AN EMPIRICAL EXAMINATION OF THE FEASIBILITY OF AN ONLINE MUSEUM EDUCATION PROGRAM: THE MUSEUM OF ARTS AND SCIENCES, MACON, GEORGIA

By

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CAPSTONE PROJECT
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To:

To my parents Dr. Sams, PhD and Mr. Philip Sams; my children Justin and Lorelei; my sisters Misty Conner and Whitney Bolton Minor, Esq. To my close friends whom encouraged me in every way during my journey even though they are too numerous to name a special thanks to Hilary Meyers Frambes, UF Masters of Art Ed; Julia Garrett, UF Department of Ed; Deborah Gustlin, UF Masters of Art Ed; and Stephanie Wirt, UF Masters of Art Ed.

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Out of a spark of imagination, reality forms, Jen

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ABSTRACT OF CAPSTONE PROJECT

Presented to the College of Fine Arts of the University of Florida
In Partial Fulfillment of the Requirement for the
Degree of Master of Arts

AN EMPIRICAL EXAMINATION OF THE FEASIBILITY OF AN ONLINE MUSEUM EDUCATION: THE MUSEUM OF ARTS AND SCIENCES, MACON, GEORGIA

By

Jeniffer Sams

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Chair: Elizabeth Delacruz
Major: Art Education

In an age of globalization, the Internet, budget cuts in education, and No Child Left Behind, one third of the Museum of Arts and Sciences' (MAS) revenue which is provided by students' field trips has been reduced causing the MAS revenue to struggle. Factors such as funding cuts for the arts and cutbacks in school-sponsored fieldtrips has the MAS pursuing alternate solutions to increase museum revenue and visitor attendance. (Bellamy, Birdsong, Connaly & Walters, 2011) This capstone research study examined the feasibility of adaptation of the Denver Art Museum (DAM) Creativity Resource Website (CRW) at the MAS. In order to examine the feasibility of adapting of the CRW by the MAS hypotheses were formulated, methodology for research developed, resources reviewed, research questions were developed, a pilot survey was conducted, a purified survey was delivered, and a visit on site at the took place in January 2012. This capstone research project paper is a combination of first hand information obtained via onsite meetings with the DAM Creative Resource Website and Education Department in January 2012 and the empirical research derived from the Bibb County educator surveys. The culmination of this research has resulted in statistically sound recommendations and action plans

for the benefit of the MAS and patrons. The survey results convey that the CRW is desired and feasible for adaptation at the MAS.

Keywords: Art Education, Art and Science Museum, Backward Design, Generalizability, Museum Education, Museum Outreach, Online Education, Visual Thinking Strategies

CHAPTER 1: INTRODUCTION

"Museums and schools share the responsibility of teaching inquiry skills necessary to find meaning in works of art and making museum visits more accessible to a larger segment of the population" (Henry, 2010).

Sitting in front of Xu Beihong's large oil on canvas painting, *Tian Heng and His Five Hundred Warriors* in the Denver Art Museum were a group of students from the Cory Elementary School on a docent led tour the *Xu Beihong: Pioneer of Modern Chinese Painting* and *Threads of Heaven: Silken Legacy of China's Last Dynasty.* One at a time, the students stood up in front of the group after they chose a character in the painting and acted out that character's behaviors until another student guessed which character they were from the painting. After all the students had a turn and had a lot of laughter, the tour continued on to a photograph of the Empress. The photograph of the Empress contained many unique qualities including her hands, which had both of her ring fingers and pinkie fingers with extremely long fingernails. The docent asked the students to tell her about the photograph. One by one the students raised their hands and noticed the most extraordinary details including the Empress' fingernails. The docent asked, "How do you suppose the Empress does any housework or dishes with those long nails?" (DAM Docent, personal communication, January 18, 2012). Several hands fly up into the air, but the docent choose a boy who had been a little quieter than the rest of the group and he quite matter of fact stated, "The Emperor does them! (Unknown, personal communication, January 18, 2012)" and that is the joy of children learning.

Introduction

The Denver Art Museum (DAM) has a Creative Resource Website (CRW), which was developed with educators in mind. The CRW allows educators to quickly and easily find lesson plans, resources, workshops and webinars; participate in educator blogs, explore classroom

showcases, and obtain high resolution 360° images of the CRW collection which has a lesson plan paired with the work of art. The lesson plans are specifically engineered to address Denver's Performance Standards. The DAM Creative Resource Website lesson plans are worded in a manner so that educators, no matter what subject area they teach, are able to understand and utilized the lesson plans. Additionally, the lesson plans are designed to be easily adaptable to the educators' needs regarding subject, time frame, and grade level. When a museum visit is not possible, the high-resolution 360° images along with the museum's online resources makes the CRW lesson plans viable in the educational institution's setting and home school setting. This type of education website has made it possible to present art and art history to a larger audience. The DAM is acting as an art advocate to students and educators; it is introducing the museum to students who may otherwise not have attended a museum, and it has made lesson plans, which facilitate and encourage other core curriculum to incorporate the arts. Educational constraints and fiscal consideration for the MAS necessitate consideration of adapting options such as the CRW at the Museum of Arts and Sciences in Macon, Georgia. Therefore, the adaptation of the Denver Art Museum's CRW became the focal point of this capstone research project.

Keywords

Definitions of the less common terms as they are utilized in this capstone research study:

1. Backward Design – An instructional design method invented by Wiggins and McTighe, which begins with the end in mind. In *Understanding by Design* by Wiggins and McTighe, the authors wrote of designing curriculum the same as designing for any client with an end project in mind. They illustrated backward design when they wrote, "Teachers are designers. An essential act of our profession is the crafting of curriculum and learning experiences to meet specified purposes…Like

people in other design professions, such as architecture, engineering, or graphic arts, designers in education must be mindful of their audiences" (Wiggins & McTighe, 2005, p13).

2. Generalizability – The applicability of a survey's findings to populations and places other than those involved in the survey (Fink, 2003).
3. Online Education – "Online education is defined as the creation and proliferation of the personal computer, the globalization of ideas and other human acts, and the use of technology in exchanging ideas and providing access to more people. Audio, video, computer, and networking technologies are often combined to create a multifaceted instructional delivery system ("E-learning", 2011)".
4. Visual Thinking Strategies - (VTS) is a research based teaching method that improves critical thinking and language skills through discussions of visual images (What is VTS, 2011).

Purpose

The purpose of this capstone research project was the collection of data via a survey completed by Bibb County educators, which was available; live from February 19, 2012 through March 10, 2012. Additional information was obtained during a January 2012 on site visit at the Denver Art Museum with some of the members of the Creative Resource Website and Education staff with the intention of gaining first hand information and feedback regarding the viability of adapting the Denver Art Museum's Creative Resource Website Project team at the Museum of Arts and Sciences in Macon, Georgia. Findings from both the survey instrument and the DAM meetings resulted in recommendations and action plans for the MAS. The action plans contained within this capstone research project will be made available to the Museum of Arts and Sciences

upon final completion of this Master's Degree capstone research project. The capstone research project is intended to be a source of information regarding the adaptability of the DAM's Creative Resource Website for the MAS and proposes a completely developed, fully researched, well-designed, online education curriculum resource site at the MAS. Weil, a museum commentator for the Smithsonian and author of, *Making Museums Matter* (2002) argued that museums must change in their scope of thinking about the public and this is essential for the Museum of Arts and Sciences in moving forward with the educational institutions.

Statement of the Problem

Budget reductions in Georgia's Bibb County, the county in which the Museum of Arts and Sciences (MAS) is located in, has a direct impact on the MAS and has significantly reduced field trips to the museum from local educational institutions. As reported in the "Museum of Arts and Sciences Marketing Plan" written by Georgia College, field trips account for approximately thirty percent of the MAS's revenue each year and that revenue is in jeopardy. Fieldtrip funding is directly tied to the Georgia Performance Standards (GPS) and the No Child Left Behind (NCLB) Act (Bellamy, Birdsong, Connaly & Walters, 2011). In considerations of these factors and the direction of museums' roles in education, consideration of new and additional directions for MAS to stay connected with the community; local education institutions, educators, and students in meaningful ways the online education website was proposed for the Museum of Arts and Sciences. The capstone research project question, "Is the Denver Art Museum's (DAM) Creative Resource Website (CRW) Project feasible to adapt to meet the needs of the Museum of Arts and Sciences and the surrounding area's educational systems and what factors are important in examining feasibility?" was the driving force for this capstone research project.

The above question stated as a research problem is in fact an opportunity for this well-established museum to look to the future and work with educators to meet the needs of educators in the 21st century. By adding an online education program at the MAS the museum would have the potential of reaching more students in the area surrounding the MAS. There is also a probability of increasing the participation of educators in many academic fields to attend the museum, to assist educators in obtaining support for field trips by providing lesson plans aligned with specific Georgia Performance Standards, and to be a broader-reaching art advocate in the community.

Significance of the Study

By the nature of the MAS' collections there is a surfeit of interesting and relevant objects, art, and historical artifacts contained within the Museum of Arts and Sciences. The collection contains the artifacts with the ability to inform and crossover many core academic subjects that exist in schools; therefore the contents would fit well into a variety of curriculum lesson plans and subject areas. An effective and well designed museum education website at the MAS has the potential to convey more clearly the museum's services to potential new visitors, create a digital bridge to the educational institutions in the area, to reach educators outside the immediate area, and expand the reach of the museum to members of the community who are unable to visit to the museum's facility. An educational MAS website could expose students in the area to the arts even if they were unable go on a field trip as result of funding or physical constraint.

The MAS is dealing with financial constraints in education, the community and the United States economy. Securing funding and grants for an online education website for the MAS would consequently benefit staff in addition to the patrons from possible new jobs created, interns, additional grants, equipment, and visiting professors who could augment their staff. In

summary, curriculum enrichment in local schools, art advocacy, job creation, expansion of the number of children reached via the museum, and increased assistance for area educators are potential outcomes of an online education website by the Museum of Arts and Sciences. The website would also have the potential to reach interested scholars, artists, and educators living well beyond the immediate vicinity of the museum.

CHAPTER 2: LITERATURE REVIEW

Financial Issues and Museum Education

Economic conditions have negatively impacted financial conditions for museums in many capacities. Coupled with the budget reductions in educational institutions, exposure to the arts through museum field trips have dwindled or no longer exist. As reported in the "Museum of Arts and Sciences Marketing Plan" by Georgia College, public school visits (field trips) are nearly one third of the MAS's revenue each year. Field trip revenue is in jeopardy due to the budget cuts, cuts in education from many curriculums, and the emphases placed on standardized testing as a priority in many school systems. (Bellamy, Birdsong, Connaly & Walters, 2011) Lauren Hunley's (2011) dissertation "Teaching, Testing, & Tyrannosaurus Rex: How the No Child Left Behind Act has Affected Museum and Galleries in the United States" confirms that field trips have plummeted since the enactment of the NCLB Act. Museums rely on visitor numbers for grants and revenue. Additional conditions in Hunley's report identified transportation costs, paperwork costs, admission costs, and time spent by the local educators verifying that field trips align directly with the State's Standards of Learning (SOL) directives, notably, directives that link directly to the NCLB objectives (Hunley, 2011). This information provided insight for the creation of the capstone research project pilot survey and the subsequent purified survey utilized for this capstone research project.

