

The Learning Trip:
Using the Museum Field Trip Experience as a Teaching Resource
to Enhance Curriculum and Student Engagement

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Submitted in Partial Fulfillment of the Requirements for the Degree
Master of Science in Education

School of Education and Counseling Psychology

Dominican University of California

San Rafael, CA

May 2011

Acknowledgements

I would like to thank Dr. Madalienne Peters and Dr. Sarah Zykanov for all of their guidance, support and words of wisdom throughout this process. They have challenged me to be a better researcher and academic which has led me to be a life-long learner. Thanks go to my colleagues who have supported me throughout this process and encouraged me to keep going. Most importantly, I wish to thank my parents and my husband, who have always supported and encouraged me and showed me that no matter what, I can achieve anything. Thanks to them for always believing in me.

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Abstract

Teachers are forced to use state-adopted texts, approved materials and methods in order to facilitate learning. The creativity of designing a lesson plan that meets the needs of each student, while fostering the imagination and creativity, can be all but lost when constrained by such parameters.

So what can teachers do to enhance the learning process for students? Many teachers are turning towards alternative sources of information to compliment their lesson plans. One such source that can provide a wealth of knowledge and unlimited access to cultures, ideas, history and knowledge from all over the world are museums. Many of the world's most popular and renowned museums have begun to enhance their research divisions to include areas that assist educators in complimenting their lesson planning and curriculum.

The purpose of this study is to identify the various ways museum resources can enhance curriculum and lesson plans for teachers, and review the impact of such resources on student engagement and learning. Four key elements have been identified that need to be in place in order to have a successful and meaningful fieldtrip experience at a museum. These four elements are as follows: pre-planning, interaction, task-oriented activities and follow-up. This study outlines how to incorporate these four elements and outline the specific ideas behind what makes each step successful in this unique learning experience.

Chapter 1 Introduction

As a young student growing up in New Jersey, I always looked forward to the annual school trips to various museums. My favorite trips were always to the Museum of Natural History where I would see huge displays showing what life was like during a forgone era. I would imagine myself in their place wondering what my experiences would be like in a different time. Museums have always opened up a whole new world to me. Museums make history, science, art etc. come alive for the visitor. I have always found that having an experience, being a part of something you can see, touch, hold and smell creates a much deeper learning then can be obtained from just reading out of a text book. One of the greatest gifts that children have is their imagination. Unlocking that imagination can be the key to any teacher's success. For me seeing what I was learning about made it all the more real to me. My adult life has proved no different and it has been the magic that museums can provide as learning tools that has made me into a life long traveler and learner.

I had a chance a few years ago to see an exhibit on the Titanic. This exhibit was unique as it combined an experience with artifacts. I was able to walk thru exhibits of the Titanic's interior and touch a piece of the recovered hull from the ocean floor. I experienced the same simulated temperatures that the passengers endured and even followed a specific passenger thru the experience to learn as to what would be their fate. That experience has stayed with me and exemplifies what a guided museum visit can do to support learning.

I have been fortunate to visit some of the most famous museums and exhibits in the United States and abroad. How can we introduce the younger generation to the value of museums? How can teachers use museums to enhance the teaching experience both in the classroom and on field trips? Can teachers still give students that interactive museum experience

in a classroom without going? What technological multi-media resources do museums have that allow teachers to enhance the learning experience? These are the questions examined throughout this paper.

Museum integration in the elementary classroom can aid curriculum effectiveness and unlock a child's imagination creating a unique learning experience. Students learn in many different ways. They effectively have different learning styles. These different styles are categorized into three types; visual, auditory and kinesthetic. Educators are often trying to figure out how to differentiate their lessons in order to reach a classroom of unique and different learners. What if we could reach those learners all at the same time? We could then effectively guarantee we are suitably appealing to the multiple intelligences of a diverse student population. We can achieve this by incorporating unique museum field trip experiences.

Statement of Problem

Students are not learning effectively by using traditional textbooks and approaches in the classroom. The classroom environment does not promote sufficient engagement with the content. There is a need to look outside the classroom for other resources that can enhance curriculum effectiveness. While often supplemental text materials are used by educators to present information, the engagement and excitement of student-centered learning is often lost.

Purpose Statement

The purpose of this study is to identify the ways museum resources can enhance curriculum and lesson plans for teachers and review the impact of those various resources both on student learning in the classroom and as a part of an enhanced field trip experience.

Research Question

How can museum resources aid in curriculum planning and enhance the learning experience and student engagement? How have museums evolved to offer access and resources to educators around the world?

Theoretical Rationale

The theoretical rationale behind the interest in this research topic is student engagement theory and constructivism. Students need to be engaged in learning in different ways and beyond the classroom. Often times it is the experiences we have during our elementary years that we take with us throughout life. As educators, figuring out how to present those experiences in an engaging way is our biggest obstacle. The Student Engagement Theory is aimed at understanding student motivation and meaningful involvement in the learning process. The basic principles behind the idea of engaged learning is that, "...all student activities involve active cognitive processes such as creating problem-solving, reasoning, decision-making and evaluation." (Kearsley & Shneiderman, 1998, p.20). Kuh (2009) describes student engagement as, "...the more students study a subject, the more they know about it, and the more students practice and get feedback from faculty and staff members on their writing and collaborative problem solving, the deeper they come to understand what they are learning and the more adept they become at managing complexity, tolerating ambiguity, and working with people from different backgrounds or with different views" (p.5).

What are the barriers to the learning process and what triggers remove those barriers that can lead to active student participation in the education process? Creating opportunities to learn by utilizing the engagement-based learning and teaching approach is one possibly way to break through those barriers. The Engagement-Based Learning and Teaching approach (EBLT) is

made up of three separate domains: cognitive (different beliefs and values), emotional (motivation and feelings) and behavioral (habits and skills) (Jones, 2008). This approach suggests is that we need to consider all of these aspects not just in the classroom but in the entire school and learning community to engage students and create life-long learners.

We can also look to the idea of constructivism for some understanding as to how students learn and why figuring out what engages them is so important. Constructivism suggests that through experiences and meaningful exchanges, students can put personal meaning and understanding to ideas, which aid in their learning process. There are three types of questions that should be considered when considering Constructivism. These questions are:

How do you acknowledge that idea and knowledge are actually constructed in the mind of the learner? How is active learning created? and how is the environment or situation created or designed to make it accessible (Hein, 1998)? The three questions can assist in the teacher in understanding how the student may view an idea or exhibit. The answer to each of these questions could essentially influence how each student experiences their own learning. “It is not only difficult but almost impossible to learn something without making an association with familiar categories” (Hein, 1998, p.156). This idea that Hein suggests, makes possible note of the importance of preparation in order to activate ideas. Given the topic of this paper, one can surmise that the “take away” from the museum field-trip experience will be greatly influenced by a student’s background and prior experience.

This is a compliment to student engagement theory as meaningful exchange is the focus. In order to have that meaningful exchange, a student and teacher must be fully engaged in the content. What makes an experience meaningful? This can be different to each individual, which is why presenting information in many different ways is crucial to creating deeper learning.

Exploring how we can present information by utilizing museum resources is one way to engage students.

Assumptions

Using a museum fieldtrip experience as a resource allows students to interact with content leading to an enhanced learning experience. Online museum resources offer teachers access to content that enhances planning and can appeal to various learning styles.

Background and Need

Key programs at several museums are examined through interviews of education personnel. Observation of various exhibits and education centers in the museum as well as the virtual environment and review of teaching materials are explored. Class trip observation allow for first-hand accounts of museum field-trip experiences.

The International Center For Leadership Education tells us that an engagement-based learning and teaching approach, encompasses 6 objectives: cultivate one-on-one relationships, learn new skills and habits, incorporate systematic strategies, take responsibility for student engagement practices, promote a school-wide culture of engagement and professional development to increase student engagement (Jones, 2008). Incorporating and meeting all of these elements into the preparation of a curriculum unit, takes time and resources.

