AN EVALUATION OF THE WISCONSIN CONSERVATION HALL OF FAME EXHIBIT EFFECTIVENESS AND EXPLORATION OF DELIVERY METHODS AND LEARNING MODALITIES

by

Ginamaria F. Javurek

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APPROVED BY THE GRADUATE COMMITTEE OF:

Dr. Brenda Lackey, Committee Chair
Assistant Professor of Environmental Education and Interpretation

---

Mr. Jim Buchholz
Assistant Director of Schmeeckle Reserve

Dr. Robert Holsman
Associate Professor of Wildlife

Dr. Greg Summers
Associate Professor of History

ABSTRACT

The purpose of this study was to evaluate the impacts of multi-modal methods of delivery for interpreting the stories and lives of Wisconsin Conservation Hall of Fame inductees, as well as to determine whether a person's learning modality type plays a role in their preferred mode of exhibit delivery. The study was conducted in two phases. In Phase I the strengths, limitations and effectiveness of the current Wisconsin Conservation Hall of Fame (WCHF) exhibition were determined by gathering opinions from the visitors using a questionnaire (n=311). The questionnaire was also used to determine each respondent's learning modality type through a self-assessment test. Results indicate that exhibits that are multi-modal, interactive and evoke emotion are favored by visitors. Suggestions for improving the WCHF included incorporating more hands-on exhibits (videos, computer kiosks, dioramas), increasing the size of the WCHF and including more about the fascinating lives of individual inductees in order to help visitors form more connections. In Phase II, four exhibit prototypes were fabricated. The exhibit prototypes consisted of exhibits that were visual, auditory, kinesthetic and multi-modal in order to determine if a visitor's learning modality affects his/her preference. These prototypes were shown to individuals and personal interviews were conducted to evaluate the exhibit prototypes (n=19). Results show that although people's learning types did not directly affect their exhibit preference, 11 of the participants enjoyed and learned more from the multi-modal exhibit because they could interact with and relate to the stories told within the exhibit.

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CHAPTER 1

Introduction

Problem Statement:

The purpose of this study was to evaluate the impacts of multi-modal methods of delivery for interpreting the stories and lives of Wisconsin Conservation Hall of Fame inductees, as well as determine whether a person's learning modality type plays a role in their preferred mode of exhibit delivery.

Subproblems:

1. Identify the effectiveness of the current Wisconsin Conservation Hall of Fame (WCHF) exhibition through stakeholder and visitor input.
2. Examine exhibit effectiveness using different methods of delivery (prototypes) in museum exhibit work to connect visitors intellectually and emotionally to interpretive messages.
3. Examine whether a person's learning modality is related to the way a visitor learns from an exhibit.

Hypotheses:

1. The learning modality of respondents will be related to their preferred exhibit mode of delivery.
2. The gender of respondents will be related to their preferred exhibit mode of delivery.
3. The age of a respondent will be related to their preferred exhibit mode of delivery.

Definition of Terms:

Auditory learning style: Involves the transfer of information through listening-to the spoken word, of self or others, of sounds and noises.

Connection: Linking the interests of the visitor to the resource or topic, both intellectually and emotionally.

Effectiveness: Determining whether each exhibit is meeting its intended goals and objectives (intellectually, emotionally and behaviorally).

Emotional values: The affective benefits of a product for people who interact with it, benefits such as pleasure or fun. Such benefits arise from affective experiences that occur on three levels: aesthetic (referring to delight experienced in a sensory capacity, meaning (referring to experiences that relate to one's personality or character) and emotion (referring to the provocation of strong feelings such as love, anger, etc.) (Desmet & Hekkert, 2007).

Exhibition: Series of exhibits that are related and together tell a complete story.

Evaluation: The collection of information through interviews, focus groups and written surveys in order to provide information that could be used to modify exhibits and guide future exhibit planning (Gross & Zimmerman, 2002).

Hall of Fame: A structure housing memorials (portraits, memorabilia or belongings of people) of famous or illustrious individuals that have excelled in a particular sphere of activity and are usually chosen by a group of electors.

Interpretive media: A channel or system of non-personal communication, such as an exhibit, that guides visitors to discover meanings in objects, places and landscapes.

Kinesthetic learning style: Involves physical experience — touching, feeling, holding, doing, practical hands-on experiences.

Learning modalities: The preferred way that a person processes information to the memory. The three types of learning modalities are auditory, kinesthetic and visual (Huntinger, 2001).

Message: The ideas that will be communicated to the public, including the theme, sub-themes and storylines. They directly relate to each sub-theme (Gross & Zimmerman, 2002).

Multi-modal delivery method: An exhibit that involves several senses of the visitor to facilitate learning.

Multi-sensory learning: Learning that relates to or involves several bodily senses, including auditory (hearing and speaking), visual (seeing and perceiving) and kinesthetic (touch and movement).

Museum: An institution devoted to the procurement, care, study and display of objects of lasting interest or value.

Sub-themes: Split the theme into several broad categories that make the ideas more workable.

Theme: A main idea that links tangible resources to intangible meanings and directs the messages that are to be included in a design (Gross & Zimmerman, 2002).

Visual learning style: Involves the use of seen or observed things, including pictures, diagrams, demonstrations, displays, handouts, films, flip-chart, etc.

Visual method of delivery: An exhibit that only involves a visitor's sense of sight.

Wisconsin Conservation Hall of Fame (WCHF): A non-profit organization composed of 24 Wisconsin conservation-related organizations that was established to encourage the growth and practice of a conservation ethic as a legacy for the people of the state. The inductees into the Hall of Fame have significantly contributed to conservation programs, projects, public understanding, and conservation ethics within the state of Wisconsin and the nation.

Assumptions:

1. A self-assessment test is an accurate way to determine a visitor's learning modality type.
2. Developing multi-modal interpretive media in the WCHF Land of Wealth museum is the most effective method to tell Wisconsin's conservation history to visitors.
3. Visitors can better understand and appreciate historic conservation efforts if they identify with the Hall of Fame inductees who led or participated in the movements.

Importance of the Study:

In the United States there are over 200 Hall of Fame organizations memorializing over 100 subject fields (Danilov, 1997). These Hall of Fame (HOF) organizations celebrate a variety of topics from Rock and Roll to archery. Although the topics are varied, all of the HOF organizations have three things in common. First, their main mission is to honor illustrious people. Second, they display memorabilia of the inductees in a museum-type fashion. Third, they attempt to connect the visitors and the inductees in some cognitive and/or affective way (Danilov, 1997). Although they have many similarities, HOF organizations differ in the methods used to connect visitors to the inductees and their stories. Although many methods are available to make these

connections, some may be more effective than others. In order to draw more visitors, nearly all HOFs periodically make improvements to their exhibits and programs, whether it is a major renovation of exhibits, expansion of facilities or relocation to a more attractive facility (Danilov, 1997). The improvements of HOFs are dependent on a reliable stream of income from a connected and interested public via attendance fees, memberships or donations. By making connections with visitors through stories and interpretive media, the future of HOFs can be enhanced and the continuation of the inductees' accomplishments can be guaranteed (Danilov, 1997).

Wisconsin has historically been a leader in pioneering new concepts and taking progressive steps toward the conservation of natural resources. These programs and ideas have been accomplished through the continuing efforts of leaders in the conservation field. The Wisconsin Conservation Hall of Fame (WCHF) was established to recognize the people who made significant contributions to resource management. It also encourages citizens to involve themselves in the management of our resources and to promote an interest in conservation among Wisconsin youth. The WCHF inducted John Muir and Aldo Leopold as its first inductees in 1985 and since then over 60 people have been inducted with new nominations occurring every year (Wisconsin Conservation Hall of Fame Board, n.d.).

The exhibits in the museum have been designed and fabricated by University of Wisconsin-Stevens Point Environmental Education/Interpretation practicum students and previous graduate students, but the exhibition was never completed according to the original plans. Many of the existing exhibits were built over 10 years ago and are becoming worn and outdated. The formal hall of inductees contains plaques of each

inductee with a quote and brief histories are available in a binder. This study recommends methods to renovate existing exhibits and designs for new multi-sensory exhibits that incorporate the inductees into Wisconsin's conservation history. Gathering public input on the current exhibition and possibilities for new exhibits was important to ensure that the stories are told effectively and that the public will continue to be a stakeholder in the WCHF. A by-product of this research will be suggestions for the WCHF exhibition that address the current limitations, the needs for renovating existing displays and designs for multi-modal exhibits that could be incorporated into a future WCHF with more space. An updated museum and formal Hall of Fame will increase interest in Wisconsin's conservation history and help inspire future generations to continue the great tradition (Wisconsin Conservation Hall of Fame Board, n.d.).