Online Museum Education Through Website Design

The Denver Art Museum (DAM) provided a comprehensive resource report, which contains surveys, best practices, and lesson plans, which provided the information needed for the development of a survey for the Bibb County educators for the Museum of Arts and Sciences. The DAM Creative Resource Website Project reports also provided an inspirational plan for

creating a path to research the viability of developing an adapted educational website at the Museum of Art and Sciences (Denver Art Museum, 2010). (The DAM Creative Resource Website Project resulted in a large website after an initial limited website was launched and a survey of their initial trial version of the small test website was conducted and analyzed.) With a similar survey goal in mind, the pilot study survey, "MAS Replicate and Adapt DAM" (Sams, 2011) was performed in Fall 2011. A purified survey of the pilot study was created and then renamed; "The Feasibility of an Online Museum Education Program at MAS" (see Appendix A) was distributed to the Bibb County educators in the K-12th grades for this capstone research project during Spring 2012.

Political and Government Issues

Hunley's research (2011) focuses on determining the influence of the NCLB (No Child Left Behind) Act on museums in the United States. Hunley asked how the NCLB Act effected classroom teaching, how had museums attempted to meet the NCLB Act's demands, and whether it is possible for the educational institutions and museums to work collectively to achieve the NCLB Act's requirements. Hunley's research asks whether museums should work with the NCLB and acknowledge the mandates or whether the museums should determine to work with a differing agenda. Working in conflict to that of the NCLB rather than address the possibility of building a working relationship between the museums and the NCLB policies was also addressed. These varying ways of addressing the changing role of the museum are all pertinent to the research proposed. Hunley's conclusions infers that by museums choosing to ignore or not address NCLB mandates creates a breakdown of networking between the museums and educational institutions resulting in both entities suffering. This in turn potentially deprives students of experiencing art, museums, and art history outside the educational system (Hunley,

2011). Hunley's research validates the necessity of integrating National Performance Standards (NPS) and legislative mandates for the educational institutes within the museums' missions and outreach activities.

CHAPTER 3: PILOT STUDY

Pilot Study Introduction

The pilot survey instrument (available on Scribd, see link below in References under *Sams, 2001*) was presented to potential respondents with the understanding that data would be statistically analyzed to purify a survey instrument for the capstone research project and to gain insights into what Bibb County educators are looking for in an online education program such as the Creative Resource Website at the Denver Art Museum. As for the client, The Museum of Arts and Sciences in Macon, Georgia, the museum education curator was informed that the pilot survey would be analyzed and purified (Sams, 2011).

Pilot Population

The target population for the pilot study came from a convenience sample of educators and education students. The potential respondents were solicited to complete a survey through the direct link posted from http://www.surveymethods.com/ to the University of Florida Sakai message board, blog, and email in the University of Florida course *Methods of Research in Art Education ARE6746* on November 11, 2011, Section 3000. The pilot study results consisted of fourteen students and two professors. All of the students are enrolled in the University of Florida's Online Art Education Master's Program. A link was also posted in the closed UFArt Ed group for the UF Master's students (two professors on Facebook also belonged to this Facebook Group). At the time of the survey, this Facebook group had thirty-five members. Fourteen of the student members and one Professor member overlapped the ARE6746 course. The survey instrument link was also posted on Art Education 2.0 (an online closed social network that is devoted to art education) on November 14, 2011 and was viewed by eight members of the 10,162 Art Education 2.0 members (fourteen of which are overlap to the Facebook closed

group). The survey closed on November 16, 2011. Only one survey response was acquired from the post to Art Education 2.0 (a non-University of Florida student) (A non-University of Florida student) (http://arted20.ning.com /profile/JenifferSams) (Sams, 2011).

The pilot study was a descriptive research survey combining quantitative and qualitative questions. The survey instrument was administered via convenience sample (a type of non-probability sampling) due to time and financial constraints; therefore, no sampling list is available. By removing the outlier on the Art Education 2.0 website and the overlap of the Facebook group the population with the course ARE6746, the census size was thirty-seven with a response of fifteen resulting in a response rate of 40.54% (Sams, 2011).

Pilot Survey Data and Results

Pilot survey data was examined to determine the validity of the survey instrument itself and to purify the survey. The educators were asked specifically the open-ended question, "How could the Museum of Arts and Sciences (MAS) be the most helpful in your class and in achieving the Georgia Performance Standards?" During the pilot phase of the research this question was asked of respondents who are in the educational field, but may or may not be in Georgia. The purpose was merely to allow the researcher to determine if the question was relevant to the study. A series of qualitative questions added depth of understanding and addressed content validity (i.e., face validity) of the survey instrument. The pilot survey was invaluable in developing the right questions to ask toward obtaining concise information pertaining to what the educators want and what a museum is able to provide within reason, prior to engaging in a major survey initiative across a larger population. From the pilot study findings, additional question were added to the final survey instrument to assure appropriate subject matter coverage (Sams, 2011).

Understanding that response rates to surveys have been declining, in the United States, for at least several decades (De Leeuw and De Heer, 2002) in conjunction with the demanding professional circumstances of educators' time, it is this researcher's suggestion that future studies be conducted in a differing format such as focus groups, personal interviews, or another personal format so as to obtain a higher response rate. Additionally, the value of the pilot study was the purification of the survey instrument; however an additional and unexpected value of the pilot study was the information gained from Master's of Art Education students who fall into either the category of experienced educator who is returning to college or education student who is studying theory. Both categories of students have great insight, perspectives, and merit in their surveys for this pilot study.

The rate of return on the surveys by the University of Florida Art Ed students during the pilot study was 40.54% (Sams, 2011). There is great merit in surveying college students as they are soon to be working (or are already working) in education, they are actively working with education theory, and they probably will maintain a higher response rate than a full time educator according to the examples gained in these surveys. The information gained about website design on the pilot surveys should not be dismissed solely because it was not in accord with the research questions, it should be viewed as providing an unexpected cache of knowledge by current and future educators.

A purified descriptive survey containing both qualitative and quantitative questions was then developed and strategically delivered to an identified sampling frame based on the characteristics of respondents in other research conducted by the Denver Art Museum and in Hunley's research. From the preliminary findings of the pilot study, the resulting data indicated the adaptation of the DAM Project was feasible for the Museum of Arts and Sciences. Therefore

educators in the Bibb County education system, Georgia were identified and sampled (Sams, 2011).

CHAPTER 4: RESEARCH METHODOLOGY

The Museum of Arts and Sciences (MAS) located in Macon, Georgia (Bibb County) is in need of new solutions for continuing their mission due to an ever changing educational institution budget and NCLB Act constraints on field trips, educators being required to integrate core subjects with the arts without the knowledge as to how to incorporate them into lesson plans, and due to the widening use of the Internet by Americans. Researching the possibility of an adaptation of the Denver Art Museum's Creative Resource website is timely.

Research Methods and Hypotheses

A strategically delivered survey was sent to target respondents in Bibb County, the area in which the Museum of Arts and Sciences is located. The respondents were identified via a sampling frame based on the characteristics of the pilot study conducted during *Research Methodology* course at the University of Florida Fall 2011, on the Denver Art Museum research (Denver, 2010), and on Hunley's research (Hunley, 2011). Educators in the Bibb County area were chosen randomly and surveys (see Appendix A) were distributed to them via email with a cover letter (see Appendix B) and an *Informed Consent form* (see Appendix C). A purified descriptive survey containing both qualitative and quantitative questions/statements was developed during a University of Florida *Independent Study Course* completed during Spring 2012. "The Feasibility of an Online Museum Education Program at MAS Survey" (see Appendix A) was be designed to address the research questions below:

Research Questions

Q1: What factors are important when examining the feasibility of adapting the Denver Art Museum Creative Resource Project?

Q2: Is the Denver Art Museum Creative Resource Website Project feasible to adapt to meet the needs of the Museum of Arts and Sciences and surrounding area educational system?

Research Hypotheses

HO_{1a}: The CRW project should not be adapted to meet the needs of the MAS within the next three calendar years (beginning in 2012).

HA_{1a}: The CRW project should be adapted to meet the needs of the MAS within the next the next three calendar years (beginning in 2012).

HO_{1b}: The CRW project should not be adapted to meet the needs of the Macon Georgia area educational system within the next three calendar years (beginning in 2012).

HA_{1b}: The CRW projects should be adapted to meet the needs of the Macon Georgia area educational system within the next three calendar years (beginning in 2012).

Research Design

The respondent population for the capstone research project surveys was drawn through a probability-sampling plan from the appropriate target population in Georgia's Bibb County education system, which is the county surrounding the Museum of Arts and Sciences (MAS). Procedures for choosing the sample were established as random selection and the appropriate sample size was determined based on examining the rate on the return on surveys by both Hunley's research work and the Denver Art Museum's research work and via identifying an appropriate precision level. Hunley's research returns were 12% using a semi-random selection of teachers from the Washington D.C. and surrounding area schools (see Figure 1).

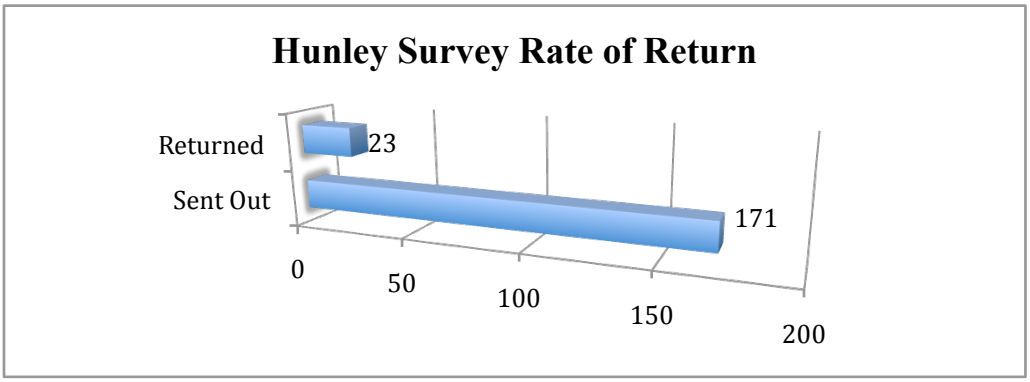
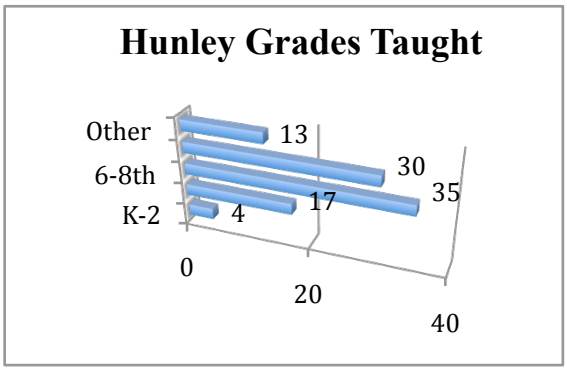


Figure 1. Rate of Return on Hunley's Surveys in Percentage (12%)

The rate of return on the surveys by both Hunley's research and the DAM's research was examined and considered in establishing a sampling plan (see Figure 2 and 3 juxtaposed).



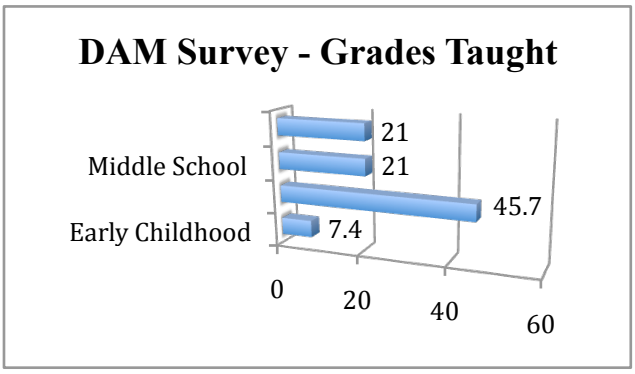


Figure 2 & Figure 3. Juxtaposed Grades Taught by Respondents

After identifying an appropriate precision level for the MAS survey, a sampling plan was established. Based on a sample size for +/- 10% (90% precision level), surveys sent out to achieve the rate of return (usable surveys) from the educator population required a reach determined by usable surveys and divided by .24 (24% reach rate) (see Figure 4).