Cultivate one-on-one relationships

We can define cultivating relationships in many ways. We can think of this in terms of relationships from teacher to student, student to student or student to content. Having the ability to make information relatable to students' begins with creating a trusting relationship. The student needs to trust in the teacher that he or she will be led through a series of exercises to retain information. Creating a relationship between student and content is also a challenge in

education. “The one-one-one relationship between student and teacher is the critical element that can lead to increased student motivation and higher levels of engagement in academics and school life” (Jones, 2008, p.1). How can we make this information seem relevant and important to this student? Different students learn and take away different ideas from learning. But creating a relationship first by aligning past experiences up with the learning goals, and creating an element of trust between teacher and student, could be a good first step in engagement-based learning.

Learn new skills and habits

If we take a look at the second objective, learn new skills and habits, suggests’ to us that educators can learn new skills and positive habits to add to their toolbox (Jones, 2008). We can also translate this use of new skills to show students they can source new information, not just from the school site but also from other areas in our community. Just as providing continuous professional development for educators and the school community alike, creating these “habits” at a young age assists in forming a child’s personality and their likes and dislikes that they may carry throughout their adult life. These educational experiences could also affect the type of career one chooses in adulthood. For the purpose of this study, museums can be the catalyst for students to seek out new ideas and allow them to pursue additional study in areas of interest.

Incorporate systematic strategies & taking responsibility for student engagement practices

These are two elements we should discuss in tandem as one directly affects the other. Teaching strategies must be consistently reviewed in order to make sure student’s are receiving the support they need. Constant reflection on the responses of student’s, help shape how we plan the following lesson. In order to engage students effectively, an educator must review and reflect on their approach and consider these questions;

What visual cues did I see that made me realize that the students were grasping the concepts being presented?

Did any of the students become distracted during the activity? What were they doing?

Did the distracted student come back into the group or remain outside of the learning process and project?

What part of the lesson did it seem that the students were most enthusiastic about?

What part of the lesson did the students seem to not find interesting? How did I know this?

How will I apply what I have learned when planning instruction in the future?

All of these questions I feel can assist an educator in shaping their teaching strategies to better engage students'. It is the educator's responsibility to create engaging lessons to meet the needs of various learning styles (Jones, 2008).

Promote a school-wide culture of engagement

Promoting an environment where student engagement practices and student centered learning is embedded in the culture is the key to its' sustainability. Fullan (2005) tells us that, "Changing whole systems means changing the entire context within which people work. Contexts are the structure and cultures within which one works" (p.16). In order to be successful at creating innovative and engaging lessons for students', the school needs to be supportive of that type of thinking. Administrations need to encourage thinking out-of-the-box, allow meaningful collaboration, sharing of resources and allow educators to explore various ways to communicate their messages. Through those new messages, student's can become active learners.

"Active learners tend to do better in their school careers, and not just in academic terms. They tend to have better motivation and better skills, especially in new and difficult situations. They actually learn how to learn, which is the best thing they can ever hope to achieve" (Talboys,

2010, p.27). Is this not what we want for our students? For them to not just be actively engaged and responsible for the depth and breadth of their learning but for it to carry over so they can become active participants in the school community as a whole. The expectation needs to be put in place that the school community will accept nothing less than teachers who provide meaningful, engaging and relevant lessons.

Professional development to increase student engagement

Providing teachers with the opportunities to continue their professional development assists in creating a positive working environment. In order for a culture to exist that promotes students to feel engaged in learning, teachers need to feel that they are engaged as well. By allowing educators the opportunity to maintain their life-long learning pursuits, a school-wide “learning” culture is maintained and supported. Professional development can be many different things for an educator. However the fundamentals of professional development should be agreed upon. “...professional development should fundamentally be about teacher learning changes in the knowledge, beliefs, and attitudes of teachers that lead to the acquisition of new skills, new concepts, and new processes related to the work of teaching “ (Fishman, Marx, Best & Tal, 2003, p.645). This directly relates back to the second element of the Engagement-Based learning and teaching approach, learn new skills and habits (Jones, 2008).

When educators take responsibility for building student engagement into their curriculum, meaningful interaction with content slowly emerges. Modeling this educational behavior at an early age, as part of a school field trip for example; consistently supports the idea of creating life-long learners. Teachers can assume some of the responsibility for their own professional development by looking outside the school site and toward this non-traditional

resource for content and subject presentation. Differentiating the experience for the learner is at the heart of student engagement.

Chapter 2 Review of the Literature

Historical Background

The change in function and philosophy of the museum as an environment, changed from the early part of the nineteenth century to the late nineteenth century. During the early nineteenth century, museums were mainly comprised of objects, artifacts and ideas of those governments and countries who utilized museums to show off their superiority and riches of plunder (Hein, 1998). Museums were almost used as an advertisement for the state or nation. In the book, *Museums, Media and Cultural Theory*, Michelle Henning notes, “This process of democratization involved a redistribution of wealth and importantly, of access to knowledge. It also involved the dissemination of the ideals of democracy. The ‘treasure’ which found its way into the public museums of Europe and the New World became a means of communicating democratic ideals” (Henning, 2006, p.13).

The role of museums changed in the later half of the nineteenth century. Hein tells us that as populations moved more towards the cities, government had an increasingly broader role in social services and education (Hein, 1998, p.4). “Museums were included among agencies available to help people better themselves and to appreciate the value of modern life” (Hein, 1998, p.4). Museums became less about conquests and more about a reflection of all types of life and societies. The educational aspect of museums has always been at the heart of their function. The change from the start of the nineteenth century to the latter half of it, was a shift from what the government wants you to know and learn about, a controlling factor, almost propaganda for the state, to a more community focused, broad perspective on life, societies, ideas and innovations. One of the more interesting criticisms of museums of the nineteenth century were

that they were viewed being somewhat elitist which was often in conflict with their goal of educating the public (Hein, 1998, p.6). This does beg the question, what kind of equal opportunity and access was there to education for the masses? This was a society that was often dictated by class.

Key Legislation

The 1965 the Johnson administration had a mandate that enforced; “equal educational opportunity, supplementary educational services, and special education for the disadvantaged” (Hein, 2000 p.115). This created an educational environment under duress. Public schools were forced to figure out ways to supplement their curriculum to develop new programs that could appeal to many types of students and learning styles (Hein, 2000). Schools turned to museums for additional support and help. This meant that the responsibility was not solely on the shoulders of our school systems but a shared responsibility of our community and its’ institutions. This slowly paved the way for museums to consider the importance of a broader role in the education of its’ patrons. Today, we consistently see the creation of various educational programs that are designed to challenge and engage students and support teachers. Examples of such programs are discussed in greater detail throughout this paper.

Museums were naturally the perfect fit for the educational gap that educators were faced with. Finding news ways to supplement curriculum and offer students a broader perspective and hands-on opportunities for learning became important. What followed was a time filled with new museums being established to enhance all of our learning disciplines. Additionally, in 1965, the United States government created the National Endowment for the Arts (NEA) and the National Endowment for Humanities (NEH), which legally suggested that museums are a recognized source of education. The NEA was established as an independent agency of the federal

government. The NEA is; “dedicated to supporting excellence in the arts, both new and established; bringing the arts to all Americans; and providing leadership in arts education.” (National Endowment for the Arts, n.d., para. 1). The NEH provides “...grants for high-quality humanities projects in four funding areas: preserving and providing access to cultural resources, education, research, and public programs.” (National Endowment for the Humanities, n.d., para. 2). This move to create new organizations to further the support of museums resulted in the establishment of the Institute for Museum Services under the Museum Services Act in 1976. This act gave actual legal ground that museums are an educational resource (Hein, 2000, p.115). In 1996, The Museum and Library Services Act (MLSA), “established the Institute of Museum and Library Services within the National Foundation on the Arts and Humanities. The new agency combined the Institute of Museum Services and the Library Programs office which had been a part of the Department of Education since 1956” (Institute of Museum and Library Services, n.d., para. 1). Even in today’s society, the US government actively looks at continued legislation for museums. In December of 2010, President Barack Obama signed the Museum and Library Services Act of 2010 reauthorizing the Institute of Museum and Library Studies. The act also calls out the advancing roles of various libraries and museums in education, life-long learning and preservation (Marsteller & Bitter, 2010).