Multi-modal exhibits include learning components that involve two or more of a visitor's five senses when they are exploring the exhibit. A visitor investigating an exhibit is actively learning and committing the information to memory. Research has shown that people have three preferred ways that they process information to the memory and these are called learning modalities. The three types of learning modalities are auditory, kinesthetic and visual (Huntinger, 2001; Kratzig & Arbuthnott, 2006; Kruger, Saul, and Lin, 2000; Wilson, n.d.; Krueger et al., 2000; Cassidy & Eachus, 2000; Lujan & DiCarlo, 2006; Lu, Yu and Liu., 2003). A variety of delivery techniques can be applied to exhibits so that the information can be processed to memory better by different modality types. Understanding which delivery techniques of exhibits are more enjoyable for different learning modality types and are more conducive for learning may be important in future exhibit design.

CHAPTER 2

Literature Review

The focus of this study was to evaluate the impacts of multi-modal methods of delivery for interpreting the stories and lives of Wisconsin Conservation Hall of Fame inductees in order to facilitate an experience of creating meanings and connections for the visitors, as well as to determine whether a person's learning modality type plays a role in their preferred mode of exhibit delivery. To accomplish this, the following areas of literature were reviewed:

- Hall of Fame Organizations
- Wisconsin Conservation Hall of Fame
- Museum and Interpretive Center Visitors
- Multi-modal Experiences
- Learning Modalities
- Exhibits, Designs and Stories
- Visitor Evaluation

Hall of Fame Organizations

A Hall of Fame is a structure housing memorials (portraits, memorabilia or belongings of people) of famous or illustrious individuals that have excelled in a particular sphere of activity and are usually chosen by a group of electors (Merriam-Webster, 2005; Microsoft Corporation, 2007). The founding executive director of the International Swimming Hall of Fame, William F. Dawson compared a Hall of Fame with a museum saying, "A Hall of Fame is a museum with a personality. Whereas an anthropological museum deals in the composite man, a Hall of Fame deals in specific men and women-personalities whose talent and achievement express biographically the

dramatic episodes displayed in the Hall of Fame." Both Halls of Fame and museums have been built to capture and protect the contents from time (Armstrong, 1992).

In some instances Halls of Fame consist of actual halls, while others are more figurative and consist of a list of names maintained by an organization. When the Halls of Fame are actual physical spaces, they generally have a formal gallery, museum, gift shop and library of related literature (Danilov, 1997). The actual halls were built to protect the reputations of those that distinguished themselves with notable achievements (Armstrong, 1992).

Halls of Fame began in Europe several centuries ago with statuary tributes to national heroes in England, France and Germany. The first of these types of tributes was in Westminster Abbey in London, England. The United States followed suit in 1864 with a National Statuary Hall in Washington, DC honoring figures such as Thomas Jefferson, Brigham Young and Robert E. Lee. The modern types of Halls of Fame began in the 1930s with the first being the New York Yankees Memorial Park in Yankee Stadium. Since that time Halls of Fame have spread rapidly (Danilov, 1997). This increase in interest in Halls of Fame may be due to four reasons:

1. The increasing desire to memorialize and know more about illustrious figures.
2. The greater educational and economic levels of visitors.
3. An increase in leisure time of the public.
4. The mobility and readiness of people to travel and visit places.

(Armstrong, 1992; Danilov, 1997).

Halls of Fame have been initiated by private individuals, groups of people, clubs and associations, universities and city, state and federal governments. They were built as

agents of preservation and transmission of heritage, so that peoples' achievements could become an example of accomplishments to compel and inspire future generations. Without the accumulated heritage to pass on to future generations, there would be nothing upon which to build further (Armstrong, 1992). Inductees are usually chosen by a designated committee based on achievements in a particular field. Typically inductees are individuals, but in some cases partners and even animals are inducted. Many Halls of Fame have requirements that inductees must meet in order to be nominated for induction, which may include being active in the field for a specific number of years, age requirements, retirement for a certain number of years, or death. Depending on the Hall of Fame, the number of inductees ranges from only a handful to several thousand.

Halls of Fame are organized to memorialize and connect visitors to the inductees. The range of different exhibit techniques employed by Halls of Fame include displays of memorabilia, plaques, panels, photographs, audiovisual presentations, artwork, dioramas, models, replicas, touch screens, computer games, participatory activities and virtual reality. Some of the most popular exhibits at Halls of Fame include "hands-on" exhibits where visitors are actively involved in the actual exhibit, instead of just reading signage (Danilov, 1997). For example, in the International Swimming Hall of Fame there is an exhibit where the visitors can actually use "touch pads" and starting blocks to test an electronic timing system (Streiner, 2007).

Besides the exhibits, many Halls of Fame are also involved with educational programs and putting on special events. Educational programs may include guided tours, workshops, and seminars aimed at getting people involved with the Hall of Fame. Special events serve and draw the public to the Hall of Fame. These events may include

induction ceremonies, awards dinners, tournaments, or week-long events. Many Halls of Fame do not charge admission fees. They receive a majority of their funding from memberships, contributions, grants, gift shop sales and programming fees (Danilov, 1997).

Wisconsin Conservation Hall of Fame

The Wisconsin Conservation Hall of Fame (WCHF), a nonprofit organization, was established in 1984 by various Wisconsin organizations (Appendix A) to honor Wisconsin's pioneering leaders for their contributions to resource management and to encourage the growth and practice of their conservation ethics legacy in today's citizens. Wisconsin has historically taken many first steps toward new ideas and concepts that promote conservation, and the continuation of this conservation leadership and education is what the WCHF encourages through displaying the inductees as role models (Wisconsin Conservation Hall of Fame Board, n.d.). It has been shown that role models play an important role in environmental behavior and sensitivity (Sivek, 2002). Clifford Knapp (1993) said, "The more heroes and heroines we can discover, the more we can expand our value choices and possible ways of taking action to help preserve the Earth (5)."

The WCHF has four main goals:

1. To foster cooperation in conservation achievement among organizations of similar interests.
2. To annually recognize one or more individuals who have made significant contributions to the conservation movement in the state.
3. To develop a permanent display facility to commemorate individuals who are recognized.

4. To engage in educational, scientific, literary, and historical pursuits on the conservation heritage of the state (Yarmark, 1995).

The WCHF, located in the Schmeeckle Reserve Visitor Center in Stevens Point, Wisconsin is comprised of two components: the "Land of Wealth" museum and the formal Hall of Inductees. The formal Hall of Inductees consists of a gallery facing out into Schmeeckle Reserve with plaques for each leader in conservation. Currently there are over 60 inductees in the WCHF with new inductees added yearly (Wisconsin Conservation Hall of Fame Board, n.d.)(Appendix B). The inductees are chosen by the WCHF Executive Board based on nominations from the public. The nominees must have made a significant contribution to conservation in environmental law enforcement, applied resource management, conservation education, conservation policy formation, legislation and public leadership, conservation oriented research or conservation literature, art or journalism. Nominees should also have had significant ties to Wisconsin (born in or lived here for period of time), their impacts of their deeds are long lasting, their work was important to Wisconsin and/or the United States, and their work has affected a variety of natural resources (Barrett, n.d.)

The "Land of Wealth" museum is made up of exhibits detailing important information on the environmental history of Wisconsin. The exhibits in the "Land of Wealth" museum have three main goals:

1. To provide an overview of the environmental impacts caused by humans in the state from the initial European occupancy through today.

2. To encourage visitors to understand that their existence and behaviors have significant impacts on the environment and this is done by comparing and contrasting Wisconsin's environmental issues to those of the rest of the world.
3. To invite visitors to actively participate in solving environmental problems just as ordinary people that stepped up to the cause did in the past (Zimmerman, 1992).

The exhibits in the "Land of Wealth" museum display the seven Wisconsin conservation history eras recognized in Robert Steele's unpublished thesis, A Land of Wealth-the People and Events that Shaped Wisconsin's Conservation Heritage (1995). Each era exhibit has a cognitive, behavioral and emotional objective that they were designed around (Appendix C).

