called *Mesozoic Monsters, Mammals and Magnolias* (Diamond, Bond, Schenker, Meier, & Twersky, 1995). This project was computer-based and targeted children ages six to seventeen. They found that while the displays were cumbersome, the children required little direction (1995). In addition, they found that:

...a range of tools that would give visitors opportunities to learn in a variety of different styles and modes. Access to images permitted the development of entirely graphic interfaces, so that text information was available only on demand. This makes the exhibit accessible to the widest possible audience since reading is not a prerequisite for its use.

(Diamond, Bond, Schenker, Meier, & Twersky, 1995)

By using multimedia, they opened their content up to a wider audience with different learning levels. Especially in a usually text panel heavy setting like a natural history museum, this type of technology really allowed a new audience to become even more engaged. The fact that children were able to navigate the interfaces with little to no instruction made technology integrating smoother.
Providing Opportunity for Participatory Activities

Another important idea from developmental psychology is that interaction is the most powerful mode of learning. Interaction is the opposite of passivity.

Nina Jensen

In addition to increasing the engagement of specific audiences, new media can also increase engagement with a traditional museum audience by providing an interactive experience which is less linear and more able to customized by the visitor. As Lynn Dierking and John Falk explain, “the greatest promise of digital technologies is not how they 'deliver' information but their capacity to place the visitor increasingly in control of his own visit experience” (Falk & Dierking, 2013). Strong linear narratives are a solidly engrained part of museum visits. Whether reading wall label, listening to a traditional audio guide, or following signs through the museum, the lack of interactivity and emphasis on one-sided narratives from the institution has been oppressive and frustrating for visitors seeking an experience in which they can feel in control and part of.

As Luis Arata writes regarding interactivity, “[interactivity] opens multiple points of view though the blurring of boundaries of realities and objects once conveniently fixed. This shifts the emphasis away from the object and tilts it more toward the subject who perceives. Viewers interact with objects in a way that celebrates subjectivity and diversity” (Arata, 2004). This opening up of objects to be viewed from multiple perspectives allows visitors from all walks of life to
connect and engage with objects in the museum – moving from passive observation to active participation.

Participatory activities are often referred to simply as “play” with the implication that play is not learning. While play is certainly allowed and encouraged in a children's museum and even in science and history museums, play is not always encouraged in art museums. As Arata writes, “unfortunately, the creative function of play at the adult level tends to be underestimated” (2004). At the National Museum of Play, they describe play as having six steps – anticipation, surprise, pleasure, understanding, strength, and poise (S. L. Brown, 2009). Essentially, confidence, pleasure, and knowledge are outcomes of play. Whether for children or adults, this can be an important step in visiting an art museum. Visitors who are not typical museum-goers are often intimidated by the museum 'rules' and the amount of prior knowledgable required to gain a deep understanding of the works on display. By providing playful and participatory new media activities, new audiences can gain confidence and understanding so they they might feel more comfortable in the galleries.

Challenges

A Pew Research Center poll found that of the arts organizations surveyed, “40% agree with the statement that digital technology is 'negatively impacting audience members’ attention spans for live performances,' including just 9% who strongly agree this is the case” (Thomson, Purcell, & Rainie, 2013). The fact that 40% of arts organizations surveyed believe that digital technology is negatively
impacting their audiences shows that there are still significant challenges facing those who wish to implement digital media at their institutions. Implementing effective digital media in the museum presents a set of challenges – some relatively traditional and some new and unique to digital media. As mentioned earlier in this chapter, a major hurdle that institutions must overcome when implementing digital media is the division between education and entertainment. “Some observers worry that digital technology is blurring the line between the traditional public museum and the commercial theme park and retail complex, such as NikeTown in New York City, into generic spaces of “edutainment’” (Griffiths, 2004). In her book Re-Imagining the Museum: Beyond the Mausoleum, Andrea Witcomb makes the connection between a curatorial fear of the word 'entertainment' with children's museums explaining the argument that adults in grown up art museums are not supposed to behave like children in children's museums. Play and entertainment go hand-in-hand without much consideration for the learning and value that can be achieved through entertaining play. Overcoming this mindset is not only challenging for museum professionals, but often also for museum visitors. Visitors are often hesitant to engage in playful, interactives (digital or otherwise) as they assume they are only for children. Without specific permission to engage, adults might miss an opportunity to participate.

Witcomb then continues, writing, “Adding a multimedia station to an exhibit will not, therefore, necessarily challenge a one-way flow of communication which
the exhibition as a whole may be premised upon. Nor does multimedia in itself necessarily represent a more democratic, open medium of communication” (Witcomb, 2003). This message is echoed by Vera Frenkel in her discussion of the limiting characteristics of technology (Frenkel, 2007). Using a quote from psychiatrist and cultural theorist Jeanne Randolph, Frenkel quotes:

The elimination of ambiguity is exactly what the ideology of technology demands. For without ambiguity, there is no opportunity to contribute multiple and alternative interpretations. The citizenry who cannot contribute cannot be in a position of responsibility but must either submit to the authority of an object or attempt to dominate the object by exercising their power to explain it (Frenkel, 2007; Randolph, 1991).

In an era of museums where open dialogue is favored and valued over transactional experiences for visitors, institutions must be especially aware of their use of technology as to use it in a transformative way which engages and allows for visitor learning and input without simply using a shiny new way of delivering the same one-sided information.

In addition to considering the kind of information that is communicated with the audience, it is also important to remember that museums are inherently social spaces. “We often visit museums with others – whether friends, family, peers or colleagues – and even when we visit a museum alone we are sensitive to the behavior of others” (Heath & vom Lehn, 2010). Christian Heath and Dirk vom Lehn focus on the difference between interactivity and social interaction &
collaboration. They emphasize that it is important not to confuse the two. While interactivity can take place between a digital media object and a single user, social and collaborative experiences are important and should not be left out. They write:

In designing and developing for museum and galleries we have to reshape the ways in which we think of and conceptualise the visitor, to break away from the individualistic model that continues to pervade 'interactives' and the very idea of 'interactivity.' Unless we place the social and interactional at the heart of agenda we will continue to be disappointed by the unanticipated ways in which people use our 'interactives' and disappointed when we examine their conduct and experience, let alone learning (Heath & vom Lehn, 2010).

Digital media does not have to be a solo experience. Traditionally, technological advances have emphasized the personal – from personal desktop computers and laptops to PDAs and smartphones. Society often thinks of digital media as a solo activity but that is changing. Museums must be mindful to design spaces and interactive digital media objects in a way which encourages group participation and interaction as to fulfill the social interaction desires of the majority of museum visitors.

In addition to practical concerns when designing digital media objects for use by multiple people, there are several practical issues which should be kept in mind when implementing digital media strategy in an institution. Duff et al.
present three main challenges facing organizations that want to incorporate technology. They are “(1) the cost of designing, implementing, and maintaining technology; (2) a lack of in-house expertise; and (3) information management” (Duff et al., 2009). Anne Fahy similarly outlines four major issues in her chapter “New Technologies for Museum Communication.” These include having well defined aims and objectives that clearly tie in with the rest of the exhibition and reach the target audience, having an effective way of evaluating the digital media applications, well working and user-friendly software and hardware, and finally, a clear understanding of the information and curatorial control in order to not provide information from a single voice (Fahy, 1995). These are important considerations which tie in with the institution as a whole. All departments from education to development to curatorial should be involved in the implementation of digital media strategy at an institution. This requires the staff at the museum to have at least a basic understanding of how the digital media interactives work as well as the goals and outcomes of the implementation. In addition, digital media technology requires trained information technology professionals to maintain and operate the technology and to respond to trends and developments within the field (Roberts, 2010).