The Museum Experience

Museums are constantly changing their approach to education to appeal to the community and its needs. How information is presented and experienced must be constantly refreshed to captivate an audience. Children today are consistently bombarded with messages in the media and digital information. Museums need to seek out a way to relate to this plugged in generation while maintaining the integrity of the experience and exhibit. Many museums today are using

interactive elements even theatrical in nature to appeal to these finicky audiences and provide a unique “experience” (Hein, 2000). Museums are often viewed as a form of entertainment and entertainment changes over time. In terms of this research, what we want to understand is how we can get students excited about the museum experience and what drives the potential learning that can take place.

How one can experience a museum can be different from individual to individual. We must gain access to the thoughts and concepts behind what drives our emotions to make something emotionally relevant to us. “Experience becomes educationally meaningful only when it ceases to be private and acquires shareable form” (Hein, 2000, p.109). Museums are often arranged in such a way that there is often only one particular way to learn from them. This is called ‘museum literacy.’ It suggests that there is a specific way to read objects and gain knowledge or information from them (Hein, 2000, p.110). This is a very static way of learning and if one is not educated in how to read those objects for validity, no real exchange of information can take place. Thus, museums are turning towards creating interactive experiences to enhance deeper learning and effectively increase recall of the content. Museum literacy is actually a way to understand human interactions (Hein, 2000, p.111). It is the museum’s responsibility in this ever-changing society to show us how to convert the objects and exhibits we see, hear, feel and touch into personal experiences that we take with us. When a museum sets up an education department for class trips, professional development etc. they are essentially taking on the role of teaching that ‘museum literacy.’

Interactive Experience Model

The exhibit experience has to take us on a journey to be relevant and stay with us. The amount of information that we are faced with in a museum environment is overwhelming. Therefore, we

need to examine how museums can create an environment to promote education and enhance the learning experience. According to Falk and Dierking (1992) interaction with three contexts comprises the museum visit. These contexts are: the personal context, the social context and the physical context. The personal context suggests that through our own personal experiences, background, bias, interests and experiences at the museum are shaped and defined differently from individual to individual.

The social context implies that depending on whom we are with at the museum, i.e. class trip of fourth graders, our parents, a group of other teachers engaged in professional development will also influence the type of experience we might have. If we are experiencing the museum with someone who has a lot of knowledge on a particular subject or idea, your experience might be enhanced. Other such factors in the social context could be, how crowded is the museum? Which might influence how closely one can interact with an exhibit. How friendly and resourceful is the staff of docents or educators (Falk & Dierking, 1992)?

These are all factors that could influence the experience. The physical context explains to us how a visitor is affected by the actual building or environment of the museum. This could be, for example, how the temperature of a butterfly habitat exhibit or the availability of rest areas impacts visitors. The layout of the actual exhibits and how you move through the museum, including accessibility issues could be factors affecting the physical context (Falk & Dierking, 1992). Falk and Dierking tell us that each context is consistently interacting with the other shaping our experience. As many of these aspects can change during a visitor's trip, the experience and level of interaction will change (Falk & Dierking, 1992). In terms of how these three contexts affect the individual interpreting a given exhibit, Falk and Dierking tell us, "whatever the visitor does attend to is filtered through the personal context, mediated by the

social context, and embedded within the physical context” (Falk & Dierking, 1992, p.4). The authors continue to explain to us that the choices that a visitor makes (within each one of the three contexts), are actually the difference between the possible or potential museum experience and the actual experience they have (Falk & Dierking, 1992).

We now understand how a visitor interprets ideas and concepts in the museum. We understand what motivates and engages visitors to have a meaningful experience. Let’s consider a look at a specific scenario for learning, the field-trip experience. In Henderson & Atencio’s, (2007) *Integration of Play, Learning and Experience: What Museums Afford Young Visitors*, the author’s describe learning as: “In certain situations and at certain levels, learning is the process of understanding that occurs through children’s perception, encoding, and subsequent retrieval of information that modifies their future behaviors and attitudes” (p.245). For the purpose of this study, this is the definition of learning we will consider when evaluating and understanding the various aspects of the museum experience.

We all remember a time when as young students we visited our local wildlife museum, living farm, aquarium, art museum or toured a historic building or house. How did those experiences shape our understanding of learning? We need to take a look at how fieldtrips to museums can enhance the curriculum from the classroom and make it exciting, relevant and meaningful. What about fieldtrips to museums makes learning exciting? For a student that is otherwise not motivated, engaged or disinterested in learning or the classroom setting, fieldtrips can be somewhat motivational (Millan, 1995). Millan describes for us five considerations in facilitating a fieldtrip experience, local politics, logistics, linkage to curriculum, timing, and accessibility (Millan, 1995).

For the purpose of this research, we skip the first consideration, local politics, and focus on those elements directly affecting curriculum and student engagement. When planning a trip or any lesson for that matter, a good teacher will always come up with a plan. Field trips are certainly no exception. Before a fieldtrip, an educator should visit the museum site to explore what the site has to offer (Millan, 1995). If we think in terms of the Interactive Model by Falk and Dierking, there are those three contexts that will be affecting each student's visit; personal, social and physical (Falk & Dierking, 1992). While as a teacher we might not be able to address the personal context in a student, we can be aware of it. Educators can affect the social and physical contexts. For example, judging from the physical size, layout and specific presentations or talks to be visited, this could change the way an educator sets up the field trip groups. Teachers might consider number of students, the make-up of the students' learning styles and personalities. These are all in the social context.

As previously mentioned, the size or layout or even weather in some cases fall in the physical context and could effect what the schedule of the visit might involve. Anticipating where those triggers are, could be beneficial in planning the visit. How will the groups move through the museum? What specific exhibits do you want the students to focus on and why? There might be time considerations as well to consider and due to the potential size of particular museums, what specific ideas, concepts, performances, exhibits should the students' focus on? Are there areas that can be utilized for group lectures or places to write?

“A field trip that does not have a legitimate link to the curriculum is hard to justify educationally” (Millan, 1995, p. 132). Supporting and improving the curriculum is of course the prime reason for a school field trip. Offering students a new way to experience or learn about an idea or concept is why educators plan them. Ramey-Gassert, Walberg and Walberg (1994) tell us

that in their review of the literature, it suggests that “informal learning in museums can improve science education” (p. 346). We often think of science museums as hands-on learning environments full of experiments. Following on the work from (Wellington, 1990), Ramey-Gassert et al. tells us that museums can increase motivation. Various interactive hands-on science museums offset the in-class textbook curriculum that so often feels removed and lacks student engagement and excitement (Ramey-Gassert et al., 1994). There is a definitive link between understanding something on a deeper level by seeing or touching it and maybe even experiencing it. The availability of artifacts and items at an exhibit to handle should be included when possible in the fieldtrip experience at a museum (Talboys, 2010).

Timing in terms of when in a unit of study do you plan for the field trip experience is an important consideration (Millan, 1995). This timing could be just as important as the fieldtrip experience itself. Teachers could essentially consider using the field trip at the start of the unit to create excitement, lay the background for further in depth text study back in the classroom. Or, the experience could be used to bring the subject matter together towards the middle of the unit, something for the students to use to further their understanding of ideas. Millan tells us that experiential learning theory would suggest that experiences that are first-hand must come early in the learning process (Millan, 1995). Millan notes that allowing time for follow-up after the visit allows for the students to share their experiences and evaluate them (Millan, 1995). For example, upon return from a science museum, questions about specific experiments or ideas can be discussed and examined offering the students even more background and clarification on a particular concept.