After installation of the exhibits in the museum in 1998, an evaluation of their content effectiveness was conducted by UWSP Master's student Tara Tucker. Questionnaires were completed by UWSP NRES 150-People, Resources and the Biosphere students and museum professionals. The warden exhibit was rated as the favorite exhibit and the success stories exhibit was rated as requiring the greatest amount of future development (Tucker, 1999). Upon completion of the evaluation, suggestions for future evaluations of the WCHF included performing focus groups on a larger population and evaluating visitors' learning modalities (Tucker, 1999).

Museum and Interpretive Center Visitors

Almost all museums share a commitment to provide an enjoyable opportunity for visitors to learn about an array of topics. The distinction between a traditional learning facility and a museum is the emphasis on the free-choice nature of learning for the visitor. Free-choice learning is usually non-linear, personally motivated and involves

considerable choices by the learner in deciding what, when and how much to learn (Falk & Dierking, 2000). Interpretation is a special form of communication for conveying messages to free-choice learners.

There are two types of visitors: the occasional visitor and the frequent visitor. The occasional visitor is drawn to leisure activities that emphasize active participation, social interaction and enjoyment of their surroundings. The frequent visitor wants a challenge of new experiences, opportunities to learn and the knowledge that they are doing something worthwhile for themselves (Hood, 1992). The museum's job is to provide for both types of visitor and focus on ways to attract them. Moscardo (1999) found that features that best attract visitors' attention include extreme stimuli, movement and contrast, unexpected, novel and surprising things, other living things and things that connect the museums to the visitor.

Positive museum experiences can act to establish a sense of self-directed curiosity in an adult and suggest to a child that learning can be exciting (Spock, 2006). Learning is based on four things:

1. It flows from appropriate motivational and emotional cues.
2. It is facilitated by personal interest.
3. New knowledge is constructed from a foundation of prior experience and knowledge.
4. It is expressed within appropriate contexts.

(Falk and Dierking, 2000)

Multi-modal Experiences

One way to make experiences exciting and meaningful to individuals is through interaction. Visitor studies research has shown that interactive exhibits that include

computers, microscopes and objects that can be touched attract more visitor attention than static displays (Moscardo, 1999). Another example of interaction is to add sound to a display or moving objects such as models (Melton, 1936; Pearce, 1988; Peart, 1984; Wolf and Smith, 1993). By making exhibits multi-dimensional and multi-modal visitors will be more interested in spending time looking at them. A visitor will be especially interested in spending time at an interactive exhibit if the exhibit is related to them in some way (Bechtel, 1967; Davidson, Heald, and Hein, 1991; Koran, Koran, and Foster, 1989).

The most popular places to visit are those that are relevant, have high-interest collections, exhibits, and programs, and are effective in marketing their offerings (Danilov, 1997). The content of a place can be made more relevant to a visitor through strong emotional values. Stronger emotional values are more likely to include sensory information and be admitted into the memory (Falk and Dierking, 2000). People are motivated to visit places and will retain different aspects from their visit depending on whether they are intrinsically or extrinsically motivated. Extrinsic motivation means the anticipated benefits are external to the activity, while intrinsic motivation is when an action is done for its own sake (Falk and Dierking, 2000). For example, when people visit a museum or visitor center during a vacation and are there just for the experiences, then they are intrinsically motivated. School children on a field trip who will be tested on the material they view are extrinsically motivated. Visitor motivations and emotional values must be taken into account when designing places for people to visit.

One of the seven characteristics of exhibits that facilitated learning was "multi-modal," which means that they appeal to different learning styles and levels of

knowledge within an individual(Allen, 2004). Staff at the Boston Museum of Science added elements such as objects to touch, listen to and smell, as well as an activity station where visitors could examine objects under a microscope. Allen (2004) showed that the changes improved the experience for visitors by increases in time spent at the exhibit, use of exhibit labels and understanding of the exhibit's theme. Another aspect of multi-modal instruction was the inclusion of narratives, which are loosely defined as personal storytelling. These types of exhibits can engage a more diverse audience and allow different learning types to explore (Allen, 2004).

Learning Modalities

People process information and commit it to memory in different ways. These different ways are called learning modalities and are categorized as auditory, kinesthetic and visual. How well a person absorbs and retains information depends largely on whether the information was received in the person's preferred learning modality (Kratzig & Arbuthnott, 2006). Most people have predominantly one preferred learning modality, but some people do have a balance between two or three (Krueger, Saul, and Lin, 2000). Visual learners tend to learn by watching and looking at pictures, diagrams, maps, etc. They may be easily distracted by movement and other action. Those who are kinesthetic learners like to be involved and active rather than watching and prefer "hands on" projects. Auditory learners gain new knowledge by being told and respond well to verbal instructions. They may be easily distracted by other noise (Huntinger, 2001). Lectures, for example, are not conducive to non-auditory learners. They will often tune out the speaker and have a hard time listening for the whole lecture. People who are non-visual learners often read a page, realize they did not comprehend what they just read,

and then have to reread the page. They may find it difficult to concentrate on reading assignments or overhead notes. People who are non-kinesthetic learners avoid getting involved in action-oriented activities. They prefer to watch and not participate (Wilson, n.d.).

Depending on a person's learning modality, different delivery techniques can be applied so that the information can be processed to memory better. A person that is more visual may learn more effectively if taught using guided imagery, viewing demonstrations, copying notes, or color coding and using flashcards. A person that is more auditory may learn better if asked to read aloud, listen to oral instructions or auditory tapes, participate in group discussions or listen to lectures. A kinesthetic person may learn better if they participate in experiments, are given problems to solve, play role playing games or take field trips (Krueger et al. 2000).

A number of studies refute the notion that a person's learning modality determines their degree of information retention. A study completed by Kratzig and Arbuthnott tested whether the self-assessed learning style preference of an individual correlated with memory preference (2006). They used tests that involved visual (pictures), auditory (stories) and kinesthetic (tactile shapes) learning. Based on their study of sixty-five university students (54 women, 11 men) the study indicated that objective test performance did not correlate with learning style preference (Kratzig & Arbuthnott, 2006). Another study by Cassidy and Eachus suggested that learning style preference is a partial response to a particular learning environment, and that when faced with a variety of tasks people use a variety of styles (2000).

A study done on first-year medical students to determine if there were preferences in the ways in which they received information found that only 36% of the students preferred a single mode and the majority (64%) preferred multiple modes (Lujan & DiCarlo, 2006). Students preferring a single mode chose kinesthetic learning (touch, smell, taste, interaction), then visual learning (graphs, charts, reading) and finally auditory (lectures) learning methods. Students that preferred multiple modes wanted the information presented using all learning modality types at once. The study didn't address demographic information but suggested that further research be conducted on whether gender effects learning styles (Lujan & DiCarlo, 2006).

A study was completed to identify the impact of student learning styles on their learning performance in a Web Course Tools Management Information Systems graduate course. Seventy-six graduate students participated in the study and found that there were not any statistically significant interactions between learning style, gender and age. The only demographic characteristic that seemed to influence the learning performance was ethnicity. However the authors felt that the results may have had to do more with level of technological knowledge then learning style (Lu et al., 2003).

Exhibits, Designs and Stories

Museums were once thought of as simply "mausoleums for things" and places to wander, but newer functions have now been ascribed to them. Not only are museums a gathering of collections, preservation, study and exhibition but they also have the capacity to create changes in their audience and share an experience (Hein, 2000). The exhibits in museums must be designed to facilitate learning as well as enjoyment, so exhibits do three things:

1. Show things and make the subject come to life (may include a comprehensive display of objects and/or specimens).
2. Communicate ideas, information, feelings and values using modern display techniques.
3. Provide experiences for visitors that are memorable and designed for all ages.

(Zimmerman & Buchholz, 2005)

Recent studies show that exhibits are being designed to meet the needs of visitors rather than trying to force visitors to view exhibits that were developed without taking their needs into account (Alt & Shaw, 1984). Exhibits that are successful should influence visitors in three ways. First, they should have a behavioral impact on the visitor. Second, an exhibit should facilitate the gaining of knowledge. And third, exhibits should have an emotional or affective impact (Zimmerman & Buchholz, 2005).

Three approaches to the development of exhibits are experience vs. information, exploration vs. explanation and meaning making vs. transmission-absorption. On one side, the focus is primarily on the experience and the meaning to the visitor, while on the other the content and knowledge the visitors will gain (Anspacher, 2002). In order for the visitor to grasp the meanings behind exhibits some sort of communication activity must go on between the visitor and the exhibit. Moscardo (1999) found that there are four important features of communication activities, which included arousing the visitors' interest in the subject, clearly presenting the information, involving the visitor, and teaching the visitor something new.