Information technology departments at museums have grown substantially, however, museums often do not properly understand the costs, benefits, opportunities and risks associated with digital media projects (Duff et al., 2009). Not understanding the costs is a significant problem as digital technology
projects often come with a steep price tag and can get out of control without proper planning and forethought. Institutions are going through major institutional change as baby boomers across the country retire and younger and more tech savvy workers enter the workforce.

All changes present new challenges and implementing digital media is no different. As the world becomes increasingly digital, institutions must find a balance which can attract new audiences, engage the audiences they have, and still consider the aging audiences which have always supported them. There is a fine line between digital media which is effective, engaging, and participatory and digital media which is available just to be available. Museums must take these challenges into consideration and act mindfully and with consideration for multiple points of view moving forward.

Looking Forward

The inclusion of more digital media combined with a focus on visitor engagement and education has done many great things for museums over the years. The evolution of digital technology has certainly changed the look of the museum. From the early 1990s where collections were just beginning to be digitally catalogued to now where not only are the collections online, but available to be customized into your very own iPad tour at the Cleveland Museum of Art (Bernstein, 2013). Institutions are essentially required to have a website, as well as possibly, a smart phone and/or iPad app. This inclusion of technology also requires hiring employees with the skills to manage the technology. Employees
are having to take on new responsibilities and learn new skills.

Looking forward in the world of digital media in museums means developing better ways of differentiating between successful uses of digital media and unsuccessful ways of using digital media. “Marshall McLuhan used a temperature metaphor to distinguish between what we consider are interactive features. He distinguished between hot and cold media. He wrote that hot media leave little to be filled or completed by the audience. Hot media are low in participation, and cool media are high in participation or completion by the audience” (Arata, 2004). Aiming for digital media strategy which focuses more on cool media rather than hot media will provide a more engaging and deeper experience for visitors.

One approach for looking at the future and impact of digital media in the museum is by exploring the ways in which digital media enriches the three different contexts laid out in Falk and Dierking's contextual model of learning. The three different contexts which make up the museum experience are the personal context, the social context, and the physical context (Falk & Dierking, 2013). “Each museum visitor's personal context is unique, incorporating a variety of experiences and knowledge” (Falk & Dierking, 2013). By incorporating digital media into the museum experience, visitors might be able to explore and understand the ways that their personal experiences impact their understanding in the museum. Falk and Dierking explain that museums are inherently social spaces as the majority of visitors go to the museum in a group and social
interaction impacts learning in a strong way (2013). With early implementation of
digital media, social interaction was not as strongly emphasized as it is currently.
By creating digital media objects and interactive applications, groups can
experience more aspects of the museum together. Finally, the physical context of
the museum is important to consider when implementation digital media. It does
not matter how much fun or how educational an interactive display is if it requires
the visitor to stand for too long, s/he will move on. Design is an ever more
important part of digital media implementation in varying ways. Visitors want to
feel comfortable and not intimidated by the technology while still being impressed
and excited. Visitors, especially adults, often need explicit permission to engage
with digital media in museums and the design of the space is a component to
giving that permission.

While the experience in museums is made of the same components,
digital media has the power to make the experience dramatically better when well
implemented and designed or to distract and disengage visitors when poorly
designed and implemented. New considerations develop as new and more
technologically advanced media is developed and it is the responsibility of the
staff and leadership in the institution to properly guide the digital media strategy
to benefit the visitors.
Theory

Positioning & Definition of Terms

The previous sections have demonstrated the extensive literature available regarding museums, museum history, and the implementation of technology in the museum. While I have found that there is a large amount of diverse literature, the literature very rarely attempts to view implementation of technology as having far reaching impact within the museum. When the implementation of technology coincides with or prompts institutional change, the impact can be felt in departments across the museum ranging from development to education to curatorial. This section will explore theories which will aid in understanding the analysis of the case in a later chapter. While there are numerous theories to draw upon, I will focus on just a few. I will begin by discussing the application of John Kingdon’s three policy streams to the arts as a way of understanding the implementation process. Then I will explore Dr. Margaret Wyszomirski’s presentation of triple bottom line as applied to the arts with references to similar frameworks including Weinstein and Bukovinsky’s application of the balanced scorecard methodology and Magnetic Museums as presented in Magnetic: The Art and Science of Engagement by Anne Bergeron and Beth Tuttle. These theories provide a framework to understand the before and after of technology implementation and how many small changes which come about as a result of technology implementation bring about institutional change.
Three Policy Streams

Introduced by John Kingdon in his book, *Agendas, Alternatives, and Public Policies*, the three policy stream model provides a framework demonstrating the forces which create a policy window and allow for change to occur. Kingdon's three streams are the problem stream, the political stream, and the policy stream (Kingdon, 1997). The problem stream involves identifying and calling attention to a specific problem. This might take place via a focusing event or indicators which direct attention toward the issue at hand. Without convergence with the other two streams, the problem simply fades with no action (Henry, 2007). The policy stream encompasses a variety of voices and members of the policy community (specialists in the specific arena) all offering suggestions and proposals to deal with the problems. Kingdon describes the policy stream process as similar to natural selection where good ideas spread and bad ideas are weeded out (Kingdon, 1997). The final stream, the political stream, incorporates public mood and atmosphere, changes in leadership, and changes in ideology. As Kingdon explains, “The separate streams come together at critical times. A problem is recognized, a solution is developed and available in the policy community, a political changes makes it the right time for policy change, and potential constraints are not severe” (Kingdon, 1997). When this perfect storm of variables occurs at the same time and the three policy streams meet, a policy window opens and change can occur. While Kingdon writes about the political process very literally, this stream framework can be applied to change within any
institution, museums included. Rather than considering the President or
Congress as actors changes in museum directors and leadership can be
considered. Political parties are not as relevant, but the museum and arts
community attitude can be a major factor when considering changes within the
institution. In a later section, I will demonstrate a rough framework for using
Kingdon's three policy streams to view the implementation of technology within
the Cleveland Museum of Art.

Triple-bottom Line

The phrase "triple bottom line," first coined by John Elkington in his 1997
book Cannibals with Forks: the Triple Bottom Line of 21st Century Business,
refers to a way of looking at businesses with an emphasis on three bottom lines
which lead to sustainability. The three bottom lines are social equity, economic,
and environmental factors (Elkington, 1997). Dr. Margaret Wyszomirski adapted
this framework specifically for the arts (using the National Endowment for the Arts
(NEA) as the case in her framework) in her article “Shaping a triple-bottom line
for nonprofit arts organizations: Micro-, macro-, and meta-policy influences.” She
establishes three bottom lines as applied to the arts - financial sustainability,
artistic vitality, and recognized public value for the nonprofits (Wyszomirski,
2013). Wyszomirski explains that these three bottom lines draw from the
enabling statute of the NEA which emphasized concern economic necessity,
artistic quality and broad public access. She then goes on to emphasize that
“Each bottom line was first cast as a problem or deficit for which the NEA had to
develop a policy solution through a process of learning and adaption" (Wysomirski, 2013).