Education Level of Students	Full Time Education Instructors	Quota Sample Reach	Usable Surveys
Elementary	815	51.6% = 204	49
Middle School	352	22.2% = 88	21
High School	413	26.3% = 104	25
Total Population	1580	396	--
Sample Size @ 90% Precision Level	95	95	95
Overall Reach	396	396	--

Figure 4. Bibb County Education Demographics and Sample Size

(Sample Size - Based on a Sample size for +/- 10%, so to determine the number of surveys to send to achieve the rate of return the Sample size of +/- 10% of the teacher population was determined for usable surveys and divided by .24 (24%) for a reach Amount of Sample Size needed for survey distribution).

For the "Feasibility of an Online Museum Education Program at MAS Survey", 396 surveys were delivered via email to a representative sample of randomly selected Bibb County educators. Of the 396 surveys, 204 were sent to elementary educators, 88 were sent to middle school educators, and 104 were sent to high school educators. For a 90% precision rate, 95 usable surveys would need to be completed by the educators (see Figure 4).

Research Limitations

Several limitations occurred during this capstone research project process, some limitations were expected and some limitations were unexpected. One limitation for this study is the rate of return on the surveys. A low rate of return was expected due to things such as surveys typically having declining return rates both in the United States and Internationally (De Leeuw and De Heer, 2002), educators' time constraints, and the issues of school holidays. The surveys were distributed February 20, 2012 thru March 10, 2012 therefore the first weekend the survey was distributed an unexpected three day vacation occurred in Bibb County educational institutions the weekend of

the President's Day on February 20, 2012 through February 22, 2012. A possible conflict with spring break closures was anticipated; however the three-day closure for President's day was not anticipated. The educators in Bibb County returned to work Thursday, February 23, 2012 after a five-day break and most likely returned to a back up in emails and work. The low response rates could plausibly be partially due to a five-day loss of time (2/20-2/25) for survey completion and/or since the surveys were distributed on February 20, 2012 the emails in the following four days would have essentially buried the survey email in the educators' email inboxes.

An unexpected constraint on timing also came as a result of the University of Florida's accelerated semester in the Master's of Art Education (8-week semesters) and a delay in University of Florida's Internal Review Board (IRB) approval process. IRB approval was granted, but was delayed longer than expected, which kept the surveys from being sent out earlier in the semester. University of Florida IRB approval was received via U.S. Postal Mail on February 18, 2012. Even with sending surveys out on February 20, 2012 after IRB approval, the survey was only available to educators for twelve working days as the UF deadline for the capstone research project first draft was March 12, 2012.

Other limitations of this study include the focus of the research (development of a feasibility action plan for creation of a museum educational website that ties into school curriculum standards) and the selection of potential respondents (educators). Art museums have many other issues and areas of concert to pursue, and findings for this study may or may not inform those other areas of concern.

CHAPTER 5: ANALYSIS AND FINDINGS

For the "Feasibility of an Online Museum Education Program at MAS" survey, 396 surveys were delivered via email to randomly selected Bibb County educators Of the 396 surveys, 204 were sent to elementary educators, 88 were sent to middle school educators, and 104 were sent to high school educators. For a 90% precision rate, 95 usable surveys would have needed to be completed by the educators, however only seventeen surveys were completed.

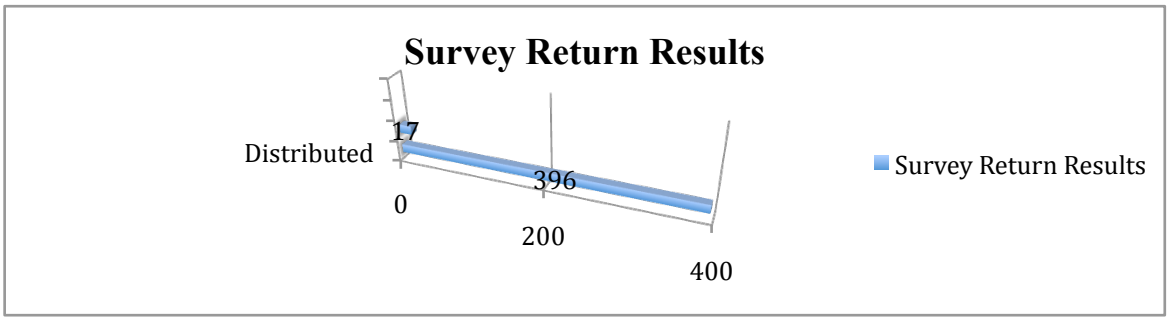


Figure 5. Survey Return Results for the "Feasibility of an Online Museum Education Program at MAS"

A 24% reach would have been needed for the 90% precision level; however even with the sampling frame and a follow-up email only 4.29% was achieved.

Data Analysis and Findings

Quantitative data obtained from the survey instrument was analyzed using frequency analyses with the software provided by the same company through which the survey was administered, Survey Methods (www.surveymethods.com). Qualitative data was analyzed through a content analysis by manually identifying repeating themes. The data was transcribed, categorized, and reported. From these findings (a.k.a., results) conclusions were drawn. These conclusions have been compared to the Creative Resource Website survey and it has been determined that the adaptation of the DAM project is feasible.

The research obtained from the survey has provided information that is of benefit to the Museum of Arts and Sciences, and this information will be significant in their consideration of

how to move forward toward an online educational website designed for educators' use and as an outreach outlet to other entities. Art advocacy, job creation, expansion of the students reached through the museum's programs, and assistance for educators are viable potential outcomes from the implementation of some or all of the action plans resulting from this research.

For the purpose of this capstone research project the survey data was examined, research was collected, and information was obtained via direct interaction with the Denver Art Museum Education Department and members of the Creative Resource Website team. The hypotheses as set forth in the research question #2, "Is the Denver Art Museum Creative Resource Website Project feasible to adapt to meet the needs of the Museum of Arts and Sciences and surrounding area educational system?" was analyzed and a report of the findings is offered below:

Hypothesis 1a

HO_{1a}: The CRW project should not be adapted to meet the needs of the MAS within the next three calendar years (beginning in 2012).

This hypothesis was tested through discussions with the Museum of Arts and Sciences to identify the needs of the MAS through a web-based museum education program, and through meetings with members of the Denver Art Museum's Education Department and members of the Creative Resource Website Team in Colorado. Based on a series of discussions with the Education Curator of the Museum of Arts and Science (MAS) in Macon, Georgia and after meeting with members of the Denver Art Museum's Education Department and members of the Creative Resource Website (CRW) team in Colorado it was determine that the MAS should adapt the Creative Resource Website project as manpower and funding could be provided through volunteers, interns, and grants to design and maintain the program. The current online information for the education department at the MAS consists of general information, contains a

dated program, and results in many dead-end links. The meeting with the Education Department and members of the CRW team at the Denver Art Museum provided additional avenues of successfully creating an adapted education website for the Museum of Arts and Sciences. The null hypothesis 1a is rejected, thus the alternative hypothesis "HA_{1a}: The CRW project should be adapted to meet the needs of the MAS within the next the next three calendar years (beginning in 2012)." is accepted.

Hypothesis 1b

HO_{1b}: The CRW project should not be adapted to meet the needs of the Macon Georgia area educational system within the next three calendar years (beginning in 2012).

The survey was designed to determine the need for a web-based educational program in the Southeastern Georgia area similar to the CRW project in Denver, Colorado. This hypothesis was examined by surveying educators in Bibb County, Georgia as to how many field trips are taken per year, where, and the constraints on educators to take field trips if any. Additionally the same educators were asked what items they would like to see on an educational website at the MAS to benefit the educational institutions and educators.

As per the survey results, when asked if educators in the sample take their students on field trips, the following was found through a frequency analysis:

> Five of seventeen respondents reported taking students on field trips (29.41%); five of seventeen respondents did not answer the question (29.41%); and seven of seventeen respondents answered no (41.18%). As to how many field trips are taken in a typical school year, a frequency analysis revealed that the majority, 35.29% (six of the seventeen) do not take any field trips and 23.55% (four of the seventeen) take their students on 1-2 field trips in a typical school year. Based on the figures alone the

hypothesis would appear plausible; however after review of the comments as to why field trips are limited or not taken (see Appendix A for survey instrument), the comments support the alternative hypothesis that "The CRW projects should be adapted to meet the needs of the Macon Georgia area educational system within the next three calendar years (beginning in 2012)".

As to the comments, for example: one respondent stated, "I believe students need to be exposed to the world around them in order to solidify their learning one way to do this is through field trips"; "It (field trips) reinforces the concepts and gives them hands on"; "We do not have the funding for art education field trips"; and "Very few (field trips) due to budget and GPS requirements". After the pilot study purification and after reviewing Hunley's research "Teaching, Testing, & Tyrannosaurus Rex: How the No Child Left Behind Act Has Affected Museum and Galleries in the United States" the qualitative question (question #15 on Hunley's survey) "What challenges, if any do you encounter when attempting to take a field trip?" was addressed in the Bibb County survey as well. Hunley's respondents identified transportation costs, admission costs, and time spent proving the field trip will align with the state's Standards of Learning directives, which link directly to the NCLB objectives as some challenges (Hunley, 2011). The Bibb County education survey identified many of the same constraints and therefore the Bibb County survey is consistent with the patterns revealed in Hunley's surveys.

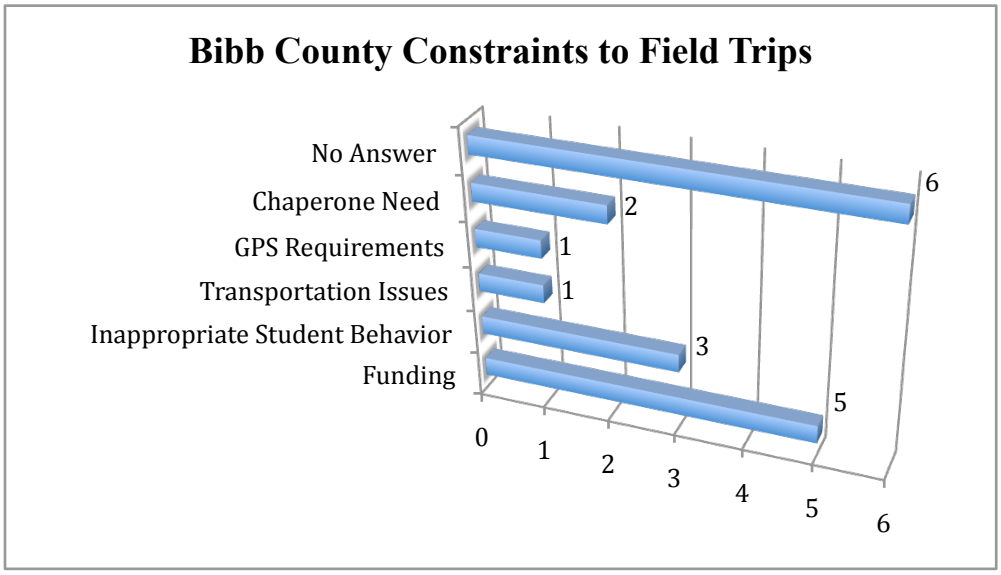


Figure 6. Constraints to Field Trips as Identified by Bibb County Educators on the Survey

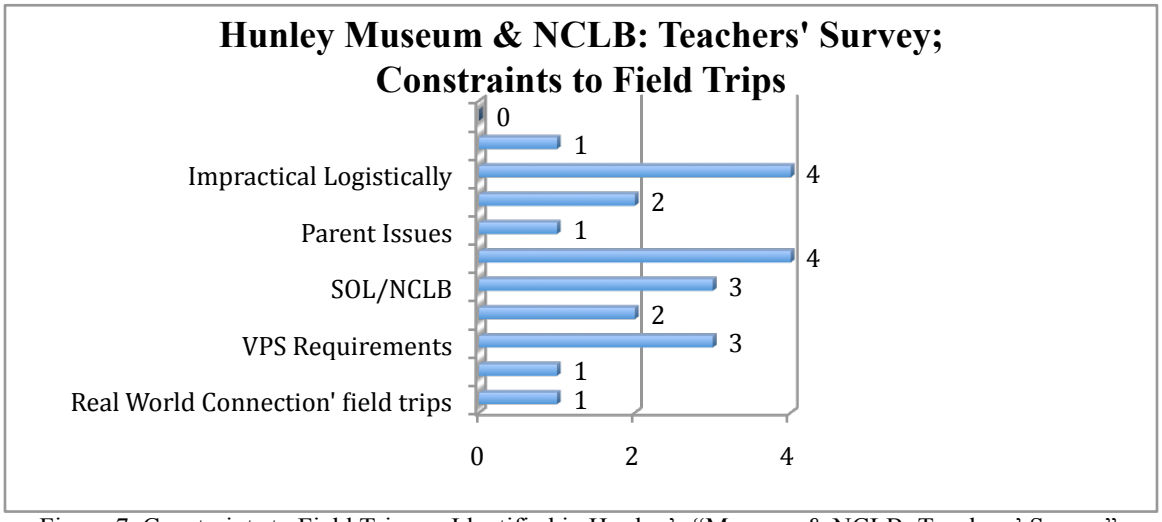


Figure 7. Constraints to Field Trips as Identified in Hunley's "Museum & NCLB: Teachers' Survey"

In considering not only the quantitative data, but also the qualitative data, these findings support the alternative hypothesis and reject the null.