The most important communication activity of Halls of Fame is getting the visitors involved in the stories of the inductees. Halls of Fame do this through exhibits,

public programming and special events (Danilov, 1997). Through involvement with the stories of inductees, personal connections can be made. Exhibits can facilitate personal connections by engaging the visitors in conversations, using analogies and metaphors from everyday life and choosing topics from everyday experiences (Moscardo, 1999). Another way to facilitate personal connections between the visitor and the inductees is through displays of objects owned/used by the inductees. Susan Pearce (1992) said, "It is the ability of objects to be simultaneously signs and symbols and to carry a true part of the past into the present, which is the essence of their peculiar and ambiguous power" (27). For example, it is exciting to see the actual ruby slippers worn by Judy Garland in the "Wizard of Oz" at the Smithsonian or the wooden dentures worn by George Washington as they are physical links to the past. The meaning of an object is not put into text but rather comes into being through participating in experiences (Hein, 2000).

In order to develop successful exhibits, interpretive planning should occur. Interpretive planning is a decision-making process that blends together management, message, market, mechanics, and media (Brochu, 2003). A visitor experience plan can then be developed that incorporates all of these. This plan determines the purpose, themes and messages of the exhibits. A theme expresses the principle message of the exhibit. It answers, "What is the big idea that we are communicating with this exhibit?"(Ham, 1992). This theme will direct the researcher where to go when developing exhibits and telling the story of a site (Zimmerman & Gross, 2000). The themes should be linked to tangible resources and intangible meanings. Tangible resources are material objects that one can perceive with senses, such as a picture or an object. Intangible meanings are universal concepts, ideas, abstractions and values

(Zimmerman & Buchholz, 2005). The development process is broken down into four phases, consisting of the content phase, the concept design phase, the detail design phase, and the fabrication phase (Zimmerman & Gross, 2000). The content phase consists of ideas being visually communicated with prompt feedback. The main theme, along with an established budget, preliminary research and an outline for design should be included. The detail design phase should include collecting objects and artifacts, conducting further research, producing final mockups, developing final cost estimates and writing final label copies. The objectives developed in the content phase should allow an exhibit to be evaluated on its effectiveness. There are three types of objectives:

1. Cognitive objectives which are facts that visitors might learn from interactions with the exhibit.
2. Emotional objectives which are how a visitor feels when viewing the exhibit.
3. Behavioral objectives which shows how visitors behave after viewing the exhibit (Zimmerman & Buchholz, 2005).

Exhibits should incorporate diverse techniques that communicate through many learning styles. A matrix was developed by Dr. Gabriel Cherem that classified exhibits based on visitor involvement and interaction. The four classifications of exhibits are passive-inert, passive-motion, active-inert and active-motion (Figure 1) (Gross and Zimmerman, 2002).

	Exhibit Mode		
		Motion	Inert
Viewer Mode	Active	**Active-Motion**	**Active-Inert**
	Passive	**Passive-Motion**	**Passive-Inert**

Figure 1: Cherem's Classification of Exhibits

A passive-inert exhibit is static, with the visitor viewing it passively or just reading, for example a diorama or sign. The passive-motion mode of exhibits is one where the exhibit moves, makes sounds or delivers smells that the visitor receives, an example being the ability to push a button and have the exhibit talk. An active-inert exhibit gets the visitor involved physically and mentally with a static exhibit, for example flipping labels or touching skull casts. The active-motion mode is an exhibit that creates interaction between the visitor and the exhibit, where the exhibit responds to the visitor's actions, for example the incorporation of a computer program that responds differently to choices and visitor inputs (Cherem, 1979). Ideally a museum, visitor center or Hall of Fame should have a variety of exhibits because it increases learning options, and diversity enhances the overall use of an exhibit.

Visitor Evaluation

In order to determine what visitors expect from an exhibit an evaluation must be completed. Visitor studies and exhibition evaluation emerged as indispensable features of museum practice for any institution serious about museum-based learning (Spock, 2006). It has been found that an exhibition's effectiveness has been attributed to evaluations to understand visitors' expectations and interests, exhibits that are created in an array of formats to engage people, and communication of messages visually and experientially (Hayward and Rothenberg, 2004). Visitor evaluation can provide information during the planning stage, during the preparation stage and also after installation of an exhibit. The stages answer questions such as the knowledge of the audience, information about what is or isn't working and making final adjustments to an exhibit to improve its effectiveness (Bitgood, 1991).

There are three kinds of evaluation types: front-end, formative and summative. Front-end evaluations find out about the audience before an exhibit has been designed in order to predict how visitors will respond to the project once it has been developed. It can be used to determine an audience's pre-knowledge, interests, attitudes and misconceptions (Diamond, 1999; Bitgood, 1991). This is where the goals and objectives of a project are established (Bitgood, 1998). Formative evaluation provides information about how a program or exhibit can be improved. Exhibits can be trial tested to determine how visitors will interact with them. The attraction and ability of an exhibit to hold a visitor's attention can also be determined through formative evaluation (Bitgood, 1991). Summative evaluation tells about the impact of the project after it is completed (Diamond, 1999). Visitor feedback can be gathered about the effectiveness of the exhibit by studying the frequency of use, time of use, and accuracy of use (Bitgood, 1991). Summative evaluation can also be used to evaluate the cost-effectiveness of a project and whether an exhibit should be replaced or changed in the future. It is determining whether an exhibit or project is meeting its objectives and it doesn't attempt to build-in improvements (Bitgood, 1998).

Visitor evaluation can use a variety of different research tools and methods. Surveys and questionnaires completed by visitors before, during and/or after a visit to a site can be used to collect quantitative and qualitative data. Interviews can also be used to follow up the responses on the written documents (Leedy and Ormrod, 2005). Direct participant observations can be made by researchers, use of hidden cameras or the shadowing of a visitor are common methods (Bitgood, 1998).

Challenges of visitor studies include the cost of the research and the time that it takes to complete evaluations. Researchers may not always know what they are looking for at first, and may waste time observing behaviors that aren't important, as well as overlooking significant aspects. The cost of hiring researchers or a research company may also be more than is in a yearly budget (Leedy and Ormrod, 2005).

Summary of Literature Review

The WCHF was built to honor illustrious people that played an active and important role in Wisconsin's conservation history. Through visiting the WCHF, people will hopefully learn about the roles that individuals can play in conservation efforts. The evaluation of exhibit delivery has been well researched at other institutions. Using this as a foundation, a plan was developed to evaluate the current WCHF exhibition effectiveness. The use of multi-modal exhibitions in museums has been researched and found to be important when exhibits are designed, but the incorporation of learning modalities into exhibit design has not been extensively studied and so the justification for determining if learning modality type plays a role in preferred modes of exhibit delivery. Also, the literature has shown the need to evaluate the current WCHF and determine what the visitors and stakeholders want to see in future multi-modal interpretive media exhibits.

CHAPTER 3

Methods

Introduction

The purpose of this study was to evaluate the impacts of multi-modal methods of delivery for interpreting the stories and lives of Wisconsin Conservation Hall of Fame inductees to facilitate the creation of meanings and connections for the visitors, as well as to determine whether a person's learning modality type plays a role in their preferred mode of exhibit delivery.

Data collection was separated into two phases, with the second phase based on the responses collected in the first phase. Data collected in the first phase were the attitudes and opinions of WCHF stakeholders and visitors (UWSP students, Schmeeckle mailing list, and general public) about the current WCHF exhibition, as well as a self-assessment to determine each person's learning modality type. In the second phase, the stakeholders' and visitors' opinions of interpretive media prototypes for new exhibits and suggestions for additional exhibits were collected. Quantitative and qualitative research procedures were utilized to collect and analyze the data.

Phase I

Formative evaluation was used to address the first subproblem, which was to identify the effectiveness of the current Wisconsin Conservation Hall of Fame (WCHF) exhibition through stakeholder and visitor input, and the third subproblem, which was to examine whether a person's learning modality is related to the way a visitor learns from an exhibit. An elicitation study, using a questionnaire, was conducted to determine views

and preferences that the stakeholders and visitors have regarding the current WCHF exhibition, as well as a self-assessment to determine their learning modality type.