The first bottom line addressed in Wysomirski’s paper and by the NEA is the financial bottom line. Wysomirski writes that through the leadership of NEA Chair Nancy Hanks, the NEA developed new grant categories while pursuing additional advocacy efforts to support the additional funding opportunities. Though battling through inflation and instability, the NEA worked to stabilize the financial bottom line by using tools such as Challenge Grants to cultivate donors and stabilize the field of nonprofit arts organizations (Wysomirski, 2013). While recent years have seen the NEA lose political support in a post-culture war era, other arts organizations in the field have stepped up to shape their own financial bottom lines with tools learned from the history of the NEA to remain sustainable in the future.

The second bottom line is the artistic bottom line. Wysomirski writes that the NEA’s artistic bottom line shifted from one of artistic excellence in an elitist sense to a more populist approach with cultural diversity being embraced. An emphasis on new and innovative work pushed the NEA forward into challenging and, at times, controversial waters. Balancing financial stability with the need to take risks became key in balancing the artistic bottom line. Wysomirski explains that in a post-culture war time recent NEA Chairs have attempted to “[reframe] the artistic bottom line to make it more relevant to the American public and encouraged arts organizations to do the same” (Wysomirski, 2013).
The final bottom line is the public benefit bottom line. Public benefit is not unique to the arts but rather is part of all public policy as well as the mission of nonprofits in the United States. Reaching excluded communities by expanding programs to serve minorities, those in rural and inner city areas, and the disabled is one way that both the NEA and all nonprofit arts organizations can increase public value. By increasing the emphasis on demonstrated public benefits, arts organizations can often also strengthen the other two bottom lines. The challenge with demonstrating public benefit with the arts is that it is not easily measurable and quantifiable and that can lead to a weakening of the financial bottom line.

Wyszomirski writes:

The triple-bottom line presents arts organization leaders and managers with a complex and differentiated set of accountability expectations. Each bottom line can create tensions with other bottom lines. Therefore, the balance point for the composite triple-bottom line is a moving target subject to changes in the artistic, economic, social, and political environment (2013).

Her application of triple-bottom line to the NEA shows how applicable this theory can be to other arts organizations from museums to state and local arts councils. The emphasis of the interconnectedness of the bottom lines emphasized that a change in one bottom line impacts the other two and requires that the organization find a new equilibrium. This is valuable as institutions operate strive
for more communication across departments and a more holistic view of the institution. This perspective can also be seen in frameworks explained in Weinstein and Bukovinsky’s application of the balanced scorecard methodology and Magnetic Museums as presented in Magnetic: The Art and Science of Engagement by Anne Bergeron and Beth Tuttle. The balanced scorecard methodology “is a framework for evaluating performance as it relates to the organization’s strategies, by emphasizing the linkages between current operations, performance measurement and strategy” (Bukovinsky & Weinstein, 2009). Like triple-bottom line, the balanced scorecard approach looks inward towards finances and management as well as outward in communication with the public.

In Magnetic: The Art and Science of Engagement, Bergeron and Tuttle explain that a “magnetic museum” stating:

What makes Magnetic Museums different from the rest of the field is that they exhibit a powerful ability to attract and retain the four types of capital needed for museums to conceive, develop and deliver superior exhibitions, programs and experiences to their audiences: core, social, brand and, of course, financial capital (2013).

Their framework, while reaching towards the same goals of triple-bottom line and the balanced scorecard methodology, is more abstract. Bergeron and Tuttle outline six common practices of magnetic museum: build core alignment, embrace 360 engagement, empower others, widen the circle and invite the
outside in, become essential, and build trust through high performance (Bergeron & Tuttle, 2013). What aligns these three theories is their holistic view of the museum. These are not educational theories or guides for financial gain and responsibility, but rather they acknowledge that the museum is not built of silos which can operate independently. Collaboration and understanding across various departments within the institution is key to success and key to creating the welcoming, engaging, and secure arts institution of the future.

Conclusion

This chapter provides a framework and essential background knowledge which will be key in understanding the case to be presented later in this thesis. While the topics presented here can certainly be elaborated on further and with much greater detail, essential details are presented so that appropriate context can be accounted for when considering the case in a later chapter.

The paradigm shift in museums brought the outside into the museum by diversifying the visitors, collections, and goals. By shifting the focus to the visitors, institutions paved the way for innovative methods of connecting to visitors through a variety of ways and means. The simple fact of considering the visitors' interests alongside the interests of the curatorial staff members has the power to change entire institutions. This is not to say that all museums have participated in the paradigm shift to the same degree or at all. There are still museums across the country and the world that are just as elitist and closed off to the general public today as they were 50 or 100 years ago.
On that same note, not all museums that use technology use it effectively. Digital technology has developed so rapidly and has been implemented in such a variety of ways that it is often challenging to even gauge what is effective. The technology from the early 1990s is barely recognizable to children born in the new millennium as it has advances so quickly. As technology has become more user friendly, its’ uses have widened to create truly transformative and innovative experiences. As this thesis aims to explore the innovative experience created by Gallery One at the Cleveland Museum of Art (CMA), it is vital to understand what a leap forward they have taken. From technology being used as an offhand tool in the past, CMA uses technology in a way which involves departments across the museum.

In order to view the impact of this cross-museum impact and collaboration, the theories discussed in this chapter (primarily three policy streams and triple-bottom line) will serve as a lens through which to view the impact of the implementation of Gallery One. Rather that viewing the implementation of Gallery One as a single event only impacting those involved, future analysis will examine how Gallery One impacts departments across the institution as well as the future of the museum.
Chapter 3: Methodology

Qualitative Research

Until graduate school, I could not have explained the difference between qualitative and quantitative research or why one should select a case study over ethnography. Thus, I did not steer myself towards a particular method, but rather let my questions and interests guide me. The first decision I made was to conduct a qualitative research study. In a graduate research methods course, I learned that qualitative researcher:

- Takes place in the natural world
- Uses multiple methods that are interactive and humanistic
- Focuses on context
- Is emergent rather than tightly prefigured
- Is fundamentally interpretive (Marshall & Rossman, 2011)

This was ideal for me as entered graduate school interested in exploring the use of technology in the museum. I was interested in real world examples and information. The evolutionary nature of qualitative research appealed to me greatly. Initially, I was unsure of how to focus my research and what qualitative method to use.
Development and Positioning of Research

When I decided to attend graduate school, I wrote an essay detailing how I was interested in the inclusion of innovative technological approaches in museums. My interest in this field had grown from several courses as well as my own experiences in museum. I was relatively unimpressed with the use of technology by the museums I frequented and even as someone educated in the arts, I found many institutions challenging or even boring.

From the beginning of my time in graduate school, I knew what I was interested in focusing on for my thesis, but the methods for going about my research eluded me until I visited the Cleveland Museum of Art during the summer of 2013. Upon experiencing the recently opened Gallery One area at the museum, I immediately knew that I wanted to use CMA's Gallery One as a case study for my thesis. I was struck by the innovative ways CMA used to pull me in and provide important visual literacy information in a fun and engaging way. It is important to note my perspective regarding technology before continuing. My perspective is colored by my love of interactive technology paired with traditional artworks. I am not of the school that disregards the traditional in favor of only new and forward thinking methods. Tradition can be important.

As an undergraduate student studying photography, I spent most of my time photographing with film in a medium format camera while many of my classmates were experimenting with the newest and most expensive advances in digital technology. However, I would often then take my film and use a high-tech
film scanner to get the highest resolution before digitally printing my images. This is why technology in the museum appeals to me. The same way that a high resolution scan can pull detail from a negative that a traditional enlarger could not have seen, technology in the museum can shed light on details and information that visitors might have missed before.