Post Hoc Analyses and Findings

Beyond the hypotheses posted in this capstone research project, it was essential to be aware of what the respondents expect in an online museum resource, therefore research question #1, "Q1: What factors are important when examining the feasibility of adapting the Denver Art Museum Creative Resource Project?" was answered via the survey to the Bibb County educators

as well. The survey of the Bibb County education population questioned respondents on characteristics akin to those of the Denver Art Museum's Creative Resource Website (CRW) Project. The information returned as a result of the survey was invaluable in clarifying that the CRW is viable to be adapted for the MAS. The survey of the Bibb County educators identified their needs and wants pertaining to offerings on the MAS educational website. Therefore the following questions were included in the survey and analyzed:

Survey question eighteen inquired as to which types of museum resources the Bibb County educator had utilized in the past. Respondents were encouraged to check all applicable boxes and a frequency analysis revealed that the primary purposes for visiting a museum website were to obtain multi-media content, to find information for visiting a museum, to find resources for the classroom, and to find lesson plans. These services are all consistent with the DAM Creative Resource Website and based on the Bibb County educator response it would be advantageous for the MAS to implement these resources into their education website (see Figure 8).

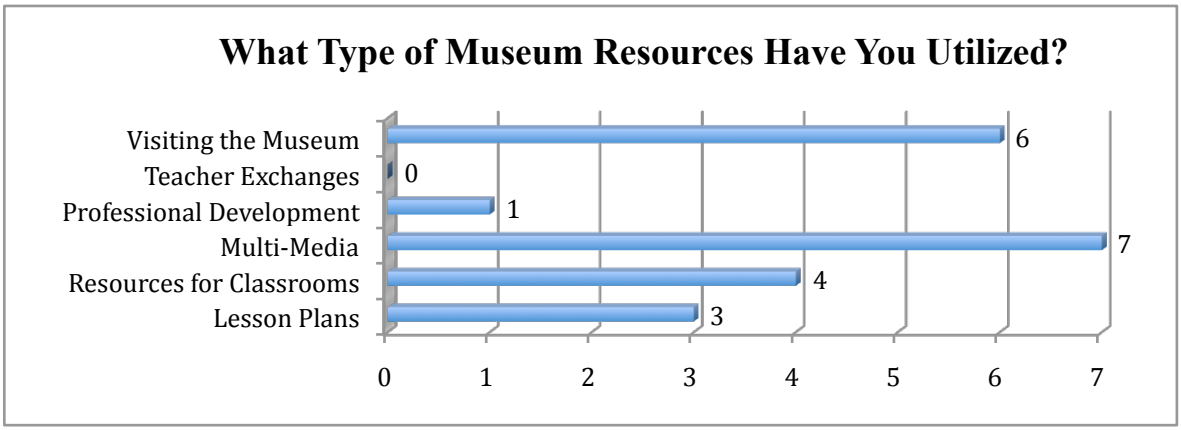


Figure 8. What Type of Museum Resources Have You Utilized?

Educator Interests and Perceived Benefits

One of the key areas of inquiry, which was added after the pilot study, was to inquire about which subjects should be included in lesson plans and educational materials. The question

that was posed to respondents was "What subject areas would be most beneficial in your classroom with regard to lesson plans and education materials? Please check all that apply". Twelve of the seventeen respondents answered this question (70.59%). The respondents were asked to check all areas that applied to the subject areas they felt would be most beneficial in their classroom and they replied at a rate of seven for history, six for fine arts, five for culture, four responded for both science and language arts, two responded for math, and one reply of *other* where the respondent wrote in, "Anything tying the GPS (Georgia Performance Standards) to LA (Language Arts) either Specifically or as a collaboration with another subject area", therefore other should be included in the Language Arts category making Language Arts a five (see Figure 9).

The survey results for which subject areas would be most beneficial for your classroom are quite interesting when compared to the respondent's subject taught. Respondents answered the question "What grade level(s) do you currently teach? (check all that apply)". Of the fifteen out of seventeen respondents that answered four indicated they are kindergarten teachers, three are first grade teachers, four are second grade teachers, five are third grade teachers, four are fourth grade teachers, three are fifth grade teachers, three are sixth grade teachers, three are seventh grade teachers, two are eight grade teachers, three are ninth grade teachers one teaches for the tenth, one is a teacher for the eleventh, and four teach twelfth grade. Respondents appear to have replied disproportionately to the History, Language Arts, Science, and Culture subject areas being useful in their classroom, to the amount of respondents identifying themselves as teaching in those subject areas. Two plausible causes could be that the six out of the fifteen respondents who answered this question responded as teaching several grade levels threw the chart off significantly or it is this researcher's opinion that the educators who took this survey

have a vested interest in a variety of subjects for education resources. This issue should be research if a similar study is repeated with additional questions to clarify the issue.

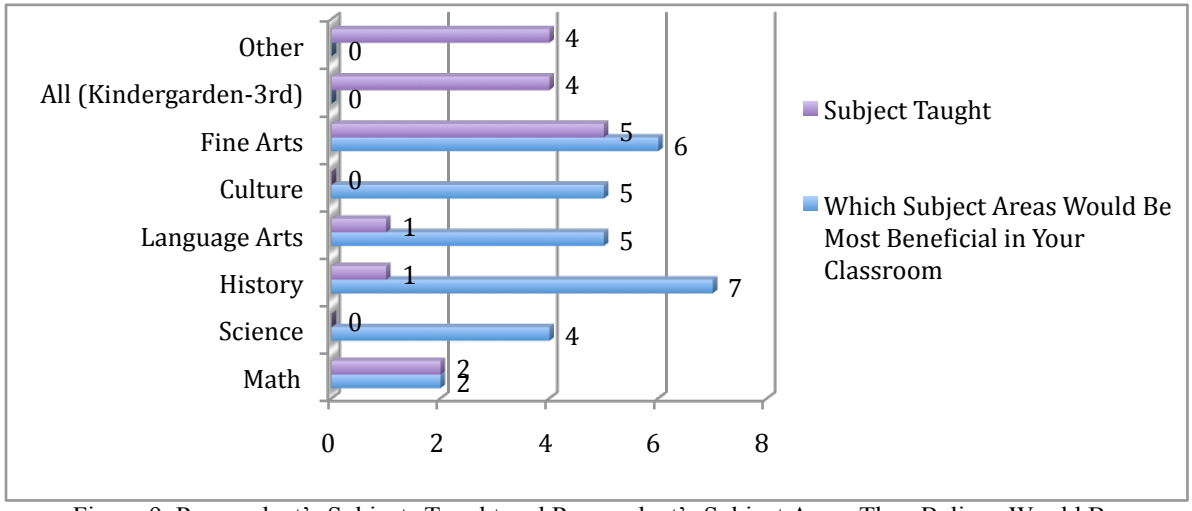


Figure 9. Respondent's Subjects Taught and Respondent's Subject Areas They Believe Would Be Most Beneficial in Their Classroom

Question twenty asked the respondents about which features they wished to see on a museum education website (as it pertains to education). Utilizing a frequency analysis the following chart provides a visual representation of the responses. Respondents were requested to check all applicable responses (see Figure 10).

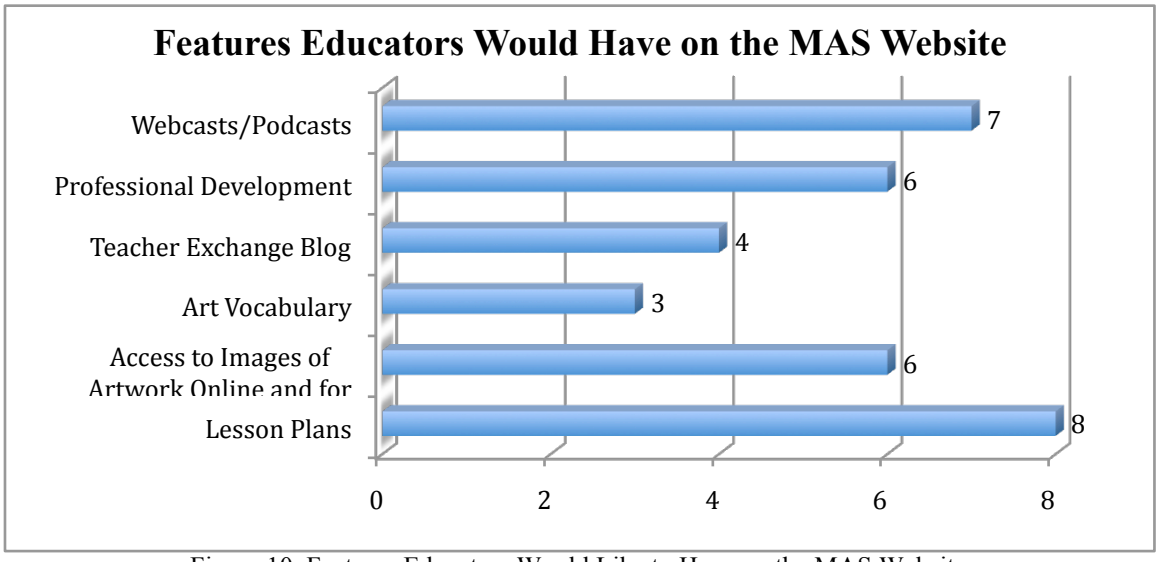


Figure 10. Features Educators Would Like to Have on the MAS Website

Twelve of the seventeen respondents answered this question. *Lesson Plans* ranked the highest at 66.67% or eight of twelve checking this feature followed by *Webcasts/Podcasts* with seven of twelve respondents choosing this feature for 58.33%. *Access to Images of Artwork Online* and *Professional Development* were both equally important to 50% of the educators with six of the twelve choosing these options, *Teacher's Blogs* was chosen by four of the twelve respondents, with *Art Vocabulary* being the least important on this list with three of the twelve choosing this option. All of these items exist on the DAM Creative Resource Website and should be of great importance in creating the MAS Education Website (see Figure 11).