The questionnaire consisted of both closed and open format questions (Appendix D). Closed format questions or quantitative data are easier to analyze and to calculate percentages and statistical data over the entire group (Dillman, 2000). Open format questions or qualitative data allow people to generate their own ideas and respond in their own words (Diamond, 1999). The questionnaire focused on interest in Wisconsin conservation, clarity of information presentation, visitor engagement, connection to the inductees and the behavioral/emotional impacts. It also focused on visitor suggestions for new exhibits and the incorporation of new multi-sensory interpretive media (Buchholz and Zimmerman, 2005; Danilov, 1997; Moscardo, 1999; Zimmerman, 1992). The final component of the questionnaire consisted of 30 three-point Likert-type questions with options of "often", "sometimes" and "seldom" that were then assigned points (3, 2, 1) to determine the learning modality based on the highest score (Middlesex Community College, n.d). The questionnaire was pilot-tested on ten Schmeeckle Reserve student employees to determine ease of answering. The UWSP Institutional Review Board approved the protocol in February 2008 for Phase I (Appendix E).

The study used a non-random convenience sample, which meant that people were recruited based on access (Auerbach & Silverstein, 2003). The questionnaire was completed by 117 members of various organizations from around Wisconsin that used the conference room at Schmeeckle Reserve during March-May of 2008 (Appendix F). Participants were given the questionnaire and asked to spend 10-20 minutes in the WCHF evaluating the current exhibition and explaining what they would like to see for future

exhibits. The 565 individuals that were on the Schmeeckle Reserve mailing list were sent a postcard that informed them of the study and requested their participation. This group consisted mainly of Stevens Point community residents, which has been shown to be a target audience (Tucker, 1999). The postcard included six dates and times to visit the WCHF and fill-out the questionnaire (Appendix G). Participants were also gathered at the UWSP Schmeeckle Practicum programs, which are mainly attended by Schmeeckle Reserve mailing list subscribers. Upon completion of the questionnaire, participants received a 10% off coupon for the Schmeeckle Reserve Browse Shop. Over 100 UWSP students in NRES 369-Interpretive Media and Design, HIST 366-American Environmental History and NRES 150-People, Resources and the Biosphere were also asked to spend 10-20 minutes in the WCHF and fill out the questionnaire. Yarmark (1995) found that UWSP students are one of the largest user groups of Schmeeckle Reserve.

The results of closed format questions were analyzed using the computer program SPSS (Statistical Package for the Social Sciences). The open ended questions were coded and then summarized into data sets. Coding is a procedure that is used to organize the text of the open ended questions and discover patterns. Text that is related to the specific research is kept and the rest is discarded. Same or similar words and phrases are called repeating ideas and are highlighted and organized into themes (Auerbach & Silverstein, 2003). The interval data, such as the Likert scale questions were compared to determine the relationships and correlations. A t-test for independent means was run to indicate the trends found between the visitors' answers to Likert scale questions and their gender. A t-test for independent means is used to find out if there is a difference in

the average scores of variables between two groups that are independent of each other. It assumes that the differences between groups are being explored and that participants have only been tested once (Salkind, 2004). A simple analysis of variance (ANOVA) or a Pearson Chi-square test were used to determine the associations between a persons' learning modality and the following variables, favorite/least favorite exhibit, importance of conservation, presentation of information, and connection with inductees. An ANOVA and Pearson Chi-square test were also run on the variables and the age of the participant. ANOVAs are used to find differences between scores of different groups and assumes that participants are only being tested once. Pearson Chi-square tests allow a researcher to determine if the distribution of frequencies observed is the same as expected to occur by chance (Salkind, 2004). The age categories of the participants were re-coded in SPSS from six groupings (18-25, 26-35, 36-45, 46-55, 56-70, over 70) into three groupings (Generation Y: 18-35, Generation X: 36-45, Generation Baby Boomer: 46-70) for analysis purposes (U.S. Census Bureau, 2001). The respondents were grouped in this way in order to see if there are differences in answers based on their technological background, as well as find out if there are generational differences regarding the importance of conservation. The nominal data, such as the age and sex of the visitor, learning modality type and exhibit preference were analyzed using crosstabs. Crosstabs is an SPSS procedure that allows two variables to be tabulated and their relationship is displayed in tabular form (Salkind, 2004). Crosstabs were run regarding the following relationships: Age of participant vs. Connection to WCHF inductee, Age of participant vs. Favorite exhibit, Age of participant vs. Least favorite exhibit, Age of participant vs. Media type suggested, Age of participant vs. Learning modality type, Gender vs.

Learning modality type, Learning modality type vs. Favorite exhibit, Learning modality type vs. Least favorite exhibit, Participant group vs. Connection to WCHF inductee, Participant group vs. Learning modality type and Learning modality type vs. Connection to WCHF inductee.

Phase II

The findings from the personal interviews and exhibit prototypes addressed the second subproblem, which was to examine message effectiveness using different methods of delivery (prototypes) in museum exhibit work to connect visitors intellectually and emotionally to interpretive storylines, as well as the third subproblem, which was to examine whether a person's learning modality is related to the way a visitor learns from an exhibit. The UWSP Institutional Review Board approved the protocol for Phase II in September 2008 (Appendix H).

Four exhibit prototypes were designed about WCHF inductee George Archibald. A total of 34 individuals volunteered their phone and/or email contact information on the questionnaire in Phase I, and were contacted accordingly. Based on their schedules, they were given several opportunities to visit Schmeeckle Reserve, view the exhibit prototypes and answer the interview questions. From the Phase I questionnaire respondents, 19 people self-selected themselves and said that they were willing to participate in Phase II. Participants were given an incentive of a Kwik Trip $10 gift certificate. The four prototypes were set up in the WCHF meeting room at Schmeeckle Reserve. The participants were asked to view and evaluate each exhibit prototype, with a personal interview following each prototype (Appendix M). At each prototype the participant was timed, but was unobserved otherwise so as to not feel "watched." Each participant

viewed the visual prototype, the auditory prototype, the multi-modal prototype and the kinesthetic prototype in that order. After viewing the final prototype the participants were also asked additional questions regarding their favorite/least favorite exhibits and suggestions for updating the exhibits in the WCHF. The responses about each prototype were pooled and the open-ended questions were coded and analyzed to see if there were any trends in the responses.

George Archibald was chosen as the exhibit prototype inductee because only two people listed him as being a WCHF inductee on their questionnaire (meaning he was not well known by participants), he is alive and available for personal interviews and taping, and there is a plethora of information on his work on crane conservation. The exhibit prototypes consisted of four exhibits based on learning modality types (visual, auditory, kinesthetic and multi-modal) to determine if a visitor's learning modality type affected his/her preference. The theme the four prototype exhibits conveyed was that George Archibald became an international ambassador through his life's work of developing the International Crane Foundation and working with people to save the world's crane species.

The visual prototype exhibit was an interpretive sign panel that was 60 inches wide by 34.5 inches high (Appendix I). Archibald's involvement in crane conservation history and his role as an international ambassador were researched to find the stories that best matched the theme. High resolution photographs were also obtained from the International Crane Foundation. An interpretive panel tells the story of a site, resource or feature, with a primary goal of guiding visitors to discover meanings. The panel is designed for learning at the audiences' leisure and could have multiple messages (Gross,

Zimmerman and Buchholz, 2006). The interpretive panel was designed using the PARC (proximity, alignment, repetition, contrast) principles (Williams, 2008) and Adobe InDesign software. High resolution photographs were incorporated because they can have more impact than just words and they will focus attention on the panel. They also tell detailed stories in succinct and dramatic ways compared to words (Gross et al., 2006). A sign next to the visual prototype said, "Read the sign panel below about George Archibald."

The auditory prototype exhibit was a sound clip that was constructed after a visit to the International Crane Foundation (ICF) and a personal interview with George Archibald (Appendix J). The personal interview, along with crane calls, was combined using the program Audacity to form a sound clip. An audio exhibit communicates different information than signs and helps connect visitors on an emotional level. Tips for developing an audio exhibit include keeping it short and using natural sounds and background effects that set a mood (Gross et al., 2006). A sign next to the auditory prototype said, "You will be listening to a 6-minute interview with George Archibald. Push play."

The kinesthetic prototype exhibit was a combination of tactile components about Whooping cranes, which was a large, successful project of George Archibald's. It was researched when visiting ICF and then built using ICF's educational whooping crane trunk (Appendix K). The exhibit included a whooping crane rearing costume (how people become "ambassadors" to young cranes) that visitors got to try on, a replica of a whooping crane egg, a crane feather, replicas of food items, a transmitter and a replica of a crane leg and foot. Tactile components encourage visitors to physically discover the

meaning behind the exhibit (Gross et al., 2006). A sign next to the kinesthetic prototype said, "Be a crane ambassador. Try on the rearing costume and feed the chick. Touch and explore each item."