Why a Case Study?

Robert Yin writes that:

A case study design should be considered when: (a) the focus of the study is to answer “how” and “why” questions; (b) you cannot manipulate the behavior of those involved in the study; (c) you want to cover contextual conditions because you believe they are relevant to the phenomenon under study; or (d) the boundaries are not clear between the phenomenon and context. (Baxter & Jack, 2008; Yin, 2003)

Through understanding these criteria, I decided to pursue a case study for this thesis research. Many other researchers examining museums have chosen to use multiple case studies to compare institutions. While this is a valid and interesting method, I elected to focus on the Cleveland Museum of Art as a single case as to fit within the scope of a Master's Thesis as well as because CMA and Gallery One are so unique they can stand alone as a single case.

Writing about case studies, Robert Stake says, “We would like to hear their stories” (Stake, 1995). This is a primary factor in my decision to conduct a case study. I wanted to hear the voices of people working in the museum to
understand the impact of Gallery One. Through my research and reading, I have been presented with several extensive presentations and papers detailing the history, implementation, and impact of Gallery One. Those closely involved with Gallery One have presented at conferences across the country and be featured in as many articles in major publications. This research was prompted by my desire to understand how this implementation was impacting the museum – both actually and perceptively. The presentations and papers detail the actual impacts and statistics but often overlook the way that departments across the institution perceive the implementation of Gallery One. This research aims to fill that void.

This research demonstrates that different parts of the museum react and change differently. This research aims to explore the inclusion of educational technology in the Cleveland Museum of Art and how the implementation affects different departments within the museum differently. Rather than using traditional institutional change theory which references the institution as a whole, I will show that a institution as the sum of various moving parts. This research will serve to fill a hole in the current literature of nonprofit arts and be available as a resource to those in the field. By understanding how the different parts are affected in different ways, a greater understanding of “institutional change” as a changing of parts rather than the whole can be gained.

Data Collection

The primary data collection for this research comes from a questionnaire distributed to employees at the Cleveland Museum of Art. With the help of Jane
Alexander, the Chief Information Officer at the Cleveland Museum of Art, I gathered a representative list of museum employees from several departments across the museum. I selected employees both closely connected to Gallery One as well as those not connected to Gallery One apart from working for the same institution. The questionnaire [see Appendix B] is designed for employees to be able to consider the impact of Gallery One on their own role in their department as well as on the other departments in the museum. For example, if an employee holds a position related to grants, I am interested in both how Gallery One has impacted them in their position as well as how they perceive Gallery One impacting employees in other departments such as education or curatorial. The questionnaire asks staff members to consider impact institution wide as well as consider the future of the museum and institutional change.

In addition to questionnaire responses from CMA staff members, local, regional and national news articles are used to inform this research. The Cleveland Museum of Art is historically and culturally very significant. The next chapter will explore the history of the museum in depth as to understand why the implementation of Gallery One received so much national attention. Conference papers from Museums and the Web (2013 & 2014) will also be referenced as well as presentations from the American Alliance of Museums conference. These sources provide important data from those closely involved in the planning and implementation process. Essentially, these sources serve as the before while questionnaire responses will be used to analyze the after.
Limitations & Advantages

The chief limitation on this study is time. Time is a limitation on all master's theses leading to a limited amount of data as well as a limited amount of analysis. There is a limited window for research and that, in combination with time pressures already existing within the museum, places limitations on the number of responses as well as the depth of research that can take place. Museum professionals are extremely busy and it can be challenging to get a representative sample. This study suffers from this limitation especially in terms of responses from curatorial staff members. A larger sample size could provide additional insights and perhaps a clearer picture.

In addition, it must be noted that there is a difference between perceived and actual impact. This study attempts to balance the two perspectives while noting their contexts. It is possible that some of those questioned responded with perceived but non-the-less incorrect impacts. I will attempt to highlight any discrepancies when found; however, since I am an outsider looking into the museum, it is possible that I could miss a factual error.
Chapter 4: Background

This chapter explores the history of the Cleveland Museum of Art. This is done to demonstrate the pattern of evolution that the museum has gone through. The Cleveland Museum of Art is a major international museum with a large endowment and an equally large collection. Understanding the development of this museum from a regional institution to one of international notoriety is vital in understanding the importance and impact of their Gallery One initiative. The historical significance combined with the innovative nature of Gallery One make it an excellent case to consider the impact of the implementation of a large scale technology initiative.

Cleveland, Ohio & the Founding of the Museum

The Cleveland, Ohio of the early 1900s was certainly different than Cleveland today. After the completion of the Ohio and Erie Canal in 1832 Cleveland's popularity and industry sky-rocked. Between 1870 and 1920, Cleveland grew to rank as fourth in terms of manufacturing output and seventh in terms of population (Lamoreaux, Levenstein, & Sokoloff, 2004). “By 1920, the city [Cleveland] was home to thirty-eight banks, savings institutions, and trust companies with total deposits amounting to more than $800 million” (Lamoreaux et al., 2004). Moving from the late 19th to the early 20th century, Cleveland
developed into a major metropolitan area with leading innovators flocking to the city. As industry and innovation took hold in Cleveland, the wealthy and sophisticated people moving to the city began clamoring for an art museum. This was a common occurrence across the country with the number of museums in the United States tripling between 1876 and 1919 (Leedy, 1991). The philanthropic community in Cleveland was growing with the industry and the influx of industrialists made the Cleveland Museum of Art possible. “Its creation was made possible by Cleveland industrialists Hinman B. Hurlbut, John Huntington, and Horace Kelley, all of whom bequeathed money specifically for an art museum, as well as by Jeptha H. Wade II, whose Wade Park property was donated for the site” (“History and Mission,” 2012).

With the support of the philanthropic community, the Cleveland Museum of Art was incorporated in 1913 and the opened to the public in 1916 (Leedy, 1991). CMA was “the first [museum] in the country to be built with the three primary functions of a museum firmly in mind – ‘acquisition, exhibition, and exposition’” (Turner, 1991). The museum's trustees were aware that CMA was in Cleveland – and industrious yet innovative city – and that the museum should reflect that. From the beginning, the museum leadership emphasized the impact of the museum on the community as well as the educational efforts of the museum. J.H. Wade II wrote in the act of conveyance of land to be used for the CMA that the museum was “for the benefit of all the people forever” (“History and Mission,” 2012). This primary focus would shape the museum from the ground up.
Early Innovations at CMA

The values of the museum were solidly established at the founding of the museum and are still ingrained in CMA today. The mission of the Cleveland Museum of Art is as follows:

The mission of the Cleveland Museum of Art is to fulfill its dual roles as one of the world’s most distinguished comprehensive art museums and one of northeastern Ohio’s principal civic and cultural institutions. The museum, established in 1913 “for the benefit of all the people forever,” seeks to bring the pleasure and meaning of art to the broadest possible audience in accordance with the highest aesthetic, intellectual, and professional standards. Toward this end the museum augments, preserves, exhibits, and fosters understanding of the outstanding collections of world art it holds in trust for the public and presents complementary exhibitions and programs. The Cleveland Museum of Art embraces its leadership role in collecting, scholarship, education, and community service. ("Mission Statement," 2012)

While the mission statement is long and complex, the strong emphasis on the community and education is apparent. This emphasis on the community was shaped by the museum’s founding director, Frederic Allen Whiting. “Whiting was nationally known as a promoter of the industrial arts and an educator, not as a museum professional or connoisseur of the fine arts” (Turner & Robertson, 1991). While unconventional for a museum director, Whiting was the perfect
person to steer the Cleveland Museum of Art in its early years. Whiting did not shy away from innovation or technology. Under Whiting’s leadership, CMA “became the first [art museum] in the country to apply ‘scientific’ testing to study the efficiency and efficacy of museum educational methods” (Turner & Robertson, 1991). Whiting’s emphasis on education and the community led the Museum to reach out beyond its walls to other organizations in the Cleveland community. Working with institutions ranging from the Cleveland School of Art to the Cleveland Public School system and the Cleveland Public Library, Whiting viewed education as instrumental for the museum. While also working to fill the galleries within CMA, Whiting worked to involve the community in whatever ways possible. This led him to create the May Show. “The whole point of the Museum for Whiting, perhaps most directly expressed in the May Show, was to vitalize the local art community” (Turner & Robertson, 1991).