Statistical Research

Classroom Realities: Results of the 2007 National Survey of Teachers, Smithsonian Institution Office of Policy and Analysis

A 2007 study (Smithsonian Institution, 2007) focused on surveying history teachers about the resources they could access to enhance their curriculum and teaching from the Smithsonian Museums. The study focused on what types the teachers found useful and were most interested and preferred to utilize in their educational programs. The study hypothesized that because of the No Child Left Behind Act, traditional approaches and resources need to be enhanced using the various forms of educational technology available.

Ninety percent of respondents were from public schools, 5% private schools, 2% parochial and 4% were classified as “other types”. Most teachers said they teach using state standards, approximately 69%, however some used national history standards 7% as well as local district standards 8%. Based on having to use these standards while teaching and the NCLB act, teachers are tasked with trying to get all of the standard content into the school year and still maintain a high level of interest in the content area. Most of the teachers who responded taught social studies alone, but there are some subject overlaps. Approximately one-fifth also teach science (18%) and another fifth math (18%).

Many of the respondents had great access to technological resources to enhance their curriculum: access to computers at 5 years old (84%), color printers (55%) etc. To the advantage and delight to museum is that 90% of the respondents said they do have Internet access in their classrooms. The potential use is there is just needs to be encouraged. That 90% are downloading materials online with 85% saying that they can choose at their discretion and do not need administration approval. In reviewing what types of materials were downloaded the most by educators, individual lesson plans were downloaded by nearly 70% of respondents. These results

could suggest that when enhancing an existing or designing a new museum education program, curriculum planners need to focus on creating topic specific plans for teachers to use. The amount of materials is interesting to note in that on average six different types were downloaded. We can infer that teachers who use the Internet are actively using it in ways to supplement their curriculum. These materials are valuable resources for our educators. It is important to note which websites were most visited when searching for additional resources and materials. The top two were the Library of Congress at 20% and the National Archives at 16%.

What materials are teachers using? This is an important question to answer as it gives better clues on how to best design a museum education program that meets the needs of teachers. Materials listed were; DVDs as the most popular format and downloadable i.e. PDF, audio/video. Low on the list was VHS video (this could be as this technology has become mostly outdated), CD Rom and hard copied materials.

Now that we understand the type of materials used and format, length of lesson is just as important. What length best meets the needs of educators? Fifty minutes was the most common choice for lesson length, however results insinuated that length was tied to amount of class time available. Multiple session units were not chosen by over half of the respondents. Lessons that were too short 15 or 20 minutes were rejected as well. Teachers are inclined to use museum resources as a supplement to their already planned activities.

Most notable out of this survey was using inter-disciplines to teach. Eighty percent of respondents said they would like to use a reading and language arts curriculum based on stories form American History in their classroom. For museums educators this could provide a unique way to present topics and content. Creating lessons that apply to different subject areas is a

creative way to create themed units. It also allows for the constant reinforcement of key curriculum standards.

True Needs True Partners, 1998 Survey Highlights, Institute of Museum and Library Services

The Institute of Museum and Library Services mission is to create strong libraries and museums that connect people to information and ideas (Institute of Museum and Library Services, 1998).

IMLS is responsible for providing numerous research studies, resources and programs that assist the education community in providing opportunities for professional development. The IMLS and the Arnot Art Museum and Elmira College in New York conducted a survey aimed at finding out what educational programs, resources and activities museums in the United States offer to schools. The study took three years and yielded significant metrics that can aid in future planning of museum educational programs and projects for schools. The results offered a framework to refer to when deciding what works in the museum and school partnership.

Findings

Eighty-eight percent of museums in the United States reported have some sort of educational programs. This high percentage indicates that museums find that one of their main key performance indicators is creating thoughtful, meaningful and accessible education programs. Museums spend \$193 million dollars on those educational programs. The measurement of museum instructional hours provided to students per year total 3.9 million hours. With so many instructional hours being logged, who is teaching these students? Seventy percent of museums reported that they employ at least one full-time educator. The typical museum has one fulltime and two part-time employees and five docents that dedicate their time to educational efforts for the museum. This again points to the importance of museums that are focused on teaching. When identifying activities within museums that contribute to education, the most frequent activity was

field trips. Specifically, self-guided 88.4%, trained volunteer guided 72.6% and self-guided 68.8%.

It is important to note that there are new and innovative activities that museums are beginning to engage in. While small in percentage, they play an important role in identifying the future of museum education. Some examples are; a museum school (9.1%) or making available traveling exhibits to schools (15.9%). A perfect example of this is the American Museum of Natural History in New York's Moveable Museum. It can travel to a school site and provide an interactive experience for students. This outlet opens doors to those schools whom might not be able to afford the field trip experience or have location constraints to visit the museum itself. It allows museums to bring their artifacts to the students when the students cannot make it to the artifacts.

The innovative advancements made in museum websites offer educators a new way to resource supplemental materials and information. There are often areas dedicated to pre-planned lessons complete with readings, video clips, worksheets and even assessments. These items are often created in parallel with state standards, which make it easy for a teacher to incorporate. This seamless integration is what makes it easy for a teacher to utilize these resources.

Taking a class on a museum field trip requires a lot of planning and pre-teaching on the part of the educator. Certain age groups might be appropriate for certain type of museums. The survey addressed the issue of grade levels and participation. Grades three to six are the most common for taking on museum field trips. Fourth grade in particular is the most served in the museum environment. It is important to not forget that secondary schools do hold a significant place in the museum experience. Sixty to seventy percent have programs geared specifically to secondary programs. Overall, 46% of all museums offer some type of educational program. This

shows us there is a concerted effort in our community culture to offer educational opportunities outside of the traditional classroom environment.

Partnerships are the cornerstone of any educational program bringing together different sets of people. For a museum educational program to be successful, the museum must forge lasting and mutually beneficial relationships with teachers in various disciplines and grade levels. A professional network needs to be established allowing educators to form collaborative groups. The IMLS reports that schools often make their decisions to visit a museum based on providing and creating informal and unique learning experiences. These two key elements to a museum education program are what engage students and entice schools to visit. The study tells us that teachers hold the influence and drive the decision making when making choices on possible museum experiences and excursions. This is important for museum directors and educators to know as they need to reach this audience in particular in order to gain exposure for their programs.

Linking to Curriculum Standards

The IMLS tells us that museums do report that they are using curriculum standards when planning and designing for educational programs within subject areas. Math standards are most used when planning curriculum at 92%, followed by science at 87%, art 76% and history at 72%. When looking at the materials that a museum offers complimenting school curriculum, respondents consider in-service training, resource kits, museum visits with pre-lessons and museum visits with pre and post lessons amongst the most valued all at or above 97%. This data consistently reinforces how museums are dynamic and responding to the needs of the educational community. Seventy percent or more of respondents reported an increase in the numbers of students, teachers and schools visiting and assisted.

This report provides for us a detailed understanding of what has and what is not working in the museum education environment. This information is key for those museums that are looking at designing or revamping their programs to be more successful. The data gives us clues as to what type of materials are mostly utilized and how are students interacting with them. For museums to be successful in the future, they need to continually assess their relevance to the community as a whole. How they relate or communicate their information needs to evolve as new technologies and forms of communication do. The role of the museum is to make sure they can effectively communicate the meaning behind their collections and create relationships with as many learners as possible.

Expert Interviews

The British Museum- The Samsung Digital Discovery Center

After reviewing this report information, it was imperative to get a first-hand look at how educational programs are being executed at the site level. How are these statistics playing out in real terms? Upon a visit to the British Museum in London, England, I was able to visit a unique educational program called the Samsung Digital Discovery Center. The center is a partnership between the museum and Samsung electronics that allows students and families alike to participate in free workshops and activities utilizing new technologies from Samsung. This merge of education and technology is a unique way to present information and taps into the wired-in generation. The center is funded by a 5-year grant with the technology being refreshed every year. This allows the center to remain on the cutting edge of content delivery. The center has two full-time teachers whom work with the visiting schools to prepare lessons on various topics. There are 5 sessions at the center filled with students 3 days a week. This very popular center and is often pre-booked most of the year by visiting schools. I had the chance during my

museum visit to briefly speak with one of the center's educators. Upon my return to the states, I followed up with additional questions on the center and the role of educational programs.