The multi-modal exhibit was an interactive exhibit that responded to visitor's actions (Appendix L). It was designed using Microsoft Expression Web and included options for the visitor to watch a video about George Archibald developed by the Wisconsin Historical Foundation, read about ICF "Firsts" and take a "fun" quiz. The exhibit was developed after researching ICF and the Wisconsin History Makers video was obtained from the Wisconsin Historical Foundation. A sign next to the multi-modality prototype said, "Watch a movie, take a fun quiz and read about some of ICF's Firsts."

CHAPTER 4

Results

Introduction

This chapter summarizes the results of a study that evaluated the impacts of multi-modal methods of delivery for interpreting the stories and lives of Wisconsin Conservation Hall of Fame inductees, as well as determined whether a person's learning modality type plays a role in their preferred mode of exhibit delivery. Results of the questionnaire in Phase I were analyzed and statistics were run using SPSS. Answers from the personal interviews in Phase II were looked at for trends in the data. Variables such as age, gender and learning modality type were considered and the differences were examined.

Subproblem 1

Identify the effectiveness of the current Wisconsin Conservation Hall of Fame (WCHF) exhibition through stakeholder and visitor input.

Phase I

Favorite and Least Favorite Exhibits

The questionnaire asked respondents to choose their favorite and least favorite exhibit. Respondents liked the Law Enforcement exhibit best (33.6%), followed by the Cutover exhibit (15.2%) and then the Market Hunting exhibit (12.6%) (Table 1). Reasons given by respondents for favoring the Law Enforcement exhibit included:

"Very informative, hands-on"

"Because I liked the voice recordings and I liked sitting in the car as the warden"

"You got to interact and put yourself in the warden's shoes"

Respondents enjoyed the Cutover exhibit because, "It was the one that made the most emotional impact" and the "history importance to Wisconsin." The Market Hunting exhibit was liked by respondents because of the mixture of photos and objects. Some respondents were hunters themselves and felt connected and it "shows that even an abundance of resources needs protection."

Table 1: Favorite and Least Favorite Exhibits of Respondents (**Top 3 in bold**)

Exhibit name	**Favorite Exhibit (percentages) (n=277)**	**Least Favorite (percentages) (n=211)**
Law enforcement (Multi)	**33.6**	**13.3**
Cutover (Visual-Auditory)	**15.2**	8.5
Market hunting (Visual)	**12.6**	9.0
Wolf (Visual-Auditory)	9.7	**15.6**
Settlement (Visual)	7.2	5.7
Timeline (Visual-Kinesthetic)	7.2	11.8
Formal Gallery (Visual)	6.1	5.2
CCC (Visual-Auditory)	5.4	3.8
Success Stories (Visual)	2.2	**15.6**
Passing the Torch (Visual-Kinesthetic)	0.7	11.4

Respondents listed the Success Stories exhibit (15.6%) and Wolf exhibit (15.6%) as their least favorite exhibits in the WCHF, followed by the Law Enforcement exhibit (13.3%) (Table 1). The Success Stories exhibit was thought to be underdeveloped. One participant commented that "it was pretty boring." The Wolf exhibit was the least favorite because:

"The wolf needs a makeover"

"It [the wolf] was pretty ratty."

As mentioned by study participants, the Law Enforcement wasn't favored because,

"It was corny"

"Would have liked more historical facts"

"The dead deer hanging by the car"

Based on a Pearson-Chi-Square test, a person's age and their favorite exhibit was significantly different (χ^2=30.03, p=0.037) (Table 2). The Law Enforcement exhibit and the Market Hunting exhibit were in the top three favorite exhibits of all three generations. The differences were that the Baby Boomers chose the Cutover exhibit in their top three, while Generation X liked the Formal Gallery and Generation Y liked the Wolf exhibit. The relationship between a person's age and their least favorite exhibit however was not significantly different (χ^2=26.35, p=0.092).

Table 2: Respondent's age vs. Favorite exhibit

Generation Y (n=131)	**Generation X (n=19)**	**Baby Boomers (n=74)**
Law enforcement (51.1%)	Cutover exhibit (26.3%)	Law enforcement (28.4%)
Market hunting (14.5%)	Law enforcement (26.3%)	Cutover (28.2%)
Wolf exhibit (13.7%)	Formal gallery (15.8%)	Market hunting (17.6%)
Cutover exhibit (13.0%)	Market hunting (15.8%)	Settlement (13.5%)
Timeline exhibit (7.7%)	Settlement (15.8%)	Timeline (13.5%)

Importance of Wisconsin Conservation

After experiencing the Land of Wealth museum and the Formal Inductee Gallery, the respondents rated their interest in Wisconsin conservation (Table 3). Many respondents expressed a previous interest in conservation as well as an appreciation, such as:

"Lifelong commitment to conservation."

"Conservation is something that interests me"

"Historical perspective was very inspiring"

"Definitely reminds one of the importance"

Table 3: Interest in Wisconsin conservation

Degree of Interest (n=311)	**% of Respondents**
Strong Disinterest	0.3
Disinterest	10.0
Neutral	39.2
Interest	47.9
Strong Interest	2.6

Respondents were asked about the importance they placed on the topic of Wisconsin conservation. Based on ANOVAs, the age of a respondent and the importance they placed on the topic of Wisconsin conservation were not significantly different ($F(2, 301) = 1.556$, $p = 0.213$) (Table 4).

Table 4: Respondent's age vs. Importance of Wisconsin conservation

	% Disagree	**% Neutral**	**% Agree**
Generation Y (n=165)	5.5	9.1	85.4
Generation X (n=25)	0	4.0	96.0
Baby Boomers (n=114)	11.4	2.6	86.0

The results of a paired t-test run on the pre-visit question (the topic of conservation is important to me) and the post-visit question (after experiencing the museum and formal gallery, how would you rate your interest in Wisconsin conservation) showed that the relationship was significantly different ($t = 9.87$, $p = 0.00$). Respondents' interest in Wisconsin conservation was affected by visiting the WCHF. The relationship between a person's age and their interest in conservation was not significantly different

(F (2,300) =1.847, p=0.159) based on an ANOVA. Results suggest that the relationship between a person's gender and their interest in conservation was not significant (F (1, 300) =.043, p=0.836)

Respondents were asked to indicate on a scale of one to five how much they learned about the history of conservation after visiting the WCHF (Figure 2). The majority of respondents indicated that they learned something (61.4%). One respondent wrote that it was "interesting to see how things change with time" and "I learned who some interesting people in the Hall of Fame are." Respondents that remained neutral replied that "I know most of it already but it's nice to return to reacquaint myself" and that "as a lifetime Wisconsin resident, I knew most of this."

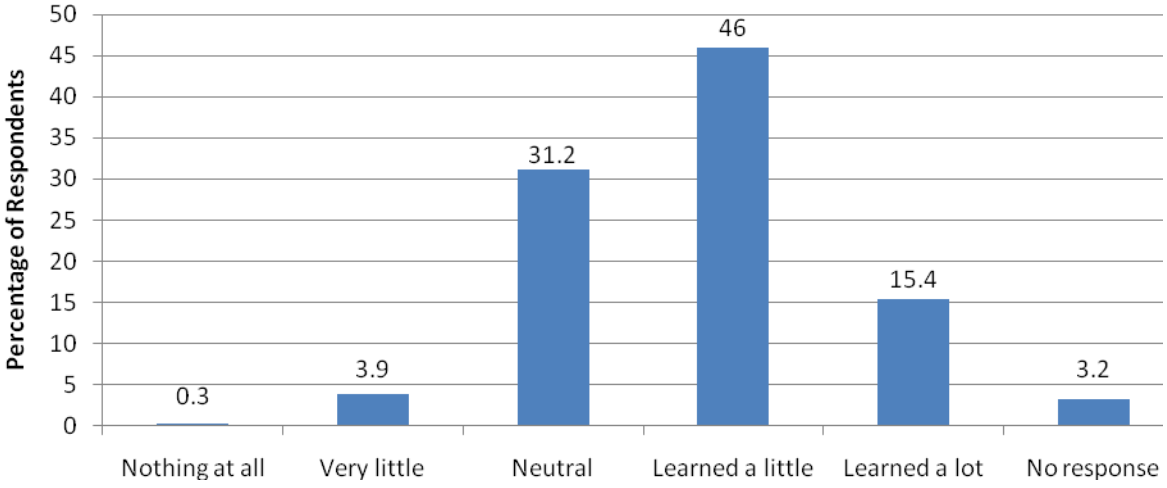

Figure 2: Responses of how much the respondents learned about the history of conservation (n=311)

Presentation of Information

Respondents were asked if they thought information about conservation in Wisconsin was clearly presented in the WCHF (Figure 3). Over 80% of the respondents agreed that the information was clearly presented. Respondents commented that

"everything had a clear, concise explanation with it" and that the WCHF "follows a good timeline that was easy to read." Respondents that disagreed or were neutral explained there was "too much stuff jammed in."