This effort to include everyone the community as a whole led Whiting to work towards democratize the art museum. Education was an important part of this goal, as was disability access. “Almost Whiting’s last action as Director was to request the installation of fifty-four Radioears for the deaf in the auditorium” (Turner & Robertson, 1991). Whiting’s ideas were certainly forward thinking at the time and until he left the museum in 1930, Whiting was key in shaping the Museum’s goals. The importance of this tone being set within the museum is key as we look toward the future.
Growth of the Museum

When Whiting left the Museum in 1930, he was replaced by William M. Milliken. The *May Show*, while conceived by Whiting, was a key part of Milliken's strategy in developing art patronage in Cleveland (Turner, 1991). While the museum was not immune to the Great Depression and collecting and salaries were both reduced, by the late 1930s, the Museum was revived and expanding the collection with series of important bequests and gifts.

The person connecting this expanding collection with the Cleveland public was Curator of Education, Thomas Munro. He was tasked with “convincing lay audiences that expert judgment deserved respect, while simultaneously encouraging independence and self-reliance in personal responses to artworks” (Turner, 1991). Munro excelled at understanding the audience and attempting to marry authority and independence. He helped expand the museum's subject matter by presenting less prestigious, but popular, works such as films, photography, and industrial and commercial arts (Turner, 1991).

Moving into the 1940s, the museum further expanded their collection with the help of donors and philanthropists such as Leonard Hanna (created the Hanna Fund), John L. Severance, Elisabeth Severance Prentiss, and Grace Rainey Rodgers. The expanded collection combined with Munro's efforts helped the “museum's attendance [soar] to a new high in 1948, with 600,841 visitors” (Turner, 1991). In addition, “the annual Report for 1951 proudly declared that among America's museums, Cleveland's acquisitions funds were second only to
those of New York's Metropolitan Museum” (Turner, 1991). To accommodate the expanding collection and increasing number of visitors, the museum embarked on a fundraising campaign to raise money for an expansion. Completed in 1958, the museum expansion had been partially funded by Leonard Hanna's Hanna Fund. Hanna died in the months leading up to the museum's expansion opening, however, what he left the museum would shape the institution for decades.

Hanna left the museum a gift of $33 million (approximately $279,000,000 today) which was equally divided between operations and acquisitions (Turner, 1991). This major gift set the perfect stage for Sherman E. Lee to become director of the museum in 1958.

_Sherman E. Lee Years: 1958 – 1983_

When Sherman E. Lee assumed the position of director of the Cleveland Museum of Art, the circumstances could not have been better. Completely financially secure, the museum was poised to make the leap from regional museum to internationally known institution under the leadership of Lee. Lee recognized that the areas in need of increased collecting attention were European Old Master paintings and Asian art and he was able to persuade the museum's trustees to follow his guidance (Litt, 2009). Lee, a former World War II Monuments Man, spent two years in Japan protecting cultural property (Litt, 2014a). He brought his expertise to CMA and “help build one of the most admired collections of Asian art in the West” (Litt, 2014). The extensive Asian collection was complimented by works by artists such as Velázquez, El Greco and Goya.
Perhaps his only downfall was his staunch philosophy that one should wait 20 years before purchasing works by an artist. As Bruce Webber explains:

Mr. Lee, who viewed the museum as an educational institution, was wary of artistic fashion, eschewing the contemporary in favor of the time-honored, sometimes to the museum’s detriment; the museum did not purchase a Jackson Pollock until 1980 and passed on opportunities to acquire works by Andy Warhol, Roy Lichtenstein and Jasper Johns. (Weber, 2008)

Sherman E. Lee not only impacted the museum’s collections, but also the institution as a while. “As director, Lee said he hired and promoted black employees, and fought with his trustees to add Jewish members to the board. He also developed a national reputation as a curmudgeon who resisted the oncoming age of blockbuster exhibitions, recorded gallery tours and museum gift shops. He hated glitz and tchotchkes.” (Litt, 2009). Lee also continued the emphasis on education that had been put in place before his time as director. As the collections were rapidly expanding, new space was needed. Lee led the project of opening an education wing in 1971 and a library wing in 1983 (opening after his successor had taken over). Under Lee, a major educational study was completed in 1978 – *The Art Museum as Educator: A collection of Studies as Guides to Practice and Policy*. This was a major study which featured a wide range of ideas regarding art museums as educational institutions from the practical to theoretical (Turner, 1991).
The combination of a rapidly expanding collection and institution combined with the emphasis on educational practice shaped the Cleveland Museum of Art greatly. By the time Sherman Lee left in 1983, he had lifted the Cleveland Museum of Art from a regional museum to one of national and international importance. “Director Lee's effective blend of brilliant connoisseurship, scholarly method and yes, - the best word is daring – ensured that the Museum acted effectively, again and again, on the international art market” (Turner, 1991).

Rapid Changes at the Cleveland Museum of Arts

After a period of stability and growth, CMA entered a period of rapid change that is still happening today. While Lee led the museum for 25 years, the turnover has been much more rapid in years since. Taking over for Lee was Dr. Evan Hopkins Turner, who came to Cleveland from his position as director of the Ackland Art Museum at the University of North Carolina (S. H. Anderson, 1982). His tenure at the museum (1983-1993) brought an expansion of the photography and modern art collections as well as a newly established community-centered focus ("History and Mission," 2012). Following Turner was Dr. Robert P. Bergman. Both Turner and Bergman faced financial difficulties the likes of which Sherman E. Lee never had to face. As trustees restricted annual withdrawals to prevent shrinking the principal, “the institution staged popular blockbuster exhibitions, provided amenities and privileges for members and donors, and reached out to minority audiences it had never tried to tap before” (Litt, 2014b). Bergman, director from 1993 until his sudden death in 1999, saw attendance rise
annually by 200,000 visitors from 400,000 to 600,000. This increase in visitors can be partially credited to blockbuster exhibitions such as "Pharaohs: Treasures of Egyptian Art from the Louvre," "Faberge in America," and "Vatican Treasures: Early Christian, Renaissance and Baroque Art from the Papal Collections" (Honan, 1999).

After Bergman's death from a rare blood disorder, Kate Sellars became the interim director. Following Kate Sellars brief time as interim director, Sherman E. Lee's daughter, Katherine Lee Reid, was named director of CMA in 2000 (Dobrzynski, 2000). In the late 1990s, CMA hired a firm to produce a facilities master plan. This plan evaluated the current and future needs of the museum. This was the beginning of the next expansion of the Cleveland Museum of Art. Moving into Katherine Lee Reid's time as director (2000-2006), the plans for expansion were well underway. In 2001 Rafael Vinoly was selected to design the expansion (Donley, 2013).