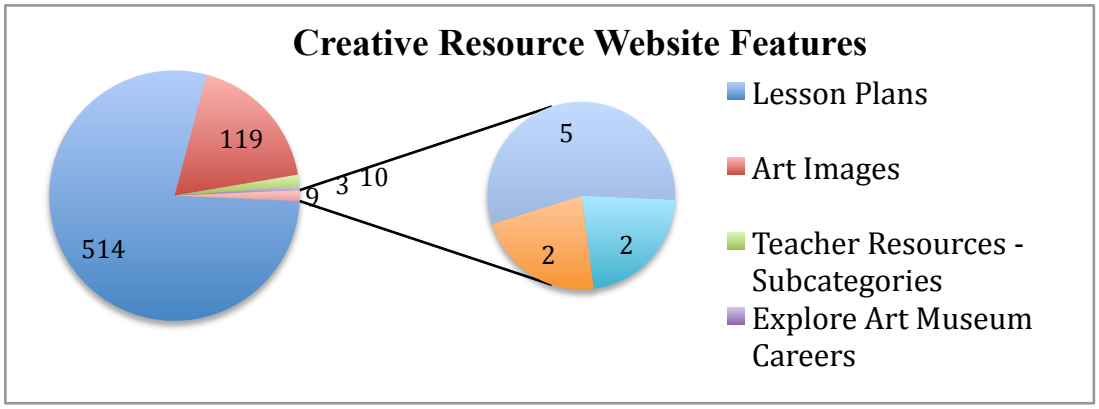


Figure 11. Denver Art Museum's Current Creative Resource Website Features ("Denver Art Museum")

Question twenty-one of the survey asked "Would you consider utilizing lesson plans and online resources in the classroom even if your class could not physically take a field trip to the museum?" Of the seventeen respondents, five respondents skipped the question; however the other twelve respondents 100% answered yes they would utilize the lesson plans in the classroom even if they could not go on a field trip to the museum.

The respondents were specifically asked the open-ended question, "How could the Museum of Arts and Sciences (MAS) be of the most helpful in your class and in achieving the Georgia Performance Standards?" Ten of the seventeen respondents answered.

The following responses are directly linked to Lesson Plans:

1. Respondent four wrote, "Resources for teachers to help provide students with interdisciplinary lessons. As a fine arts teacher, administration asks us to connect all subjects in our classes. I honestly don't know the best way to do that".
2. Respondent five wrote, "By helping us plan classroom activities and visits to the museum related to the classroom learning".
3. Respondent six wrote, "Lesson plans linked to standards." Respondent seven wrote, "It could be used, but our 6th grade standards relate to Europe, Canada, Latin America, and Australia. Perhaps there is art-related information or exhibits that would be compliant with our SS (Social Studies) GPS (Georgia Performance Standards)".
4. Respondent eight wrote, "Application of standards to real world professions and topics".
5. Respondent nine wrote, "Showing the history of Georgia and what it went through during the Civil War".

Three other respondents addressed other concerns relating to website content and access:

1. Respondent one wrote, "Be sure their offerings are in compliance".
2. Respondent two wrote, "Virtual content and access".
3. Respondent three wrote, "Having a website with resources that were easily accessible and useful without a lot of modifications".

Respondent three addressed an additional subject:

1. "It would also be helpful if they could have exhibits that were mobile that could be brought to area schools for a reasonable rate that would cost less than a field trip, but still allow students exposure to certain things". This issue is not an issue with not

having an outreach program, because the Museum of Arts and Sciences does have one relating to the Planetarium, the issue lies in the under information regarding the program.

The final question was also an open-ended question, which was answered by six of the respondents. This question asked, "What other comments and/or suggestions would you like to share to assist in the development of an online curriculum and resource website by the Museum of Arts and Sciences?"

The six responses were:

1. "Make the website professional and fun".
2. "Museum education could add to classroom instruction".
3. "Once plans are developed for the type of resources that are going to be placed on the website, please make them easy to access. I can spend hours browsing through things until I find what I'm looking for".
4. "Make them easy to use".
5. "Definitely lesson plans linked to current or prior exhibits. Searchable photographs and our resources would be helpful as well. Also, a kid's section on the website might be nice for children to be able to access themselves, play games, learn, etc".
6. "All help for teachers and students meeting the Georgia Performance Standards is great. A website would be helpful to find out what is offered".

Each of these comments is important in understanding how educators interact with websites, the value of and limitations of their time, their need for assistance with integrating art with other subjects, and their desire for lesson plans that non-art education instructors (the bulk of educators in Bibb County) are able to clearly understand and convey to their students.

Qualitative data collected from the Denver Art Museum surveys and interviews regarding their test educational website as of March 1, 2009 and in late March and April, 2009 resulted in teachers offering specific suggestions for improving their website. Teachers offered many specific suggestions for website improvement that fell into four categories:

1. **Recruitment of teachers to use CRW:** DAM should
    a. Identify subject matter coordinators in school districts (for language arts, social studies, etc.), and arrange teacher in-services on CRW similar to those for art teachers, but with a focus upon the needs of the particular subject matter area.
    b. Contact Colorado Council for Social Studies Teachers, Computers for Teachers, and other groups/associations that hold conferences for teachers in particular subject matter areas, and get on their conference agendas to present CRW.
    c. Expand emails and postcard mailings to teachers beyond existing mailing lists.
    d. Reinstate the annual Teachers' Fairs as a potential vehicle for disseminating information about CRW.
2. **Technology issues:** DAM should
    a. Fix whatever the technological glitch is that may be preventing teachers from enlarging art images to full-screen size.
    b. Improve the quality of the printed out art images – crucial to those teachers from less affluent schools lacking the technology to project the images.
3. **Art Objects and Lesson Plans:** DAM should
    a. "Get more images up" – possibly in the form of galleries representing different parts of the world or different genres.

b. List on the website the locations of featured art objects in the museum (the wing and the floor), so that students can more easily visit the objects that they have studied.

c. Include links to video clips related to the art objects (e.g., the monks making the mandalas); many such clips are already part of the exhibits at the DAM.

d. Open up the site for postings of student work arising from the lesson plans.

e. Create an on-line forum for teachers to share/exchange information about their use of the CRW's art objects and lesson plans.

4. **Standards:** DAM should

a. Develop and include rubrics or goals for evaluating student performance in connection with the lesson plans QED, May 2009 35 CRW Evaluation Report.

b. Include social science standards in the lesson plans, based upon the federal.

(Tombari, Bennett & Lichtenstein, 2009)

Generalizability and Response Rates

The research obtained by this survey is valuable even with a low rate of return based on the comments and information acquired. The research enclosed within this capstone research project compiled with and compared to Hunley's 2011 research and the Denver Art Museum's Creative Resource Website research has begun to form a pattern of generalizability of the issues facing museums, educational institutions, and educators regarding the future of museum outreach avenues and interactions between the museums and educational institutions.

The relationships between the Denver area population in the DAM research, the Washington D.C. and Maryland area population in Hunley's research and the Bibb County, Georgia population in the MAS research provides building blocks for establishing patterns of the

relationship between educators and educational institutions with museums. The research also has begun a pattern of indicating that although there are some differences from region to region, much of the educator needs are the same, the National Standards, Standards of Learning, and No Child Left Behind Act play an integral part in the ability of educators to take field trips to museums; educators expressed interests in lesson plans with art integrated into their curriculum as they stated quite often feeling unsure of how to incorporate art on their own.

Comments from the DAM Survey and Interviews, Hunley's Surveys, and the MAS Surveys

DAM	Hunley	MAS
"Right now we're talking about critical thinking in our districts, and how do you get kids to look at things and answer questions. And that's what art is (p. 28)"	'"…if the museums made sure to draw the connections to the Standards of Learning or similar there might be more buy in (p. 75)"	"Be sure their offerings (Lesson Plans) are in compliance (Q22)" "Application of standards to real world professions and topics (Q 22)"
"I can do something in here that will support what they're doing in their classrooms… a variety of materials, for a variety of audiences, that I'm able to over some of that in here (with the help of the website lesson plan)	"Having museum staff and materials that enable students to make connections between the content in the museums, life skills, and grade level curriculum (p. 75)"	"All help for teachers and students meeting the Georgia Performance Standards is great (Q 23)"
(of Lesson Plans) "…it looked like something…that I could walk right in the next day and use – and that's what we're always looking for, something we can fit right into our curriculum… (p. 14)"	"Develop grade appropriate lessons that teachers can use in lieu of classroom lessons (p. 75)"	
"I love the fact that they have the standards. Because when I am writing my lesson plans that I have to submit sometimes, I can put that in there…it's very easy to align art pieces with that, which works out well (p. 22)"	Providing an overview of the material related SOL objectives and worksheet or follow up activities to be done back in the classroom after the field trip. These are all things we have to show our Admin when seeking approval (p.75)"	"Resources for teachers to help provide students with interdisciplinary lessons (Q 22)" "Lesson plans linked to standards (Q22)"
An important aspect of the mission of the CRW is that teachers will learn more about creativity and creative thinking and be interested in expanding this aspect of their professional work (p. 25)"	"Promoting teacher education workshops (p. 75)"	
	"I wish we could know all the museum opportunities that are available to us (p. 75)"	"I would not have known they would do a trip for LA (Language Arts)… so I think letting teachers and schools know Q22)"
(On "Quick Ideas") "…if you don't want the entire lesson plan, – sort of like 'lesson plan at a glance' (p. 18)"	(want) "Online visits. Instructional Aids. Lesson plans or supplemental materials (p. 75)"	"Some museums have websites that allow for virtual field trips to be taken from the classroom. (Q 18)" "Virtual Content and access (Q 22)"
(Speaking of Ease of Use) "…don't always know where to look for things, you don't have time, it's all right there, it's nice to have the variety (p.14)"		"Time is always a huge concern so anything that makes finding information faster and getting lessons for visits faster…(Q20)" "Having a website with resources that were easily accessible and useful without a lot of modification (Q22)" ""…please make them (lesson plans) easy to access (Q 23)"

Figure 12. Comments from the DAM Survey and Interviews, Hunley's Surveys, and the MAS Surveys

This capstone research project also lays the groundwork for more involved focus groups and surveys based on the identified significant areas of importance across all three studies for other researchers and educators in the future investigations. Continued research building on the research already completed would introduce more insight and either strengthen the hypothesis of generalizability regarding the matters discussed in this capstone research project or it would provide evidence of a deviation to explore.

CHAPTER 6: ONSITE VISIT AND FINDINGS FOR THE DENVER ART MUSEUM

The information provided by the visit to the Denver Art Museum Education Department imparted information regarding obtaining additional resources of interns, grants, and professors to augment the staff at the MAS.

Researching for Denver DAM Meetings

When reading the Denver Art Museum's (DAM) "Creative Resource: The Story of Putting Together an Online Teacher Resource" 100-page report, a wealth of knowledge is exceedingly well conveyed, organized, straightforward, and very descriptive, yet nonetheless overwhelming when considering presenting a capstone research project through the University of Florida to a Georgia Museum for adaptation since the Georgia museum is facing steep education budget cuts in surrounding areas, reductions of field trip revenue, and the effects of the United States recession. After reading research from the DAM, contact with Angela Houdyshell, Coordinator of Teacher Resources, Education Department at the DAM was initiated in November of 2011. Angela began to immediately put together a team to meet in January 2012 regarding this capstone research project. The January meeting was intended to discuss how the Creative Resource Website began, how the CRW was progressing, answer questions specific to the Museum of Arts and Sciences area, and to facilitate tours with docents and students from Denver area schools.