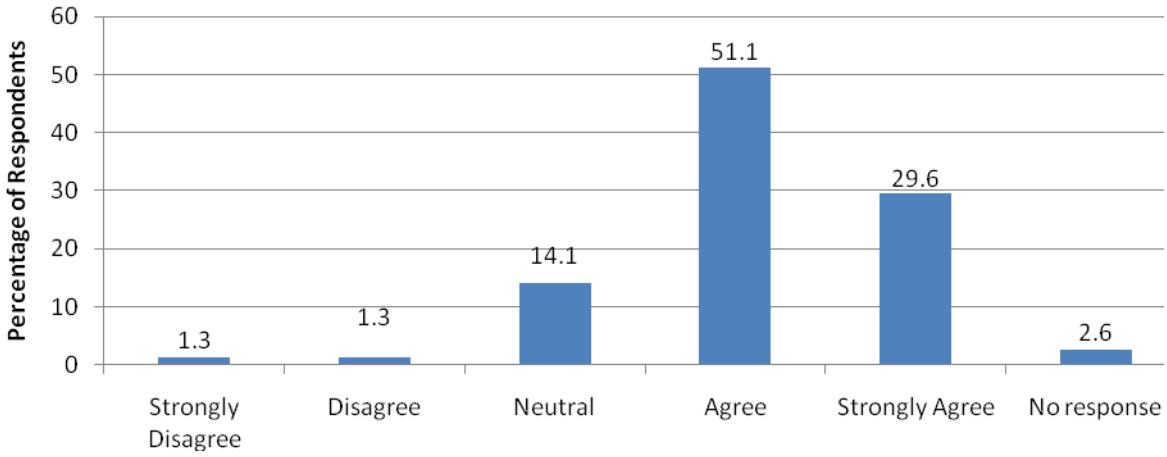

Figure 3: Responses of whether respondents thought information about conservation in Wisconsin was clearly presented (n=311)

Learned New Information

Respondents were asked whether there were unexpected and new things that they learned during their experience in the WCHF (Figure 4). Over 62% agreed that they learned something new. One respondent replied that they had not realized "how much we devastated wildlife" and they were "unaware of most of the inductees in the Hall of Fame."

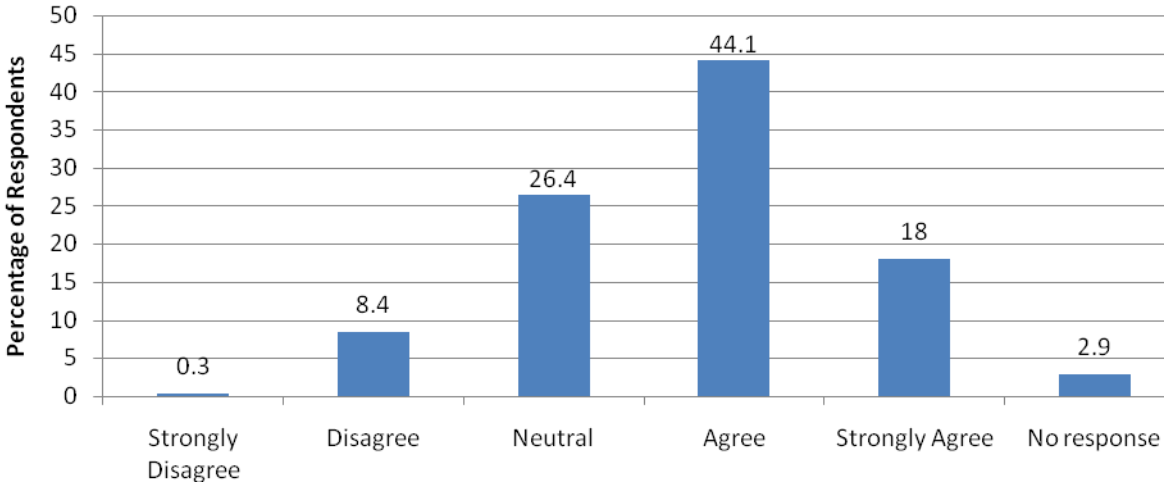

Figure 4: Responses of whether there were unexpected and new things learned during their WCHF experience (n=311)

Connection with Inductees

In response to being asked to rate how strongly they connected with the inductees, only 36.3% agreed that they felt connected (Figure 5). Over 40% remained neutral about their connection with the inductees. Those respondents that felt connected said it was because of an already formed personal connection-some had heard of the person from other sources or knew them personally. Respondents that remained neutral or didn't feel a connection with the inductees suggested ways to improve:

> "The attraction to learn about them was very low, should have interpreted stories about them"

> "Something flashy needs to be done here like in the previous section, just a bunch of guys (mainly) with a quote"

> "Most names I did not recognize. It would have been nice to learn why they were inducted"

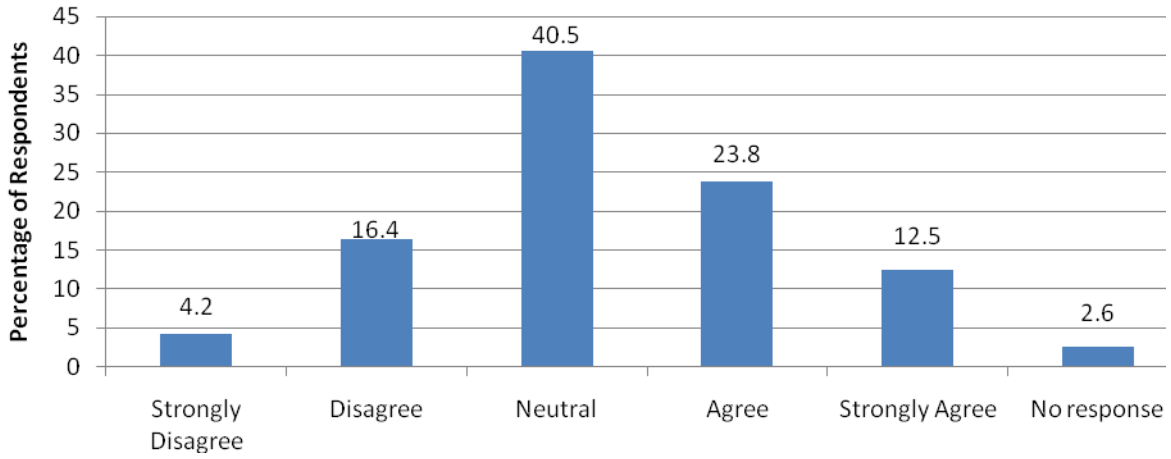

Figure 5: Respondents connection with the inductees (n=311)

Based on a Chi-square test, the relationship between a person's gender and the connection that they felt with the WCHF inductee was not significantly different (χ^2=1.649, p=0.439). However, the relationship between a person's age and the connection that they felt with the WCHF inductees was found to be significantly different (χ^2=29.99, p=0.00) (Table 5).

Table 5: Respondent's age vs. Connection felt with inductee

	Disagree (%)	**Neutral (%)**	**Agree (%)**
Generation Y (n=165)	28.5	44.8	26.7
Generation X (n=25)	16	40	44
Baby Boomers (n=112)	11.6	36.6	51.8

Sensory Experience

Respondents were asked whether the WCHF contained exhibits that involved several of the senses. A large majority (83.6%) of the respondents felt that the WCHF contained exhibits that involved several of their senses (Figure 6). Positive comments about the exhibits included:

"Fiddled with lots of stuff"

"Facts presented briefly; not too much wording which is good. Good to have touch items"

Suggestions by individuals that remained neutral included, "could incorporate multimedia-kiosk-type videos, interactive computer quizzes, etc." and that the WCHF can "always use more hands on [exhibits]."