Under Reid, CMA embarked upon the first capital campaign to rival Hanna's 1958 gift. Starting in 2002, CMA began attempting to raise $320 million to fund the expansion of the museum. This was a struggle at times with their efforts hampered by 9/11 and the economic recession. “Donations peaked at nearly $70 million in 2005-06, the last of the five years in which Katharine Lee Reid served as the museum’s director before her retirement” (Litt, 2014b). In 2006, Reid retired to spend more time with her family and aging father and the museum selected Timothy Rub to take over during this period of transformation.
Rub oversaw three years (2006-2009) of the expansion and construction period. Rub left to become the Director at the Philadelphia Museum of Art in 2009 (Dobrin, 2009). Following Rub was David Franklin (2010-2013). Franklin oversaw the museum during the reinstallation and opening of the new spaces. The extensive renovation included renovated and expanded library and gallery space, a new glass ceilinged atrium, and an interactive learning space called Gallery One.

**Gallery One**

From the original project which began in 2005, CMA had always planned to incorporate an interactive space into the future of the museum. CMA began an evaluation process in 2009 that involved gathering information about the museum visitors and how they were interacting with the newly opened spaces. They found that many of the visitors to [the] permanent collection galleries can best be characterized as browsers, not seeming to have a predefined agenda for their visit other than gravitating to the works of art to which they respond strongly based on their tastes and prior knowledge” (Alexander, Barton, & Goeser, 2013). Additionally, visitors were less concerned with overarching themes, but were more concerned with individual works.

Taking the results from their evaluation process, the interactive space began to take shape when the planning team was brought together in 2010. They developed the following goals for the interactive gallery:

- “Create a nexus of interpretation, learning, and audience development
• Build audiences—including families, youth, school groups, and occasional visitors—by providing a fun and engaging environment for visitors with all levels of knowledge about art
• Highlight featured artworks in a visitor-centered and -layered interpretive manner, thereby bringing those artworks to the Greater Cleveland community and the world
• Propel visitors into the primary galleries with greater enthusiasm, understanding, and excitement about the collection
• Develop and galvanize visitor interest, bringing visitors back to the museum again and again” (Alexander et al., 2013)

By keeping in mind these goals, Gallery One was created. CMA worked with Local Projects, a New York City-based design firm which specializes in interactive museum and cultural spaces, as well as other design partners to complete the design (“Collaborators,” 2013). Along with outside collaborators, the planning and design of Gallery One was an institution wide process. Bringing together staff members from the Department of Information Management and Technology Services, the Department of Education and Interpretation, Design Services, with consultation with the Division of Institutional Advancement and the Curatorial Department. Supported by a $10 million gift from the Maltz Family Foundation, the 12,000 square-foot Gallery One opened in January of 2013.

Gallery One is organized into different spaces which use an inquiry-based method to help visitors explore the collections. Each section focuses on a different question: (1) What is it, and what do you see? (2) How is it made? (3) Why was it made? By asking questions, Gallery One “seeks to open new
perspectives on the visual arts by moving away from the conventional, art-historical narratives as the central, overarching portal into the collection” (Alexander et al., 2013).

Gallery One combines physical art objects with touch screens and camera-based interactives which encourage active participation. The touch screens (called lenses) are large enough for more than one person to participate at the same time. Other interactives feature cameras which ask the visitor to mimic poses seen in sculpture or a 40-foot-long touch screen collections wall which allows visitors to browse the entire collection and create custom tours on iPads. In total, Gallery One features six lenses which have various layers. For example, there is the popular Sculpture Lens which features three different activities: Make a Face, Strike a Pose, and Build with Clay. The Make a Face activity uses facial recognition software to match “faces” or expressions made by the visitor to faces in a database. This then creates a photo strip which visitors can email to themselves. The Strike a Pose application asks visitors to match the pose of the figure in a sculpture by using skeleton-matching software and then rates the match on a percentage scale. The Build with Clay application allows visitors to build their own Japanese Haniwa sculpture (Alexander et al., 2013).

Other lenses invite visitors to improve their visual literacy by learning about one-two- and three-point perspective or by learning about (and digitally creating) abstract paintings in various techniques. There is also a Studio Play area of Gallery One which is aimed at younger visitors. This is an important distinction for
the Gallery as having two interactives (Line and Shape & Sorting and Matching) in an area that is obviously geared toward children gives adults permission to engage and interact in a way that adults often do not do in museums.

As visitors work their way through Gallery One they reach the 40-foot touch screen wall which displays small images of all the 3,000 works on display in the museum. Visitors can click on a work to enlarge it. They can browse by room in the museum or by genre. When a visitor likes a work they can click a small heart to transfer the image from the wall to an iPad (from home or rented from the museum for $5/day) to create a custom tour (Bernstein, 2013). This links Gallery One with the rest of the museum and brings visitors into the galleries already interested in works. Combined with the iPad, iPhone, and Android apps, Gallery One transforms the museum from passive to active.

In their conference paper at the Museums and the Web 2013 conference, Jane Alexander, Jake Barton (Principle at the interactive technology firm Local Projects), and Caroline Goeser (Director of Education and Interpretation at the Cleveland Museum of Art) explain the Gallery One experience as follows:

Information is delivered in ways that feel like experiences rather than didactic lessons, allowing visitors to drive their own encounters with works of art and share their experiences with each other. In doing so, the museum looks to visitors to engage each other in the collections rather than positioning the museum as the sole voice and arbiter of the visitor experience. Gallery One is aimed at both novice and experienced visitors,
and encourages people to use the museum as a place to spend time learning, exploring, and having fun with each other (Alexander et al., 2013).

Since Gallery One has been open to the public, it has captured the attention of the media, the visitors, and other museums and cultural institutions. Gallery One was formally visited by over 150 national and international institutions with visitors including museum directors, exhibition designers, interpretation specialists, and technology specialists (Alexander, 2014). The back-end technology has been optimized, evaluated, and enhanced. Through their evaluation, CMA found that “nearly 60% of visitors interact with the lenses in Gallery One. 38% interact with one, 23% each with two or three, 12% with four, and 4% with five” (Alexander, 2014). While it is difficult to measure the increase in visitors due to Gallery One alone, “In the first year after the atrium opening, the museum’s attendance increased by 39%, reaching one of the highest levels in over a decade. Attendance by visitor groups with children has increased by over 25% since the opening. CMA also completed the first half of its fiscal year with an 80 percent increase in donations” (Alexander, 2014).
Chapter 5: Findings & Discussion

In this section, all information is taken from the Gallery One Questionnaire responses unless otherwise noted. I received 11 questionnaire responses, however, one is being excluded as it provides no substantial information. In received responses from the following departments in the numbers as listed:

Department of Institutional Advancement – 5
Design & Architecture – 1
Education and Interpretation – 1
Collections Management – 1
Information Management Technology Services (IMTS) – 1
Curatorial – 1

While this sample is limited in number or responses, it is still valuable for viewing the museum through this limited but diverse response. The questionnaire is broken up into general categories with questions regarding:

development/institutional advancement, educational efforts and visitor engagement, curatorial practice, and the museum as a whole. I will address each of these areas in this section as well as questions and critiques brought up in the survey responses.