Program and Environment

The Samsung Digital Discover Center opened in March 2009. The center educator feels that museums can bring a topic to life. Museums can provide opportunities for teachers to use resources that the museum has to enhance teaching. This can be achieved via taught lessons as well as printed information and guidance on how to use the museum effectively. The digital center encompasses many modes of technology which assist in helping children engage with the various collections in the museum. i.e. HD video cameras, digital still cameras, laptops, green screen, sounds recording equipment and digital microscopes. This educator feels that the technology acts as a "pull" to excite students who might be otherwise uninterested in history. The programs are between forty-five minutes in length and run to a full day workshop depending on the complexity of the project. Projects can be as creative and involved as creating video news reports and music videos. As this educator focuses specifically on the digital center, the responses are based on that environment, however she notes that the museum does offer extensive non-digital workshops that have large interactive lecture theater sessions, various multi-sensory and handling sessions with objects that support special educational needs.

Resources for Teachers

How do teachers use museum resources to their fullest extent? This is the question that museums are trying to figure out in order to create and update their programs to be fully effective educational influences. This center educator feels that teachers use the museum in various ways. She has observed that some teachers carefully plan their visits in order to gain the most from the experience while others only engage briefly with objects and is by no means in-depth. This

center educator believes that that in-depth engagement with museum objects is extremely valuable even if it means that students are limited to what they do see at the museum site. She notes that there are large amounts of support materials for teachers in planning their visits, however they are not always downloaded and utilized. When thinking about the follow-up to a museum visit, the center educator points to extensive online resources that are available to teachers to review the museum experience as well as suggestions on additional study and activities. Currently, the center is not utilizing conference call capabilities but is very interested in that possible capability.

Student and Teacher Response

In an evaluation of what students respond the most to, the center educator feels that the creation of a media artifact is considered very appealing. These media artifacts are when students make use of the galleries and objects to serve as inspiration in utilizing the center's technology to create compelling video news reports. In review of teacher feedback, the center educator reports that there is great student excitement during those sessions that involve handling artifacts in some way. The most popular sessions at the center are those related to ancient Egypt or Greece, but she does note that all sessions do book quickly.

George Washington's Mount Vernon- Donald W. Reynolds Museum and Education Center

Enhancing Curriculum

I contacted Ms. Jones, the Education Center Manager/Special Projects Coordinator of the Donald W. Reynolds Museum and Education Center to get a bit more information on the educational programs that Mount Vernon has to offer. This manager has a master's degree in educational psychology with a specialization in art therapy. The position involves the management of the Educational center making sure that all of the interactive exhibits are working and the facility

area is clean. Ms. Jones manages two facilities, one called Hands-On-History, ages 3-8, and the Phoebe Apperson Hearst Learning Center which is a teachers resource center. The Hands-On-History area allows children to learn about George Washington through games and activities. The teacher's resource center gives teachers the tools for research to create lessons, games and activities. Ms. Jones feels that enhancing curriculum through museum experiences can be achieved using interactive methods using museum artifacts. Planning is a key component to making the experience more meaningful to students as well. The education center provides teachers with various planning packets which includes a CD of lessons and student handouts. The resource center itself has many primary research documents and computer stations for educators to utilize when visiting.

Ms. Jones tells us that there are other school programs available all age/grade appropriate depending on the teacher's need. For teachers, the education department has a Summer Teachers' Institute where teachers meet historians and professionals in the history and teaching fields. Ms. Jones feel that it is a wonderful way for all teachers seeking a way to tell more about the history and beginning of our country. The availability of a Distance Learning Classroom which allows classrooms to view a live program in the Education facility is just as important for those teachers and students who cannot enjoy the in-person museum site experience. How did this specific program start? Ms. Jones tells us that the program has been developed over time with a focus on telling story of George Washington. The education center itself was designed with the eighth grade boy in mind as she notes this is the age when boys start to loose their interest in education. The goal is to find new ways to teach history. As this research is also focused on enhancing classroom in the classroom, I felt it important to find out Ms. Jones' thoughts on does she think teachers are using museums resources to their fullest extent. She feels

that so much is expected of teachers in the classroom and that it does take motivation to keep the children interested in the subject matter and curriculum. The teacher who does prepare for a fieldtrip visit to the museum site do have a better classroom experience.. This is the reason, Ms. Jones points out is why the Education Center provides teaching materials in person or through the mail. She feels that it is the duty of the Museum to provide these materials so the story of George Washington is told accurately.

Engagement

Why do you think students can learn better in a museum environment? Ms. Jones tells us that the Education Center is an interactive activity, a hands on experience. As previously mentioned, there are three major movies as well as exhibits that use sensory motion. They literally come alive. Ms. Jones feels that what could be more exciting than to learn history then by experiencing it! In discussing the engagement of learners, we need to gauge the student response to the environment, their experiences and interaction with the museum and resources.

I felt it important to find out what specific aspects of the Mount Vernon environment and educational experience do students seem to respond the most to. Ms. Jones felt that actually touring the historic mansion first before the Education Center are beneficial to learning the story of George Washington. This idea of ordering the experience brings up an interesting thought of it is not just about having the experiences but how and when you have them.

Ms. Jones notes the importance of the interactive exhibits and movie experience as very important. Scavenger hunts at the museum are discouraged as students often have a limited time at the museum and often spend their time looking only for answers rather than enjoying the experience. Ms. Jones also notes that students will often use the walls as desks to write answers, which can be damaging. As part of the fieldtrip process, teachers are encouraged to utilize the

materials the museum provides in order to plan follow-up activities. Different teaching styles and student learning methods vary greatly. Therefore what programs and activities are utilized most is dependent upon what motivates the teacher and individual student more.

After a fieldtrip experience, there are many resources to use to continue study on George Washington. There are printed materials that again can be distributed via mail or the website, and additional lesson plans have been developed. Distance learning programs are also taped for free distribution. There is also a George Washington Biography Lesson booklet developed by the Education department, which can be utilized in the classroom. Upcoming additions include a graphic novel to assist in the learning process.

Chapter 3 Method

The method used in this project is qualitative research using the interview design. The focus is on contacting museum educators and gathering information on their education programs and resources and how they can assist teachers in enhancing curriculum. Research also includes; visiting museums to observe public interaction with exhibits and student field trips, visiting specifically designated educational areas and resources on-site and attending a professional educator classes in a museum environment.

Sample and Site

The sample sites are museum educators that have a direct influence on their museums educational endeavors and community outreach programs. These educators have a varied purpose from focusing on fieldtrip and student education, technological museum resources and professional educator learning initiatives. Museums included cover the following focuses; art, science, natural history/social studies, and “living” history. The museum educator sample comes from the following museum institutions; The British Museum, London, England, Museum of Natural History, New York, The Smithsonian Museum of Natural History, Washington D.C, Smithsonian Air and Space Museum, Washington D.C, The National Archives, Washington D.C, The Holocaust Museum, Washington D.C, George Washington’s Mount Vernon, Mount Vernon, VA, The DeYoung Art Museum, San Francisco, CA, SFMOMA Art Museum, San Francisco, CA, Academy of Arts and Sciences, San Francisco, CA.

Access and Permissions

In setting up the research for this thesis, I identified several types of institutions to explore in order to address different subject matter. These types included; art, science, social studies, and “living” history museums. I began to research museums on the Internet looking for trends in

educational programs and thus planning which museums I could potentially visit. I identified key institutions that had unique educational programs that could potentially provide information on what a successful educational program entails. After initial analysis on the Internet, I attended a “Get Smart with Art” class given by the DeYoung Museum in San Francisco, CA. This was a professional development program for teachers that gives them resources to link works of art within the museum to history and social studies. The experience allowed me to get a first-hand glimpse at how professional educational programs are executed, what they offer the education community and the resources that are available to teachers. I then had the opportunity to visit the British Museum in London, England. I was able to visit the Samsung Digital Learning Center and briefly observe a school field trip working on an activity led by the education coordinator. The coordinator gave me permission to photograph the learning environment and discuss the key objectives of the center. Additional interview questions were sent to the coordinator for continued follow-up on the programs.