DAM Visit

On January 18, 2012, Marie Stanley, School Tour Programs Coordinator had arranged a tour following area students and docents through the *Xu Beihong: Pioneer of Modern Chinese Painting* and the *Threads of Heaven: Silken Legacy of China's Last Dynasty* exhibits at the DAM. The Cory Elementary School was touring and the docent interacted with the students in a

way, which was unlike any museum experience this researcher had seen. Educators from the Cory school inquired about a researcher's purpose in the group and the typing of data on an iPhone notepad, which was occurring during the tour. Upon explanation of the capstone research project's purpose, they quickly offered information about their school and their principal they all adored and then she was promptly introduced. All the adults briefly chatted off to the side for a while about the concept of art integration into Denver school curriculum and how the DAM worked with the area school systems integrating the arts into many subjects. The educators' and the principal's information was exceedingly positive and fascinating, and their enthusiasm for the Denver Art Museum's work to integrate the arts and engage students was so heightened it was palpable and infectious. The conversation also included discussions about how Denver had a C3 (Creative Challenge Community) School, which would be opening in August 2012 (Information about this school option which may be found at http://c3.dpsk12.org and http://schoolchoice.dpsk12.org).

After a full day of meeting docents, students, parents, educators and a principal; notes for the days activities were typed and questions were prepared for the following day's meeting on January 19, 2012. On January 19, Angela Houdyshell, Coordinator of Teacher Resources; Ellen Spangler, Coordinator of Schools and Teacher Programs; Djamila Ricciardi, School and Teacher Team; Molly Nuanes, School and Teacher Team gathered with this researcher, Jeniffer Sams, UF Grad Student in Art Education to discuss the Denver Art Museum's Creative Resource Website and the Museum of Arts and Sciences' potential adaption of their website. After a short *Slide Rocket* presentation about the capstone research project proposal, the question was, "please tell me everything you can…" (Jeniffer Sams, UF). The group from the DAM spent the next two hours explaining the story of how the website started. Notably, they explained how the complex

website and departments involved with the creative resource grew out of a simple conversation at the Denver Art Museum into what it is today. This aspect of the meeting was inspiring as that one spark of imagination was now today's reality.

Take-Aways and Priorities Which Resonated

1. One spark of creativity can gain momentum into complex networks and projects.
2. Consider *Culture* as an *Overarching Theme* (this grew out of the conversations about the art and objects contained within the MAS collection).
    a. The DAM was excited by this concept and mentioned considering items which could stem from this overarching theme such as artists' backgrounds, community connections, artist intent, artist's processes, links to podcasts/videos/research/websites about the artist.
    b. Members of the DAM mentioned linking the Georgia Performance Standards (GPS) on culture to the overarching theme. An overarching theme brings together the many layers involved in an education website construction so that the intricacy of the content contained within the project is directed toward a central thematic statement.
3. The importance of optimizing the value of the Georgia culture, Georgia artists, and Georgia contributors by developing lesson plans and information giving examples of how people from the local community and the State of Georgia have grown up in this area, studied either abroad or right in the vicinity, became artists or connoisseurs, and have contributed to their community was dually noted. Incorporating these factors will allow museum personnel to highlight to students that they too are able to achieve great things outside of the circumstances, which may be currently surrounding them;

they are not their neighborhood but rather they are what they make of their life. The program allows students to recognize that they will get out of high school and like those from the area who have succeeded, they have opportunities if they seize them such as:

a. The Couper Collection – Emma Josephine Sibley Couper who is described in the MAS catalogue as 'Daughter of the Old South/Artist in a Modern World', born 1867 would travel around Europe with her family on a Grand Tour and forever develop a love of art and art-making. As a woman in the early part on the 1900's born in Augusta, Georgia the societal roles were fairly clear and she would follow those roles quite closely until her father's death and after she again traveled worldwide in 1890. Couper would study art to a higher extent, yet still have her work reflect her strong regional culture unlike the few other female contemporaries at the time. Couper did achieve enormous feats, travel worldwide, studied art in France, and often would return to the Georgia roots where she grew up quite frequently. For young women, Couper is an inspiration no matter the year as she traveled and studied art well beyond her societal roles and still was able to have her family life as well by her choosing. For gentlemen, Couper is an inspiration about the fortitude and creativity of women and of this Southern woman. Couper is an example of choice and of dedication to one's self (Harper, S., Joiner, D., Sibley Jennings, Jr., J. L., 1992). This specific example ties to many Georgia Performance Standards including VAHSPACU.2/VAHSDRCU.2 and demonstrates an understanding of how art history impacts the creative process of art making, (c.) Creates

artwork that explores ideas, issues, and events from current and past cultures. Additionally, VAHSDRMC.4 analyzes the origins of one's own ideas in relation to community, culture, and the world. (b.) Identifies values and practices in his or her community culture and world that inform the student's art making and (c.) Reflect on how personal experience in community, culture, and the world informs an artist's work. ("Georgia performance standards", 2009).

b. Create lesson plans around careers in art, museums, and art education – ("Dude, Where's My Museum? Inviting Teens to Transform Museums (Schwartz, 2005)" is an excellent place to begin with teenagers when discussing careers in art, art education, museums and even when discussing visits to museums.) This goal falls in line with the Georgia Performance Standards for Fine Arts under the VAHSPAC.3/VAHSDRC.3 and utilizes a variety of resources to see how artistic learning extends beyond the walls of the classroom. (a.) Accesses resources, such as museums, Internet, visiting artists, galleries, community arts organizations, and visual culture to research art in the world around him or her and (b.) Identifies various art related careers and post-secondary options. VAHSVAC.3 Utilizes a variety of resources to see how artistic learning extends beyond the walls of the classroom. (a) Discusses how study in art benefits one's future as an avocation (making, collecting, volunteering); in art-related careers; and in non-art careers and life skills (application of higher order thinking skills valued by business such as tolerance for ambiguity, judgment in the absence of explicit

rules, finding structure in apparent disorder, etc.), (b.) Identifies various art related careers and post-secondary options. (c) Identifies various art related careers and post-secondary options. ("Georgia performance standards", 2009)

c. "…emphasize the connections possible between the works of art and the viewer's personal experiences (Henry, 2010, p72)".

4. Use interns and volunteers for things such as lesson plans and administrations duties to augment the staff whenever and wherever possible.
5. Use backward design to achieve the website. Backward design is effective in the overall design so everyone knows where the process is going (*Whereto*) and so that the educators, museum, parents, and students have a clear understanding of where the learning is going. Educators, either students teachers or museum educators provide a glimmer of inquisitiveness and they *Equip* and *Enable* students with *Experiences* and *Explorations* then the students are able to *Rethink, Reflect*, and *Revise* their understandings as they learn. Ultimately the educators will be responsible for *Evaluating* and feedback to the students. Feedback should be reflective to the students' needs, interests, and talents in addition to the GPS so the museum and/or lesson plan writers need to put in place tools for educations to assist with this area (Wiggins & McTighe, 2005, p. 207).
6. Invite in as many experts as possible to assist in the process and development.
7. Clearly convey goals in written format.

CHAPTER 7: RECOMMENDATIONS AND ACTION PLANS FOR THE MUSEUM OF ARTS AND SCIENCES, MACON GEORGIA

With field trips in the Georgia's Bibb County Schools decreasing, the United States economic conditions negatively impacting the Museum of Arts and Sciences, budget reductions in area education institutions, and a need expressed as per the online survey of the Bibb County educators it is recommended that changes in the museum's delivery of art education. An expanded online educational website should be adapted from the DAM Creative Resource Website taking into account the Georgia College Marketing Report, field trips, revenue, standardized testing, and education are all linked together (Bellamy, Birdsong, Connaly & Walters, 2011), it is also strongly recommended that the connection of these factors be acknowledged and addressed for the purposes of education, art advocacy, and the Museum of Arts and Sciences' continued fiscal viability. Additionally, it is proposed that an adaptation of Wiggin's and McTigue's backward design model for curriculum development (Wiggins & McTigue, 2005) be adapted to a Museum of Arts and Sciences Action Plan for implementing these recommendations.

Action Plan 1 - Backward Design

Objectives:

1. Identify what the Museum of Arts and Sciences Education Online Website components should include upon completion"…backward design yields greater coherence among desired results, key performances, and teaching and learning experiences, resulting in better student performance-the purpose of design (Wiggins & McTighe, 2005, p33)".

2. Identify the mission(s) and goals for the education online website first, then work backward.

Description of Actions to be Taken:

1. Identify the desired content of an education website for the Museum of Arts and Sciences.
2. Present in writing clear mission(s) and goals for the education website for the MAS in writing.
3. Utilize the MAS Mission Statement for the development of the online education website and all components of the website, "The purpose of the Museum of Arts and Sciences is to acquire, preserve, study, interpret, and exhibit objects of artistic, scientific, historical, or cultural value that have inherent significance to the people of Central Georgia, so as to promote a fuller understanding of humankind, its heritage and environment ("Museum of arts," 2011)".

Action Plan 2 - Lesson Plan Creation

Objectives:

1. Develop a standardized format and components to be included in lesson plans.
2. Determine how lesson plans will be grouped (e.g. Specific grades; specific ages; subject areas; grade grouping – elementary, middle, and high school, etc.).
3. Determine which core subjects will be the focus for integration with the Fine Arts Georgia Performance Standards in the lessons. By integrating curriculum, the National Standard 6 is achieved when 'Students make connections to other disciplines and the world around them through the visual arts ("Georgia performance standards", 2009).

4. Include Georgia Performance Standards in these other core content areas in the lesson plans.

Description of Actions to be Taken:

1. Have a central person to work directly with area and online colleges and universities to have college students create lesson plans in accordance with the agreed upon format and core subjects to be integrated with the Fine Arts utilizing the GPS.
2. Adapt the lesson plan components from the Denver Art Museum's Creative Website:
    a. Overview – a short description of the lesson.
    b. Georgia Performance Standards Content – A list of the GPS that the lesson fulfills written out in entirety.
    c. Suggested length of lesson; lessons may be divided by days or other units of time if necessary.
    d. Rationale – explaining what the lesson will help the students achieve and what value it will bring to their long-term learning.
    e. Materials – list of all the materials the teacher will need to gather.
    f. Provide step-by-step instructions for the lessons (Denver Art Museum, 2010, p19-31).
3. Attached to each lesson plan should be a pdf print out for each work of art chosen for the website. The pdf should have information included similar to the DAM CRW called '*About the Art*' which contains the following:
    a. Who Made It?
    b. What Inspired It?
    c. Things To Look For.

d. A full-page color image of the artwork with a credit line so educators may make copies for students.

(Denver Art Museum, 2010, p. 21)

4. Consider including "Quick Ideas" with lesson plans. Lesson Plans at the CRW include 3-5 "Quick Ideas" for each piece of artwork. These Quick Ideas are short and simple activities with discussion points about the artwork for educators who may only have a short amount of time to include this type of lesson plan (Denver Art Museum, 2010).
5. Encourage exploration and discovery in the lesson plans. DAM Creative Resource Website writes of lesson plans, "We wanted our lessons to encourage students to explore, to figure out the dozens of ways a problem could be solved, and to learn that sometimes there isn't always a right or wrong way of doing something. We wanted to capture those ideas in our lesson plans" (Denver Art Museum, 2010, p23). Having students explore and problem solve on their own ties back into the concept of backward design and them taking what they have learned to *Rethink, Reflect*, and *Revise* the information they obtained during the learning processes (Wiggins & McTighe, 2005, p. 207).
6. Design a template for lesson plan writers to utilize. Templates should accommodate a variety of artwork, exhibits, age groups, and subject areas.
   a. A template approved by the framers of the lesson plan format and components creates consistency for the educators to move easily from lesson to lesson without having to 're-learn' how to use the MAS lesson plans and educational information.

b. A standardized template also maintains the integrity of the MAS identity and logo.