Related to Education

The general response from the questionnaires is that Gallery One is an
engaging asset for education in the museum. Active participation is prevalent for
visitors of all ages. An Engagement Specialist from the Department of
Institutional Advancement noted, “Adults love the lenses and use them. It’s hard
to tear them away from them!” Several respondents mention how they view
Gallery One as an introduction of sorts to the museum for visitors of all
backgrounds and educational levels. The Director of Annual Giving writes, “I think
that a big drawback to people visiting the museum is that they don’t want to feel
ignorant about the art. The gallery [Gallery One] shows people that the art and
the museum is more accessible then they believe [sic].” It is hypothesized that
those who do not enjoy verbal tours might feel empowered by the ability to create
their own tour in the gallery as well as that Gallery One accommodates a variety
of learning styles in a way that was missing before Gallery One was created. The
Curator of Photography notes, “The video wall and ArtLens are enormously sexy
applications and thus increase and deepen audience engagement with the art.
[…] Being able to hear from artists and curators directly also helps people
become more intimately involved with the artwork.”

Where the responses are lacking, however, is in measurable outcomes.
Only one response mentioned a possible future evaluation to measure learning.
This has led me to question if learning and engagement always go hand-in-hand.
From the responses, I think it is often assumed that if people are engaged, they
are learning. An Engagement Specialist from the Department of Institutional
Advancement brought up an interesting critique of the impact of the ‘create your
own tour’ aspect of Gallery One. They note that by creating ones own tour might take the visitor to their favorites but might not challenge the visitor in the same way. Additionally, the Applications Services Manager from IMTS acknowledges that sometimes the technology can inhibit learning or frustrate visitors – especially when it comes to bring their own devices into the museum to use.

**Related to Development**

All respondents who answered the development questions view Gallery One as having a positive impact on donor relations. They remark upon development in relation to Gallery one in two ways – current donors and future donors. Current donors have a positive view of Gallery One and its impact on the museum. They are excited and impressed by the technology. Existing donors are proud of Gallery One. An Engagement Specialist from the Advancement Division writes:

> Not only are they personally intrigued but they demonstrate great pride in the Museum's leadership in this aspect of art museums and outreach. One of the strongest reactions is that they see the potential to engage their families and young people and verbalize their plans to bring them in. Even if they don't become direct donors for Gallery One, it seems to boost their desire to be involved.

Gallery One is used as a tool to cultivate new donors as well. Donors are always taken through Gallery One on tours of the Museum and Gallery One is essentially shown off to prospective donors. Those from outside the Department
of Institutional Advancement also view Gallery One as positively impacting donor relations. The Photography Curator notes the amount of positive local, national, and international press Gallery One has received and how that has impacted current and prospective donors. While few responses reference grants, it is mentioned that anecdotes from Gallery One could be used on future grant applications.

The view of Gallery One’s impact on donors and development is overwhelmingly positive. I find it interesting that all respondents had more to say about the impact on development than they did on the impact on education. This is observable from those outside the Department of Institutional Advancement as well as those in the department. While the main goals for Gallery One do not address donor relations at all, there has been an obvious and important impact on this area of the museum.

Related to Curation

Responses relating to curation were especially interesting given that only one curator completed the questionnaire. Additional responses from curators more directly involved with Gallery One could have shed more light on the connection between Gallery One and the Curatorial Department. The main positive points made by respondents were that Gallery One has helped prompt curators to provide additional interpretative information for the works both on display in Gallery One as well as works on display and available for viewing in the applications. Additionally, several noted that curators might consider
engagement more when writing text for exhibitions.

Perhaps the most interesting response regarding curatorial decisions and practice was from the Applications Services Manager from IMTS. They write, “In general, the Gallery One project forged a partnership between curatorial and interpretation, which resulted in high-quality/important artwork being used as part of the initial installation.” The use of important and significant works in an education and interactive space is also noted in another response as an “important precedent.” Also interesting is that the Photography Curator does not view Gallery One as having any impact on their curatorial decisions and practice. However, earlier they note that additional information is being provided for visitors.

*Related to the Museum as a Whole*

Interestingly, the opinion of the respondents in terms of accessibility to and value gained by visitors is very consistent while the responses regarding the future of the museum and institutional change are much more varied. Gallery One has made the Museum more accessible to the general public and has welcomed new and more diverse audiences into the museum in a less intimidating way. Visitors can essentially 'get their bearings' before venturing into the museum. Responses regarding the future of the museum were perhaps the least positive of all the answers. While not negative, necessarily, respondents across departments pointed out that while CMA is the example everyone is looking to currently, their system could easily look outdated and old in a few short
years. Gallery One required a lot of support during development and will require additional (and perhaps more) resources and funding moving forward. Essentially, the work is not done and with technology, will probably never be done.

The Curator of Photography writes:

It has made us, for the moment, at the cutting edge of technology and museums. Now comes the obligation of continuing to invest considerable resources and staff time in both writing extended materials for additional works already on ArtLens or which rotate onto view in the galleries and thus appear for the first time in ArtLens, but also to keep up with new technologies and possibilities. There is a great danger, given the fast pace of technological change and the fact that other institutions are themselves trying to be on the cutting edge of this type of visitor education and engagement, that our system will look dated and old-fashioned in a couple of years.

Views of institutional change also vary. Some respondents do not think that Gallery One has caused wide-spread institutional change. However, others note that Gallery One has been a project which has broken down barriers and formed new partnerships between departments. One respondent notes that because of Gallery One, communication and collaboration between departments is more common and siloing has been reduced. The Applications Services Manager from IMTS writes, “The Gallery One and Art Lens project changed the
museum's interdepartmental dynamics significantly, and really do represent the start of a new way of working together to accomplish big things."
Chapter 6: Conclusion

When I began this research, I was aware of the current trends in museums and digital technology. What I could not find, and what drove my research, was my desire to understand how digital technology implementation impacted the museum across departments. I found the perfect case in the Cleveland Museum of Art's Gallery One project. By first gaining a clear understanding of the history of the paradigm shift in museums and the adaptation of digital technology by museums through the literature review, I gained a clearer picture of the current state of museums and a better understanding of how CMA arrived at the position they are at currently.

While intensive theory application is not possible given the time and space limitations of a Master's Thesis, I selected theories which may be used as a lens through which to view the impact of Gallery One on CMA. Through my education, most references to institutional change presume that the entire institution changes in the same way. I prefer the view that while the outcome might be that the institution has changed, different departments within the museum change differently. The theories I focused on in my literature review (Triple Bottom Line & Three Policy Streams) support this view that different impacts and different factors come together to create change. By designing a survey which focuses on varying departments (education, development, and curatorial) we are able to
view how Gallery One impacts these different departments in varying ways.

The evolution of Gallery One can be seen through Three Policy Streams lens as multiple changes of different levels - director changes, funding changes, and the Gallery One team leadership, met at the right time to create change. By considering Triple Bottom Line, we can gain a better understanding of the push and pull between the different departments and the balance that has been achieved. Wyszomirski’s application of triple bottom line outlines the three bottom lines as economic necessity, artistic quality and broad public access. These three bottom lines can be seen in the development and implementation of Gallery One.