I planned an additional trip to Washington D.C to visit the large amount of institutions that are located there. The museums included: The Smithsonian Museum of Natural History, Washington D.C, Smithsonian Air and Space Museum, Washington D.C, The National Archives, Washington D.C, The Holocaust Museum, Washington D.C, and George Washington’s Mount Vernon, Mount Vernon, VA. The museum visits were focused on; gaining access to contact information, educational materials available for teachers and general observation of exhibits and their interactivity and engagement. When possible, education centers directed at young people within the museum site were also visited and observed. After this trip I was able to gain permissions from various educators to email interview questions to again follow-up on their

education programs. San Francisco based museums were also visited and explored online to get a better understanding of how state standards are incorporated into educational programs.

Ethical Standards

This study adhered to the American Psychological Association guidelines for safeguarding the welfare of human subjects (American Psychological Association, 2009). Additionally this study was reviewed by the Dominican University of California Institutional Review Board for the Protection of Human Subjects, was approved and assigned number 8232.

Data Gathering Strategies

Data was gathered in three distinct ways: observation on site, review of museum educational materials and interviews of museum educational personnel. The questions for museum educators were developed with three distinct topics in mind; museum site and educational program specific, student centered, and professional development. By categorizing the questions in this way, a well-rounded understanding of a museum's educational capacity can be examined.

Additional questions were added or deleted to best tailor to the subject and the educational program and institution researched.

For educational departments in museums

1. How can museums aid teachers in enhancing their curriculum?
2. What specific programs and resources does xxx museum have that would be of great benefit to educators?
3. Do you think teachers are using museums as resources to their fullest extent? Why or why not?
4. How did your specific xxx program start?
5. What other types of programs do you think teachers could benefit from in the museum environment? Both on site and visually?

6. Do you offer printed materials for teachers?
7. What types of continuing education programs do you offer educators?
8. Which educational programs do you find are most used by teachers?
9. Are there any other particular technologies that you find are utilized more?
10. What areas of your museum do teachers tend to focus on?
11. What is the most common grade level that visits the museum on a school trip?
12. After a school visit, what specific resource materials can teachers use to follow up the visit and enhance the lesson?

Data Analysis Procedures

The goal of the educator interviews was to gain a better understanding of how a museum views their education program and how they feel they are accommodating the teacher in their education efforts. I reviewed the interview notes and quotes for common themes. As a parallel to that, I looked for evidence, when appropriate, in the actual museum environment of certain ideas that the museum educator's pointed to. This could have been environmental factors, how exhibits or artifacts are presented and the overall accessibility of the educator tools. Ideas were supported by observing how class fieldtrips were interacting with the museum during a visit. Two interviews discussed in detail, had several themes about them that are important to note.

Chapter 4 Findings

Description of Site, Individuals, Data

The British Museum, London England, The Samsung Digital Discovery Center

My visit to the Samsung Digital Discovery Center at the British Museum was complimented by the fact that there was a school field trip for a second grade class in session taking part in the center's activities. The center is outfitted with several computer stations around the room allowing students to share space and work independently as they move through an activity. There are large screens on the walls that can be utilized for presentations or video. One of the most exciting pieces of teaching technology in the room is a green screen that can be used for stop motion video creation. A large overhead projector displays the teacher's computer to model a lesson if need be. The day that I visited, the students were working on an ancient Egypt project, which is one of their most popular subjects according to my interview with the center's education coordinator.

While observing the class during their session, I was able to speak with the visiting school's teacher who explained that the benefit of such a program assists in bringing the curriculum to life for these students. This second grade teacher mentioned that she prepared her students for this visit by utilizing some educational materials from the museum specifically on ancient Egypt. It allowed this teacher to set the stage for what her students were going to experience. As I discovered, the center provides online resources to allow the educator to create a lesson in compliment with the museum trip. "Classroom Packs" are available on the museum center's website that include cross-curricular literacy activities, PowerPoint support notes, posters, online tours and presentations. For example; in reviewing a lesson on Egypt entitled

“Nebamun goes hunting,” the classroom resource guide tells us that each activity follows a particular format: whole class introduction, whole class focused work, paired or individual independent work and whole class plenary. The guide also provides information on which skills it covers. This allows the educator to follow a multi-disciplinary lesson providing support in various subject areas at one time. This is a key step in fostering student engagement and appealing to various learning styles. By providing the teacher with these resources up front, they can prepare a class for a field-trip experience. An educator is essentially creating a relationship with the material and making it relevant for the student for when they observe the artifacts on-site. Building that background and creating a base for the student to draw from before the field trip experience fosters deeper learning of subject matter.

George Washington’s Mount Vernon & the Donald W. Reynolds Museum and Education Center
My experiences at George Washington’s Mount Vernon appealed to all of my senses with a focus *experiencing* history. Living history sites can provide a truly unique experience for a student. They provide an opportunity for an individual to really experience history by appealing to all of their senses. These sites provide a chance for someone to be transported back to a particular time, place and circumstance. Recreating that time brings history to life in a unique way. A perfect example of such a location is George Washington’s Mount Vernon Estate in Mount Vernon, Virginia. I had the chance to visit the estate which I had not done since I was a young student during my elementary years. This was a unique opportunity for me to review my experiences then as compared to my adult visit.

After arriving, I sat through an introductory short film on what there was to do and see at Mount Vernon. The film provided me with a way to plan my day and give me a brief history of the estate and George Washington. I moved onto the tour of the house itself which is completely

decorated as it was during the days George Washington lived there. It was a powerful experience looking at the artifacts in the rooms, knowing that some of the items, especially those in his study were used by him. Each item had a unique history that the docent was eager to share. Seeing the actual desk and chair that George Washington sat at was very powerful. I toured the outer buildings and then sat through a talk with Martha Washington. This was an interesting experience, as she would discuss with an audience what her life was like living with the general. Audience members were able to ask her questions that provided a real-world experience to those listening. She brought history to life.

I completed my day with a walk through of the Donald W. Reynolds Museum and Education Center. The museum and education center is full of interactive exhibits that show George Washington throughout different periods of his life. There are various theaters that show short films on such subjects as; the courtship and marriage of Martha and George Washington, three military engagements, and a montage about George Washington's legacy. Many of these presentations offer a sensory experience as well. For example; in the Revolutionary War Theater, visitors experience real conditions of various events. This could be seat's rumbling in conjunction with cannon fire during the video or snow falling in the theater when Washington crosses the Delaware. This is a truly engaging way to capture the attention of the audience.

The Phoebe Apperson Hearst Learning Center, is another area of the education center that is for teachers and educators alike to utilize in planning for lessons, museum visits and research projects. This center has computer terminals, many resource books and curriculum guides to assist the teacher in creating meaningful lessons and experiences. There is a vast amount of printed materials available for teachers as well including a Teacher's Guide. The teacher's guide I found quite interesting as it provided a way for educator's to lead their student groups thru the

museum exhibits. The guide offers background information on a particular section of the museum and has two key areas that assist in engaging students; questions to consider and things to look for. These guides help the teacher make sure they hit all of the key points that Mount Vernon feels are the most important ideas when learning about George Washington. This type of guide I feel is invaluable to a teacher while moving thru the museum with a class. The types of questions to consider offer a good opportunity for further exploration of ideas and a good measure of student learning during the visit.

Designing a Successful Field Trip Experience

Having visited such different museums, no one experience I had was the same as the next. That of course is the point of museums, in that the experience is different for each learner. Knowing that one student to the next might arrive at ideas differently and take away different levels of learning, what can an educator do to create the best possible environment and basis for that learning to happen? There are four key steps that come out of my experiences interacting with the available educator resources, both printed and online, museum environments and for our purposes in this chapter, from the interviews with key museum educator professionals. These steps are: Pre-planning, interaction, task oriented activities and follow-up. By implementing these steps, an educator can be certain of creating a field trip experience that enhances curriculum and engages students.