7. Make lesson plans both feasible for educators and students as well as easy to read

a. Have interns specialized in editing and writing work on this to help accomplish this goal. Says Lisa Levinson, Senior Interpretive Writer in the DAM report, "When writing for a general audience, you use concrete language, you don't use too many abstract words, you use shorter sentences. It's similar for teachers. You try to tie things to the concrete as much as possible so you're not just cramming things with facts" (Denver Art Museum, 2010, p19).

Action Plan 3 - Assess Resources Already In-House

Objectives:

1. Assess current resources so as to not redo any work, which already exists in-house.

Description of Actions to be Taken:

1. What items in the collection have high-resolution photographs already in existence?

a. The new MAS website has begun to include some photography.

b. Continuation of cataloguing photography needs to continue as well as consideration of working to acquire a camera and software for 360-degree images.

2. What items in the collection already have lesson plans, research material, or catalogue information already written about them?
3. What items in the collection do the MAS already have copyright permission to post online and allow the education system to reuse?
4. What other objects do not have image rights but could be obtained easily?
5. What grants are available to obtain equipment, software, personnel, and interns?

6. What museum sponsors and/or partners could benefit from and work with the MAS to create the website?
7. What additional resources are already in place which could be used with the website?

Georgia Performance Standard Coding

Domain Name	Abbreviation
Meaning and Creative Thinking	MC
Contextual Understanding	CU
Production	PR
Assessment and Reflection	AR
Connections	C
Drawing	DR
Painting	PA
Sculpture	SC

Figure 13. Understanding the Coding for Georgia Performance Standards ("Georgia Performance Standards, 2009")

Georgia Performance Standard (GPS) coding is made up of the following:

1. Subject Area, which is Visual Arts – VA.
2. Grade level or band – (K-5 for Elementary; 6-8 for Middle School; and HS for High School 9-12).
3. Specific grade levels Kindergarten, 1, 2, 3, 4, 5, 6, 7, 8, for K-5 and 6-8.
4. Letter abbreviations for the standard's domain (MC, CU, PR, AR, C, DR, PA, SC).
5. Numbering system for the standard within the domain.
6. The elements supporting the standard denoted by lowercase letters.

Coding Examples include:

1. VAKMC.1a is Visual Arts, Kindergarten, Meaning and Creative Thinking, Standard I, Element a.
2. VAKMC.1a is Visual Arts, Grade 6, Production Standard 2, Element b.

3. VAHSDRCU.4c is Visual Arts, High School, Drawing, Contextual Understanding, Standard 4, Element c.

CHAPTER 8: CONCLUSIONS

The conclusions drawn from the survey of Bibb County educators, on site conversations with the Denver Museum of Art's Education and Creative Resource Website Team Members during January, the 2011, research conducted by Lauren E. Hunley, and a multitude of research read in pursuit of knowledge for this capstone research project indicate a strong need for Georgia's Museum of Arts and Sciences to move forward with an online educational website, one which serves the needs of the community, education institutions, the educators, the MAS, other museums and the students.

The Museum of Arts and Education (MAS) has for fifty-five years provided educational opportunities teeming with possibilities that may fall by the wayside due to educational budget cuts, the recession, school transportation issues, a new generation that lack introduction to museums, and educators unable to integrate museum education into the standardization required by the No Child Left Behind (NCLB) Act and similar policies Based on the Bibb County educator survey and Hunley's study (2011) of educators for all grade levels the noted reasons for not going to the museum included reasons such as funding cuts; pressures of standardized testing, NCLB requirements and Georgia Performance Standards; transportation costs; and lack of information regarding the services offered at the MAS.

Yet, these situations could be adjusted, partially remedied, or fruitfully addressed with a program adapted from the DAM Creativity Resource Website project. "The idea that learning in the museum is both similar to-and different from-traditional conceptions of learning is crucial to developing strong educational programming (Henry, 2010, p. 50)". Creating an interactive website for the Museum of Arts and Sciences and the area educators as well as other art advocates, when done with a clear goal and purpose has a significantly high probability to

facilitate learning of the arts both in and out of the education institutions; encourage a new generation of museum goers and art advocates; and enrich the curriculum and lives of students. In this time of recession and budget cuts in particular, online GPS lesson plans/curriculum, educational resources, high-resolution photographs of the museum collection, downloadable multimedia, and virtual tours are timely. The development of this project is additionally expected to provide a stronger relationship between MAS and the community, the area colleges/universities via internships by creating more opportunities for career experience, and opening a new avenue for the museum they would otherwise not have the resources to create.

Many educators indicated a need for an easily navigated website with relevant lesson plans, which also clearly address the Georgia Performance Standards. The Museum of Arts and Sciences offers multidisciplinary programs ranging from in-house art lessons, 'Ziggy' the dinosaur, a mini-zoo, a planetarium, environmental education, and fine arts all housed together in Macon, Georgia ("Museum of Arts") yet fewer and fewer educators are able to take advantage of this vast resource, nor are they aware of the full range of this resource. The value of the Museum of Arts and Sciences, a Smithsonian Affiliate, is exceptional in regard to education inside the museum and their time to share that knowledge with educational institutions, educators, interns, other museums, and students in an online capacity has come.

Art education has the power to cross borders and boundaries like few other educational subjects and bring new meaning to learning. Utilizing a museum's resources creates a symbiotic relationship between art education and educators in all subject areas. "In all this, art has a distinctive role to play. The liberal borders of art help us to carry good thinking dispositions nurtured in the context of art to the wider world Art is an extrovert… If most disciplines dig moats, art builds bridges" (Perkins, 1994, p90).

APPENDIX A

The Feasibility of an Online Museum Education Program at MAS Survey

The Museum of Arts and Sciences (MAS) would like the opinions of the educators in the community to assist in creating an interactive website for public and school use. If you could please take a little of your time to answer the survey your answers will be beneficial in evaluating how best to serve the educators, parents, the students, and the community.

Thank you, Jeniffer Sams, University of Florida, jenfredsams@ufl.edu

Research Consent

I agree to take part in the 'The Feasibility of an Online Museum Education Program for the MAS' Survey, which is research toward creating an online database of information for the MAS for educational purposes for use by the community, teachers, students, and parents. This research is also part of a research process toward a Master of Art education degree at the University of Florida. There are no benefits to you for participating in the study.

1. I have had the project explained to me, and I have read the information statement about the project, which I may keep for my records (This information was included in the Introductory Email you received) I understand that this project will be carried out in accordance with the University of Florida's Code of Research Ethics.

I have read, and I understand the information sheet. This information was provided in the introductory email you received.
Yes
No

2. I have been given the opportunity to ask questions about the project, and they were answered to my satisfaction.
Yes
No

3. I understand that I can withdraw from the study at any time.
Yes
No

4. Please indicate the level of confidentiality you wish to obtain. Select all, which apply to you.

_ I give permission to utilize my real name and my school affiliation in connection with any words I have said or written or with any information I have provided.
_I request that my real name be used in connection with any information I have provided or comments I have made.
_ I request that my comments are presented anonymously but permission to contact my school affiliation with my comments (but not with the title of my position).
_ I request that all my information remain anonymous.
If other, please specify

---

5. Electronic Signature
Please be aware that by typing your name into the box below you are consenting to participate in this survey and your answers will be utilized as part of this research.
_____
_____
_____
_____
Identifying and Statistical Info (Anonymous Unless Otherwise Stated)

6. Please note that any information which identifies you personally will be utilized for follow-up purposes ONLY. All answers will remain anonymous unless you specifically stated otherwise in the previous section of this survey.
Name _____
Preferred Email _____
What subject(s) do you teach? _____

7. What grade level(s) do you currently teach? (Click on all that apply)
Kindergarten_1st_2nd_3rd_4th_5th_6th_7th_8th_9th_10th_11th_12th

8. How many students are in your class on average?
1-7
8-15
6-22
23-29
If other, please specify

---

9. What is the name of your school and In what city and state is your school located?
Name of Your School _____
City, State _____

10. How many years have you been an educator?
0-5
6-10
11-15
16-20
21-25

26-30
If other, please specify

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11. What technology is available to you in your classroom?
Please check all that apply.
Computers
Computers with wifi/Internet
Projectors
iPads
iPods
If other, please specify

Field Trip Information
12. Do you take your students on field trips? Why or Why not?
Yes
No
Additional Comments

13. How many field trips do you typically plan during a typical school year? (X only one.)
None
1-2
3-5
More than 5
If other, please specify
_____

---

14. If you do take your students on field trips, where do you take your students for their trips?
Art Museums/Galleries
Symphony/Music Concert
Planetarium
Aquarium
Government Offices
Parks/National Park
Amusement Park
College/University/Education Association
None of the Above
If other, please specify
_____
_____
15. What challenges, if any do you encounter when attempting to take a field trip?
_____
_____
_____

---

16. Is your school provided funding from the State of Georgia for field trips?
Yes

No
Additional Comments
_____

17. Approximately how much is your class budget for field trips for 2011-2012? (Click on only one.)
Nothing
$1-100
$101-$250
$250-$500
$501-$1000
$1001-$1500
$1500-$3000
More than $3000

What Features Are Important To You for Online Resources

18.What type of museum resources have you utilized?
Lesson Plans
Resources for the Classroom
Multi-media (Images, printouts, films, ect.)
Professional Development
Teacher Exchanges
Visiting the Museum
Planning a Visit Link prior to a Museum Visit
None
If other, please specify
_____

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19. What subject areas would be most beneficial in your classroom with regard to lesson plans and education material? Please check all that apply.
Math
Science
History
Language Arts
Culture
Fine Arts
If other, please specify

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20. Which features would you like to see on a museum education web site? (As it pertains to education)
Lesson Plans
Access to Images of Artwork online and for printing
Art Vocabulary
Teacher Exchange Blog
Professional Development
Webcasts/PodCasts

Lessons linked to Performance Standards
Planning a Visit Information
Scheduling In the Museum Visits Customized for Your Classes
If other, please specify
_____

21. Would you consider utilizing lesson plans and online resources in the classroom even if your class could not physically take a field trip to the museum?
Yes
No

22. How could the Museum of Arts and Sciences (MAS) be of the most helpful in your class and in achieving the Georgia Performance Standards?
_____

In Closing

23. What other comments and/or suggestions would you like to share to assist in the development of an online curriculum and resource website by the Museum of Arts and Sciences?
_____
_____
_____
_____
THANK YOU for your time and participation in this important study.

APPENDIX B

Cover Letter For The Feasibility of an Online Museum Education Program at MAS Survey

February 19, 2012
Educator in Bibb County:

My name is Jeniffer Sams and I am a graduate student at the University of Florida For my Master's Capstone research project, I am examining the adaptability of the Denver Art Museum's Creative Recourse Website for the Museum of Arts and Sciences As you are an educator in the surrounding area of Macon, Georgia and MAS, I am inviting you to participate in this research study by completing the survey attached with this email.

The survey will require approximately 7-15 minutes to complete There is no compensation for responding nor is there any known risk In order to ensure that all information retains your level of confidentiality desired please check appropriate boxes on the survey Your choice of level will be respected and guarded Only my Committee, my Chair, pertinent members of the University of Florida and myself will see the surveys after completion unless you indicate otherwise.

Should you choose to participate in this project, please answer all questions as completely as possible and the more data received the better understanding of the needs of educators will be obtained Participation is strictly voluntary and you may refuse to participate at any time.

Thank you for your time and thank you in advance for assisting me in my educational endeavors The information collected will provide useful information regarding educators and students' needs regarding the Museum of Arts and Sciences educational online program If you would like a copy of the Capstone research project after completion in August 2012 I will be happy to supply you with the finished work, please just email me at this email or at jenfredsams@ufl.edu.

If you have any additional questions, which are not addressed here, please feel free to contact via any method below my signature.