For the museum to be economically viable in the future, this research shows Gallery One to be both an asset and a burden. Gallery One is a major fundraising tool for the museum. By furthering connections to existing and new donors, Gallery One helps the museum achieve financial security. However, in the future, Gallery One will need significant funds to remain competitive and valuable. The amount of money that will need to be put into Gallery One is significant and could be a burden on the museum. Gallery One connects with the artistic quality bottom line as it makes important pieces from the Cleveland Museum of Art’s collection more available and understandable to the general public. Curators provide more information about works of art than before. Gallery One succeeds because it is able to combine the artistic quality stream with the board public access stream by using technology to provide a way for the public to connect with challenging works of art in new ways. Gallery One helps build visual literacy
while breaking down the traditional barriers that exist in art museums.

The survey results show that Gallery One is impacting departments across the museum and creating change in varying ways. Development has gained a tool for fundraising and cultivating donors. Education has gained a tool for connecting to visitors and enriching their experience. Curatorial has gained the opportunity to reach the audience with more digestible information on works in the collection. Further research is necessary to strictly align this case with any of these theories, but they are valuable tools for viewing this institutional change moving forward.

This research shows that Gallery One to be a prime example of interdepartmental collaboration which benefits departments across the institution. Different departments were impacted in different ways - resource for donors, additional information from curators, more interactivity in education, but the end result is the same – more collaboration and connection between departments in the museum. Rather than a siloed institution with little cross-department collaboration, CMA’s Gallery One can be looked to as an example of successful collaboration. This research also reflects the paradigm shift in museums that is discussed in the literature review chapter of this thesis. Survey responses focus on the visitor in numerous ways – from the way visitors learn and engage to the information presented to the visitor so that it can be understood and absorbed.

In addition, the survey results note that while Gallery One is a model for technology adaption currently, it will require a good deal of time, money, and
resources to continue to be the model in the future. This is something that is not noted in the literature as often as it should be. In the past, technology developed at a much slower rate than it does currently. To maintain Gallery One as the industry leader, significant funds and resources must be devoted to the space. This is particularly important for other institutions to consider before implementing large scale technology plans at their own institutions. In essence, it's similar to saving up to buy a car and forgetting that you have to put gas in it. Technology takes maintenance, updating, and time and museums implementing it must be prepared to take that on over the long term.

Further research would be needed to explore this topic over a long period of time to see how Gallery One continues to impact the museum. This additional exploration could allow the theoretical frameworks to be applied in a more direct way, rather than being used as lenses. This research has shown me that the implementation of technology like Gallery One is a truly long-term project that continues to grow and change. The Cleveland Museum of Art is perfectly positioned to lead other museums into technology implementation. Future research could address their position as leaders in the field over time in a more complete way.
References


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Appendix A: Timeline of Events from the Cleveland Museum of Art Website

(“Project Milestones,” 2012)

1999
Facilities Master Plan identifies current and future needs

2001
Rafael Viñoly named architect

March 2005
Board of Trustees votes to proceed with first phase of project

Spring 2005
Permanent collection galleries de-installed

Summer 2005
Portion of museum staff moves to downtown Cleveland

October 2005
Ground broken for east wing

January 2006
Museum closes for renovation for six months while programs continue in venues around Cleveland

July 2006
Renovated Marcel Breuer-designed education wing begins reopening

October 2006
Exhibitions resume with Barcelona and Modernity

June 2007
New central utility plant substantially complete

October 2007
Expanded parking garage opens

January 2008
1916 building ready for art installation

Spring 2008
East wing ready for art installation

June 2008
Public opening of 1916 building main floor

Summer-Fall 2008
Abatement and demolition for west wing and atrium construction
Fall 2008
The Kelvin and Eleanor Smith Foundation Special Exhibition Hall in the new east wing opens with Artistic Luxury: Fabergé, Tiffany, Lalique

June 27, 2009
Upper level of east wing opens

February 28, 2010
Gartner Auditorium reopens

June 26, 2010
Lower level 1916 building galleries open

October 28, 2012
The Ames Family Atrium, Museum Store, Provenance and Provenance Café open

December 12, 2012
The museum's new focus space in Gallery One opens

December 26, 2012
Lower level 1916 galleries featuring late medieval, Renaissance, and Islamic art open.

January 21, 2013
Public opening for Gallery One, a 12,000-square-foot interactive learning center.

June 22, 2013
North wing galleries open

December 2013
West wing galleries open
Appendix B: Gallery One Questionnaire

The Ohio State University Consent to Participate in Research

Study Title: Interactive Technology & Institutional Change: A Case Study of Gallery One and the Cleveland Museum of Art

Researcher: Lainie Chrisman

Sponsor: N/A

This is a consent form for research participation. It contains important information about this study and what to expect if you decide to participate.

Your participation is voluntary.

Please consider the information carefully. Feel free to ask questions before making your decision whether or not to participate. By completing this questionnaire and returning it to the researcher (Lainie Chrisman) you are consenting to participate in this study. By completing and returning this questionnaire, you are confirming that you are 18 years of age or older. You are consenting to the publication of your responses associated with your job title in the thesis of the researcher (Lainie Chrisman) by The Ohio State University.

Purpose:

This study aims to gather data about the implementation of a large scale digital media program and its affect different parts of the institution.

Procedures/Tasks:

Participants will be asked to answer a brief questionnaire. Any further information that participants wish to give will be gladly considered. Participants may skip any questions they feel uncomfortable answering.

Duration:

You may leave the study at any time. If you decide to stop participating in the study, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with The Ohio State University. This survey should take no more than 30 minutes to complete.
Risks and Benefits:

This study aims to explore and add to current trends regarding the inclusion of digital media in the museum. There will be no direct benefit. Participants will, however, gain a more complete picture of their institution and the impact of digital media. Participants will receive an electronic copy of the finished research.

Confidentiality:

As this study aims to compare the perspectives of different departments within the museum, job titles and descriptions of duties are necessary. As some positions are unique and the job title could only refer to one person at the Cleveland Museum of Art, confidentiality cannot be assured. In addition, there may be circumstances where information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law. Also, your records may be reviewed by the following groups (as applicable to the research):

• Office for Human Research Protections or other federal, state, or international regulatory agencies;
• The Ohio State University Institutional Review Board or Office of Responsible Research Practices

Incentives:

There are no incentives offered for this research project.

Contacts and Questions:

For questions, concerns, or complaints about the study please contact Dr. Margaret Wyszomirski (Principle Investigator) via email at margaret.wyszomirski@gmail.com or by phone at (614) 292-7183.

You may also contact Lainie Chrisman (researcher) via mobile phone at (937) 522-1358 or email at lainiechrisman@gmail.com.

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.
Gallery One Questionnaire

Instructions:
Please answer these questions as thoroughly and accurately as possible. While some questions may feel outside of your duties or department, please answer to the best of your ability from your perspective. Please return your completed questionnaire within ten days of reception to lainiechrisman@gmail.com.
Your participation is greatly appreciated. Thank you for your time.

• Title & Department:

• Please provide a description of your job duties:

• Please describe any challenges and benefits your department has experienced since the opening of Gallery One:

• From your perspective, how has the implementation of Gallery One impacted the following:
  ◦ Donor relations:
  ◦ Grant proposals:

• From your perspective, in what ways has Gallery One affected the following:
  ◦ Audience engagement:
  ◦ Learning in the museum:
  ◦ Visitor experience:

• From your perspective, how has Gallery One affected curatorial decisions and practice:

• From your perspective, how has the implementation of Gallery One impacted the following:
  ◦ Accessibility to and value gained by visitors to the CMA:
  ◦ Future of the museum:
• From your perspective, do you think the implementation of Gallery One has brought about institutional change? Why or why not?

• If you have additional comments, please detail any additional relevant information below