I. Pre-planning: creating background and relationships to content

As educators we all believe that in order to introduce a new concept to a student teachers need to build background. Figuring out how to make the idea relatable to a student in such a way to activate that background knowledge they already have is key. For example, before reading a chapter out of a social studies book on California Missions, an educator might consider the

discussion and review of key vocabulary. One might consider showing pictures of what a California Mission looks like, what types of people would you find there etc. Building this background allows the student to put together a picture in their mind like a jigsaw puzzle. This puzzle will be different for each and every student. Some students may have more pieces than others. Some students may be missing different areas of the puzzle. This is all a reflection of what we draw on in our mind that helps us plug-in those pieces. Establishing the learning goals for the upcoming lesson, reviewing any key vocabulary are also ways to build background. So why would we not do the same thing for experiences? (Namely, museum experiences and fieldtrips?) As pointed out by Ms. Jones, the Museum educator from George Washington's Mount Vernon, pre-planning is key to the process of learning in their environment. Getting the George Washington story correct is their job. By providing the materials to do so, teachers can be more successful in fulfilling this goal.

When students visit a museum for the first time, it can be overwhelming, so much to see and do. Establishing up front in the classroom what the learning goals of the visit are and the expectations that are being sent is another key factor in setting the students up to have a successful museum experience. For example, as an educator if you were to take an elementary school class to see the British Museum, the amount of artifacts would be overwhelming. So planning the visit in conjunction with a particular topic or unit builds background. As mentioned previous, when at the British Museum, I observed an elementary class in the Samsung Digital Discovery Center. After a brief discussion with their teacher, I found out that she had been teaching the students about ancient Egypt prior to their visit and utilized some of the center's online resources to prepare her students for the visit. This educator was using the museum and specifically one of the Samsung Digital Discovery Center's projects to enhance the curriculum

and bring the ideas to life for the students. The project was there to engage and interact with the students in a way to support their learning of the ideas.

II. Interaction

“There can be no learning (or meaning making if there’s been no interaction”

(Hein, 1998, p.136).

Once a class arrives at a museum site, how will students learn best? Every student of course has their own learning style but interaction with exhibits, artifacts etc., could greatly increase deeper learning. The often brief encounters that a visitor might have in a museum does seem to lead to learning and based on a pleasurable encounter can affect the future behavior of the visitor (Hein, 1998). To truly understand an object of study, it is not enough to just see a picture of it. If you are able to hold and feel it, that experience of engaging several of your senses in the process of learning could affect your recall of the artifact. We can all remember a time when something happened to us i.e. scoring a winning goal in a soccer game or receiving your high school diploma. We remember them because they are actual experiences that have emotions tied to them. These emotions could be how you were feeling at the time, the environment around you, even the smell of the environment. We have an uncanny way of recalling things based on those types of characteristics.

Experiences are ways to promote interaction with a museum and its exhibits. Many museums are designed with the experiences in mind and the objects within the museum are the support for that experience (Hein, 2000). According to Hein, the U.S Holocaust Museum in Washington, D.C. is designed to evoke particular feelings in its visitors. The museum’s designer, Ralph Appelbaum wrote: “it is the act of controlling a few hours of someone’s time and setting them up to receive a certain experience” (Hein, 2000, p.65). The corridors are narrow, the light is

very dim, the floors feel stark and cold and the experience of walking through the boxcar during the museum visit can stir emotion. This is a museum that has a particular purpose and motivation to create a learning experience. These experiences can stay with a visitor for the rest of their life. As more and more museums begin to use the interaction and experience element as a way to ‘teach’ it’s visitors, there will inevitably be a change in how the student museum field trip experience is affected. Hein tells us, “Without abandoning their pride in the “real thing” or their claim to authenticity, museums have shifted their allegiance from real objects to real experience” (Hein, 2000, p.86-87).

III. Task oriented activities & projects, students as teachers

Once a class arrives at the museum site, and they are interacting with the exhibits as mentioned above, how can we measure that learning? How can we ensure that students have gained a deeper understanding of the content? It is this researchers view that creating an activity that is task-oriented in nature can support that. The idea of having the student become the teacher creates a unique way that the student will interact with the exhibits and artifacts. Both the interaction and task-oriented activity go hand-in-hand. If a student knows that he or she will need to for example; prepare a fictitious news story on a particular artifact, how they will view that artifact is effected. The types of characteristics, or questions that one will seek in understanding and communicating could potentially change the learning process. The student thus becomes an active learner.

IV. Follow-up and assessment to support learning

When constructing any lesson, a good educator always follows up. Whether that means reviewing the following day by a short quiz or building on the concepts learned to move onto a more complex idea or problem. Every educator has a different way of measuring that learning.

As mentioned previously, a task-oriented activity assists in this measurement but even after that, the concepts need to be re-visited. A great way to follow-up after a museum visit is to continue with other activities. Museums often provide additional resources and activities to support that follow-up. Many of these activities can be found on the museum websites. For example; the Smithsonian National Air and Space Museum in Washington D.C has quizzes online. Students can take these quizzes after their return from the museum site.

As mentioned in step three, task-oriented activities assist in the learning process. After a school field trip, having the students create something as a follow-up to support learning is a great way to gauge the understanding. This also allows the student to take responsibility for their learning in a way that they become the teacher. As educators, we look at a lesson different than the students receiving the lesson do. We often consider how to make ideas relatable to the students. Who better to do this than the students themselves! Breaking the class up into groups makes creating a follow-up activity easier. If teachers' assign different areas of exploration and reflection for each group, the result is a project that has all the key components. The students become the 'experts' in their area of study. What I feel is important about this idea is that it again, has the students take an active role of responsibility in their own learning. For the educational element to be sustained in the museum fieldtrip experience, students have to be able to apply what they experienced in that environment to the outside of it.

Chapter 5 Discussion /Analysis

Summary of Major Findings

The review and literature and research has led me to identify four key elements as previously mentioned to have a successful fieldtrip museum experience. These can be used as a blueprint of sorts to create a successful meaningful plan for educators. The diagram below outlines the four key elements: pre-planning, interaction, task-oriented activity and follow-up.



In the diagram above, one may notice that each element has within it four key factors to consider when structuring a fieldtrip plan. They are; the goal, teacher focus, student focus and the activity. It is this researcher's belief that in order to create a successful lesson and experience in the museum environment, teachers' must have a defined goal to that stage of the plan. The teacher focus and students' focus are similar but they too have separate goals in themselves and they should be defined. The activity as a factor is something this researcher believes assist in creating a successful fieldtrip plan. Having a defined activity at each stage creates more of an experience for the student throughout the trip. The trip begins before ever leaving the classroom and by giving tasks or activities along the way teachers' support the learning process. These tasks can also serve multiple purposes and support each element of the plan. Let's examine our four-stage plan in creating a meaningful and relevant museum fieldtrip experience.

Pre-planning

In the analysis I touched on the idea of pre-planning. Pre-planning exists as a way to define the goals of the visit and establish what teachers' want students to get out of the experience. When in the unit of study is the teacher incorporating this visit? If the teacher is using it as an introduction to a unit, the activities designed and experiences set up will be vastly different then incorporating the trip as a mid-unit supportive experience. The goal is to create a strong background for the visit itself.

Teachers can accomplish this in several ways. First from the perspective of the educator it is imperative if visiting a museum for the first time, that the teacher pre-visits the museum prior to arranging a student visit. This will allows the teacher to note down specific things that could affect the trip. Pay close attention to the museum environment. Consider how the environment, both space, weather, museum layout etc. could affect the learning process. These

factors can also affect how a teacher divides the students up into groups, size etc. Pre-trips allow the teacher to also arrange any special talks or docent led activities. When arranging these consider how long they will take with respect to the museum trip plans.