Sincerely,

Jeniffer Sams, UF Grad Student
jenfredsams@ufl.edu / jen.art.history@gmail.com / Skype jenfredsams / 352-222-8587
Committee Members:
Dr. Elizabeth Delacruz, PhD edelacruz@ufl.edu
Dr. Jodi Kushins, PhD jkushins@ufl.edu

APPENDIX C

Informed Consent for Survey

Informed Consent

Protocol Title: An Empirical Examination of the Feasibility of an Online Museum of Education

Program: The Museum of Arts and Sciences, Macon, Georgia

Please read this consent document carefully before you decide to participate in this study.

Purpose of the research study:
The purpose of this thesis proposed research study examines the feasibility of adapting the Denver Art Museum's Creative Resource Website Project for the Museum of Arts and Sciences (MAS), a Smithsonian Affiliate museum located in the Southeastern United States.

What you will be asked to do in the study:
You will be asked to take a survey, "Examination of the Feasibility of an Online Museum Education: The Museum of Arts and Sciences, Macon, Georgia Adaptation Feasibility of the Denver Art Museum's Creative Resource Website Project" The survey consist of demographic information, qualitative questions, and quantitative questions for research relating to the participants experiences with or lack of experiences with museum resources, fieldtrips, school funding in the Georgia area, and desired features of a website for a museum educational site You are agreeing to take part in research toward the identification of the feasibility of the research material and towards a Masters of Art Education degree at the University of Florida.

Time required:

8-20 minutes

Risks and Benefits:
There are no known risk of economic, social, psychological, physical, or any other type of harm as a result of this survey There are no benefits to you for participating in the study.

Compensation:
There is no compensation for participating in this research.

Confidentiality:
Your identity will be kept confidential to the extent provided by law and according to the choices you designate in the demographic section of the survey. Your information will be protected at all times through the survey provider Surveymethods.com All surveys are anonymous UNLESS the participant chooses to fill in the demographic section voluntarily. At the end of the survey Surveymethod.com will delete the material and all information. Your name will not be used in any report UNLESS the participant has chosen to do so in the demographic section.

Voluntary participation:
Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the study:
You have the right to withdraw from the study at anytime without consequence.

Whom to contact if you have questions about the study:
Dr. Elizabeth Delacruz, PhD, College of Fine Arts, Art Education, edelacruz@ufl.edu

Jeniffer Sams, UF Grad Student, College of Fine Arts, Art Education, jen.art.history@gmail.com / jenfredsams@ufl.edu

Whom to contact about your rights as a research participant in the study:

IRB02 Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; phone 392-0433.

Agreement:

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description. The consent will be on the survey with an opt out (The first question of the survey will give them the consent form and they will click either yes or no to grant consent. If they click no the survey ends, if they click yes they are granting consent and continue).

APPENDIX D

Resources for the Museum of Arts and Sciences

21st Century Skills: A Global Imperative -

http://www.ed.gov/blog/2012/03/21st-century-skills-a-global-imperative/

Art21 Online Lesson Library -

http://www.pbs.org/art21/learning-with-art21/materials-for-teaching/online-lesson-library

C3 (Creative Challenge Community) School -

http://c3.dpsk12.org & http://schoolchoice.dpsk12.org

Cory Elementary School, Denver -

http://coryelementary.com/

Creativity Resource: The Story of Putting Together an Online Teacher Resource, by the Denver Art Museum -

http://creativity.denverartmuseum.org/wp-content/themes/creativity-2/includes/CR-Story.pdf

Davis – Online Resource Collection Updated Monthly -

http://www.davisart.com/Portal/TeacherResources/T_resourcesDefault.aspx

Department of Education -

http://www.ed.gov/

Denver Art Museum's Creative Resource Website -

http://creativity.denverartmuseum.org/

Dude, Where's My Museum? By D. F. Schwartz -

http://www.aam-us.org/pubs/mn/MN_SO05_teenagers.cfm?

Federal Resources for Educational Excellence – Visual Arts -

http://www.free.ed.gov/subjects.cfm?subject_id=5&toplvl=1

From Periphery to Center; Art Museum Education In The 21st Century Dr. Pat Villeneuve PhD, Editor Associate Professor of Arts Administration, Art Museum Graduate Advisor at Florida State University -

http://arted.fsu.edu/People/Faculty/Pat-Villeneuve-Ph.D

Georgia Performance Standards -

https://www.georgiastandards.org/standards/Pages/BrowseStandards/BrowseGPS.aspx

Henry, EdD, Carole; Professor of Art and Graduate Coordinator LDSOA at the University of Georgia Athens (UGA) and author of The Museum Experience; The Discovery of Meaning -

http://art.uga.edu/people.php?id=20

J. Paul Getty Museum – K-12 Teachers and Students Education -

http://www.getty.edu/education/teachers/index.html

National Art Education Association (NAEA) -

http://www.arteducators.org/

National Art Education Association (NAEA) Museum Education Web links & Resources -

http://www.arteducators.org/learning/NAEA_Museum_Weblinks_3-2-11.pdf

North Texas Institute for Educators on the Visual Arts -

http://art.unt.edu/ntieva/pages/teaching/tea_index.html

Smithsonian American Art Museum – Online Classroom Activities -

http://www.americanart.si.edu/education/activities/online/index.cfm

Teaching, Testing, and Tyrannosaurus Tex: How the No Child Left Behind Act Has Affected Museum and Galleries in the United States. By Lauren E. Hunley -

https://docs.google.com/file/d/0B6QP7e6EepfTMjhjNzRkY2MtZGE3NC00NDBlLWIwM2MtY2ZmMjIwY2U0ZGIx/edit?hl=en&pli=1

The Partnership for 21st Century Skills -

http://p21.org/

Willumson, PhD, Glenn – Director of the graduate program in Museum Studies at the University of Florida and Art Historian, The Emerging Role of the Educator in the Art Museum, a chapter in *From Periphery to Center: Art Museum Education in the 21st Century* (National Art

Education Association) -

http://www.arts.ufl.edu/faculty/research/Faculty_Research_Profile.aspx?PID=46

REFERENCES

Bellamy, W., Birdsong, M., Connaly, Q., & Walters, J. (2011, Spring). *Museum of arts and sciences marketing plan.* Paper presented at The Museum of Arts and Sciences, Macon, Georgia.

De Leeuw, E., & De Heer, W. (2002). Trends in household survey nonresponse: A longitudinal and international comparison. In R. M. Groves, D. A. Dillman, J. L. Eltinge & J. A. Little Roderick (Eds.), Survey Nonresponse (pp. 41-54). New York: Wiley.

Denver Art Museum. (2010*).* Denver creativity resource report for teachers, the story of putting together an online teacher resource. Denver Art Museum Resource Report Denver, CO: Denver Art Museum. Retrieved from http://www.denverartmuseum.org/files/File/creativity_resource_report.pdf

Denver art museum creative resource for teachers. (n.d.). Retrieved from http://creativity.denverartmuseum.org/

E-learning – knowledge management and education evolution. (2011). Retrieved from http://meissa.my/e-learning

Fink, A. (2003). *How to design survey studies.* (2nd ed., p78). Thousand Oaks, London, New Delhi: SAGE Publications.

Harper, S., Joiner, D., Sibley Jennings, Jr., J. L. (1992). Josephine Sibley Couper. In Georgia. The Museum of Arts and Sciences Macon (Ed.), *Daughter of the Old South / Artist In A Modern World*. Macon, Georgia: Museum of Arts and Sciences.

Henry, C. (2010). *The museum experience: The discovery of meaning.* (pp1-106). Reston, VA: National Art Education Association.

Hunley, L. E. (2011). *Teaching, testing, and Tyrannosaurus Rex: How the No Child Left Behind act has affected museum and galleries in the United States.* (Master's of Art's thesis), Available from NAEA. Retrieved from https://docs.google.com/file/d/0B6QP7e6EepfTMjhjNzRkY2MtZGE3NC00NDBlLWIwM2MtY2ZmMjIwY2U0ZGIx/edit?hl=en&pli=1

Hunt, H. (2012). *Xu Beihong, Tian Heng and His Five Hundred Warriors, 1928-1930.* [Web Photo]. Retrieved from http://calitreview.com/22783

Museum of arts and sciences. (n.d.). Retrieved from http://www.masmacon.com/

Museum of arts and sciences. (2011). Retrieved from http://www.masmacon.org/about-mas/mission

Perkins, D. N. (1994). *The intelligent eye, learning to think by looking at art.* Los Angeles, CA: Getty Publications.

Sams, J. (2011). *An empirical examination of online museum education: The Museum of Arts and Sciences, Macon, Georgia: Research pilot study: Fall 2011.* (Unpublished pilot study). University of Florida. Retrieved from Scribd website: http://www.scribd.com/fullscreen/87491560?access_key=key-2kf5rgn4b6n9xjnxrflm

Schwartz, D. F. (2005). Dude, where's my museum? Inviting teens to transform museums. Retrieved from http://www.aam-us.org/pubs/mn/MN_SO05_teenagers.cfm?

Tombari, M., Bennett, L., & Lichtenstein, G. (2009, May). *Denver Art Museum: Creativity resource website evaluation*. Retrieved from http://creativity.denverartmuseum.org/wp-content/uploads/2011/05/QED_CREval_Report_FINALsmaller.pdf

U.S. Department of Education, Fine Arts Education. (2009). Georgia Performance Standards; Visual Arts. Retrieved from Georgia Department of Education website: https://www.georgiastandards.org/standards/GPS%20Support%20Docs/Fine_Arts_Visual_GPS_Final_2-11-2010.pdf

Weil, S. E. (2002). *Making museums matter.* Washington D. C.: Smithsonian Institution.

What is vts – visual thinking. (2011). Retrieved from http://www.vtshome.org/what-is-vts

Wiggins, G. P., & McTighe, J. (2005). *Understanding by design.* (2nd ed.). Alexandria, VA: Association for Supervision & Curriculum Development.

Willumson, G. (2007). The emerging role of the educator in the art museum. In P. Villeneuve (Ed.), *From periphery to center: Art museum education in the 21st century* (pp. 89-94), Reston, VA: National Art Education Association.

BIOGRAPHICAL SKETCH

Jeniffer Sams, Masters of Art Education Student at the University of Florida, Gainesville, Florida and graduate of East Tennessee State University, Johnson City, TN in 2010 with an Interdisciplinary Studies of Art History and Education has continued a path toward museum/art education, art history, and photography toward graduation with a Masters in August of 2012 During the course of her Master's work, Sams has continued to serve the community via an Internship with the Museum of Arts and Sciences (MAS) in Macon, Georgia (http://www.newscentralga.com/news/local/Study-Break-Museum-Helps-Interns-Reach-Dream-Job-124681839.html) and the environment with such works as designing and implementing an Eco-Art Show for local High School Children to exhibit during Earth Week and Shades of Green at the Georgia College Education Building (http://www.gcsu.edu/shadesofgreen/stubiographies.htm). Sams has utilized her art history and education to expand opportunities within the community for future artists giving them a venue to express their passions for art and environmental awareness both inside and out of the art community.

Sams has begun a second internship with the Macon Museum of Arts and Sciences with the hopes of adapting and adjusting work the Denver Art Museum (DAM) successfully accomplished with their 'Creative Resource' project in Denver, Colorado A mock curriculum website for the MAS has been begun by Sams; however in understanding the wide reaching impact such an website could have, Sams has opted to involve a larger group of people to work on the project beginning with an Independent Study with Dr. Elizabeth Delacruz, PhD to conduct further research and development; the DAM to learn about their processes both past and present;

and the Education Curator at the MAS, Susan Mays to discuss what will need to be addressed first, whom to work with the most, and the best team to prepare for the project.

A full E-folio and course work as well as project work (past and current) is available at the following websites:

http://jeniffersams.weebly.com/ password to any locked pages is Gators.

http://museumofartsandscience.weebly.com/ password Gators.