The teacher focus of pre-planning is to build background for the fieldtrip experience. This can be done ahead of time in the classroom and allows an educator to assess what topics in particular should be stressed on the trip. This building background time in the classroom can be supported with materials from the museum off their website. Many museums offer various lesson plans, activities, virtual displays etc. to engage a student in the museum world. It is imperative as well to spend a little bit of time teaching students how to use the museum. How to view an exhibit or artifact and what types of questions one should consider when doing so. A good supportive technique in observation is to consider building a task-oriented activity into the field trip experience. It is important to note that during this pre-planning stage, the guidelines for a task-oriented activity, to be executed after the visit, should be outlined and discussed in class. By discussing this in class, students have a clear understanding of the expectation on them.

As part of the pre-planning process, a good way to build background is to create an in class activity to introduce the students to the museum trip. This activity could be a writing assignment where students are able to write three questions that they would like answered as a result of their visit. Students should be asked to write these questions after the goals of the visit have been discussed. This allows students to really think about what they would like to learn. These questions can be shared in class and will hope focus the trip on the topic of study.

Interaction

The interaction stage refers to when the museum field trip experience is actually happening and the students are at the museum site. Based on the literature review, a key factor in deeper

learning at a museum involves meaningful interaction with an exhibit or artifact. It can also involve having a unique a meaningful experience. The goal of interaction is to create opportunities for students to have authentic interaction at the museum that can lead to deeper learning. The teachers' focus during the interaction stage is to keep the students on task as they experience the museum. Checking in with the students groups and asking thought-provoking questions to assist the students to question what they are experiencing and seeing. Supporting the observation process is what the educator should focus on during the visit. This can take many forms, as suggested above it can be as simple as asking questions of the student groups, or it can be taking the students to an organized discussion at the museum site.

The students' focus should be on observing and asking questions about what they are seeing, hearing and experiencing. Good observation can be achieved by considering the following questions: What am I seeing? Experiencing? What about the exhibit or artifact is interesting to me? Why? Do I know how or what it was used for? (for artifacts), How does this exhibit, artifact or experience make me feel? What questions would I like answered about the exhibit, artifact or experience? These questions are a good guideline for students to contemplate when trying to learn in the museum environment.

When considering an activity for the interaction portion of the museum fieldtrip planning process, two possible ideas can be explored. First, encourage students to carry around the list of observation questions as reference. They do not need to write anything down but can refer to them for direction. With time, these questions will become part of their own museum process. This activity is in support of the overall goal of a fieldtrip museum experience to make students life-long museum learners. Second, creating a task-oriented activity as a result of the interaction

in the museum is a great way to show the extent of the learning on the part of the students and can be used as an assessment tool for the teacher.

Task-oriented activity

There are several types of task-oriented activities that can be successful in evaluating learning as a result of the museum fieldtrip experience. First, during the pre-planning stage an educator needs to decide whether they want the students to have a whole group museum experience where they take in as much information as the museum has to offer or have student groups focus on different areas. This choice should be based on the type of class, age of students and topic of study. An activity can be designed that has each student group focus on one aspect of the topic of study. This essentially encourages the students to become the teachers and creates a situation where each group can become an expert in their area. This researcher feels this approach could be very productive for older students. It also could allow for a much deeper learning and experience for the student. They essentially become responsible for their own learning and for the learning of others. This responsibility can be a powerful teaching tool.

Once the purpose of the activity is defined, the next step is designing the type of activity for the students. When considering an activity that creates an accountability of the learning process, an activity should be created that compliments the interaction achieved at the museum and takes into account the previously mentioned observation questions considered by the student. Task oriented activities could potentially be multimedia projects, art projects or even topic presentations. As explained by my interview with the British Museum's Samsung Digital Discovery Learning Center, one activity could be producing a news report on a topic of study. Students could be filmed and report on all aspects of a particular artifact. This also could promote technology element to the learning process, which can be hugely beneficial for future

learning projects. The options for art projects are endless. Consider having students create a travel brochure advertising a particular place or artifact. This idea also focuses the students on what the main topics or ideas are that an educator wants to get across. This activity could be given as a template before the class leaves the school, which can help focus the learning process while at the museum site. Any activity that can assist in focusing and organizing the information for the student could assist in enhancing their learning experience and possible recall of information.

Follow-up

The teacher focus of the follow-up element is two-fold. First, it is a great way to gauge the learning and experiences of the students. It provides an opportunity to see if any concepts need to be revisited for re-enforcement or if expanded explanation is desired and needed.

Second, follow-up allows for a time of reflection to potentially change the way the trip might be executed the next time, either with the same class at a different location or a new class the following year. The educator consistently learns from the experience and the experience will change depending on the students and focus for visit. Measuring and gauging the learning can be achieved by having the students do a follow-up activity back in the classroom after the visit to the museum. This could be lessons off the museum website to reinforce particular concepts, the actual presentation of student projects, as mentioned previous in the task-oriented element, or through a writing activity. This writing activity can be an extension of the original writing activity during the pre-planning stage. Students can receive back their papers and could be asked to re-read what they wrote. They could then be asked to comment on if their questions were answered and how they were answered. This is also an opportunity to “poll” students to find out

what they liked, disliked about the trip, materials, museum environment etc. This information then supports how the teacher may change the next museum fieldtrip experience.

The follow-up is a key element to the museum fieldtrip experience. A class discussion about the museum itself can help foster life-long museum learning in a student. It allows student to ask questions about what they saw. Separate from the content topic learning, the experience itself for each student should not be overlooked. Discussing that only supports the importance of the trip. It can essentially demonstrate the value of such a school trip for a student.

Comparison of Findings to Existing Literature

The findings of this research were the result of considering two foci that were explored in the existing literature. These foci were, the idea of enhancing curriculum for the teacher via museum fieldtrip visits and promoting better student engagement through these visits. The findings of this research and the proposed blueprint for educators to utilize, is essentially an extension of the existing literature. The concepts that were researched and reviewed, point to the relevance and importance of museums as a part of education.

Limitations/Gaps in the Research

While there is no doubt that there is a movement for museums to become increasingly more focused on how to inspire encourage and support student learning at their museums site, educators and schools alike need to make the move to make museum visits a part of their culture. The literature suggests the benefits and limitations that a fieldtrip to a museum can provide, but is lacking in a few areas that can also be explored. What are the long-term effects of creating a museum assisted curriculum culture on the student or teacher? Do the number of visits on a school year to museums make a significant difference that we must consider a standard amount of visits? Should museum studies or 'museum literacy' be a concept that is taught in our schools

and become part of the standard curriculum for students to better take advantage of the museum environment?

The idea that museums are a public institution and there is a responsibility of educating the public on ideas, concepts, innovations and history, a deeper look in to how a museum visit during the elementary school years may shape one's interests in life-long learning during adulthood. While this idea has been mentioned several times, I have not come across statistical information that would support what level of exposure to museum environments shapes an adult's interest.

This paper does not address the virtual museum facet, which could impact what teachers' might consider a 'fieldtrip'. While this researcher considered including it, I was mainly concerned with the actual experience and engagement in the real-world environment as opposed to the virtual one. After reviewing some literature on virtual museum spaces, I concluded that the types of experiences and theoretical rationale would differ from an actual museum visit. It became obvious in the literature review that to have a successful fieldtrip experience in a museum educators' need to have pre-planning and of course follow-up. While the availability of various documents, lesson plans, media and other support materials were, and continue to be, available online on museum websites, this researcher did not do a full critical analysis of online support materials and types.

Implications for Future Research

Future research on this topic can help support the findings in this research to create a successful museum fieldtrip experience. Additional focus on educating in the museum will additionally support the concept of 'museum literacy' as part of an education. As more and more education programs are developed and available for educators, the community as a whole has a

responsibility to consider the great importance of museum education. Focused future research will continue to support these institutions as a part of our community and their importance in it.

Overall Significance of the Research

Museums evoke the possibility of something. They provide the possibility that even teachers a way to be anything they want to be. By visiting different museums and speaking with various museum educators, I was able to get a better understanding of how using the museum fieldtrip experience can enhance curriculum. The research shows that by having a clearly defined plan, an educator can create a meaningful learning experience that promotes student engagement in the museum environment.

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