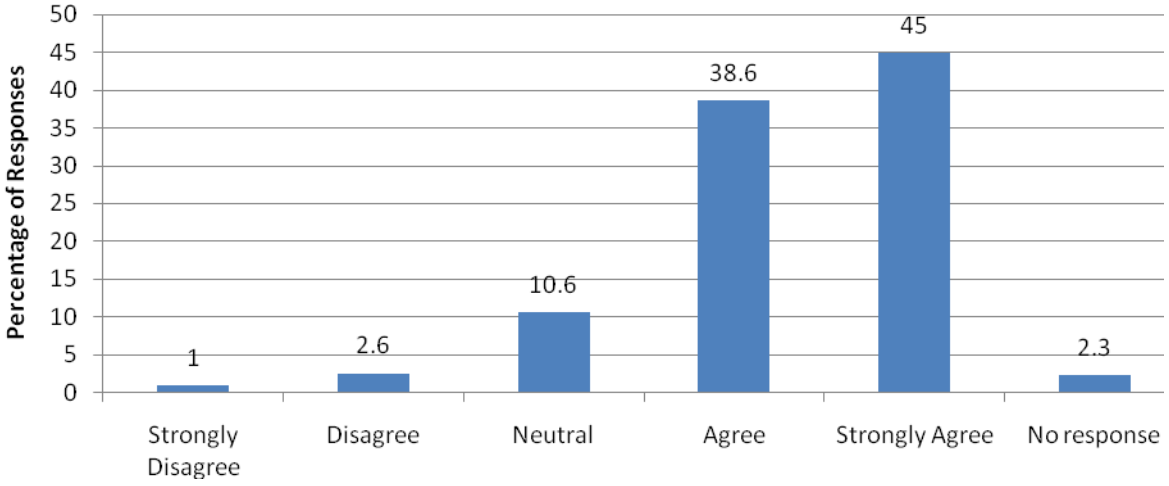

Figure 6: The WCHF contained exhibits that involved several of my senses such as sight, sound and touch (n=311)

Accomplishment of WCHF Mission

The questionnaire asked respondents whether the WCHF accomplished its mission (Figure 7). The mission of the WCHF is to "encourage citizens to involve themselves in efforts to manage resources effectively and beneficially promote an interest in conservation among Wisconsin youth and to encourage continued education about conservation issues so they inspire leadership in future resource conservation efforts." Over 65% of respondents felt the WCHF accomplished the mission, and said, "throughout the exhibition there were examples of how resources have been managed and future implications" and "gave information and showed that there are a lot of people that

care about it." The respondents that were neutral or disagreed that the WCHF is fulfilling its mission said:

> "Seems more informational, and not very motivational"
>
> "I think it teaches but doesn't push individual action"
>
> "Passively, maybe. The museum touches on getting involved but is not very inspiring."

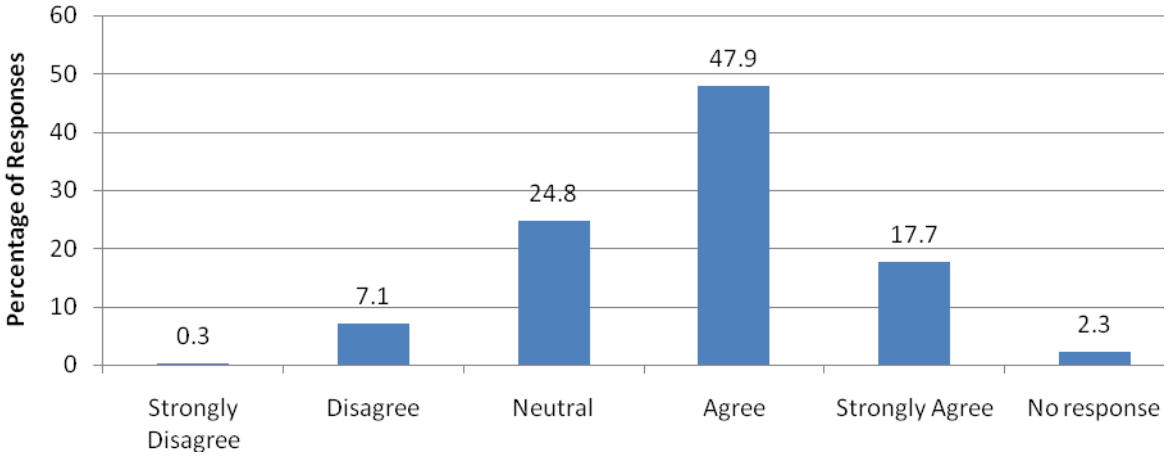

Figure 7: The WCHF accomplished the mission (n=311)

Emotional Impact

When respondents were asked whether their experience in the WCHF had an emotional impact on them only 43.3% agreed (Figure 8). Reasons given for the WCHF having an emotional impact included:

> "It gave me an appreciation for how hard people worked to obtain conservation"
>
> "It made me sad to see our past exploitation"

The majority of respondents (55%) remained neutral or disagreed that the WCHF had an emotional impact on them. People remained neutral because, "it was cool, but not really emotional" and "good information, but not much emotional connection."

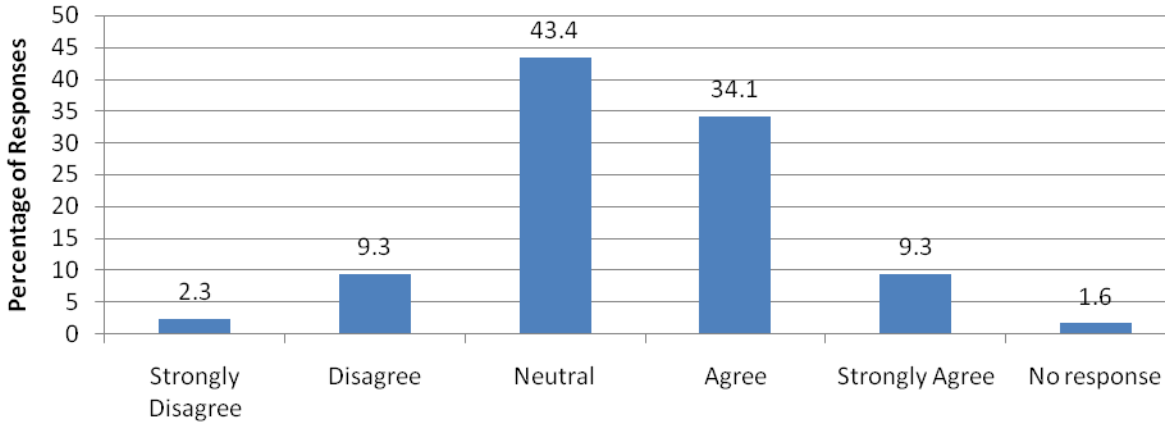

Figure 8: Responses on whether their experience in the WCHF had an emotional impact (n=311)

Based on a Chi-square test, the relationship between a person's gender and the emotional impact of their experience in the WCHF was not significantly different (χ^2=0.984, p=0.611). ANOVAs were run and the relationship between a person's age and the emotional impact of their experience in the WCHF was significantly different (F (2,300) =15.886, p=0.000) (Table 6).

Table 6: Respondent's age vs. Emotional impact of WCHF experience

	% Disagree	**% Neutral**	**% Agree**
Generation Y (n=165)	18.8	49	32.2
Generation X (n=25)	0	32	68
Baby Boomers (n=113)	4.4	39.8	55.8

WCHF Inductees' Achievements

Respondents were asked whether the WCHF inductees' achievements were an example of accomplishment and inspired them. Over 69% of respondents felt that the WCHF inductees' achievements were an example of accomplishment and inspired them

(Figure 9). One respondent felt that "the short write-ups are inspirational. It's nice to put a face to the name and achievement" and "if they can do it, I can, it showed they were just normal people." People that chose neutral or disagreed that the inductees' achievements were an example felt that more information about the inductees' achievements was needed. Responses included, "achievements were not as prominent as thoughtful quotes" and "where are their achievements? I didn't see them." Based on Chi-square tests, the relationship between a person's gender and whether the inductees' achievements were an example of accomplishment and inspired them was not significantly different (χ^2=1.64, p=0.441). The relationship between a person's age and whether the inductees' achievements were an example of accomplishment and inspired them was also not significantly different either (χ^2=4.11, p=0.391).

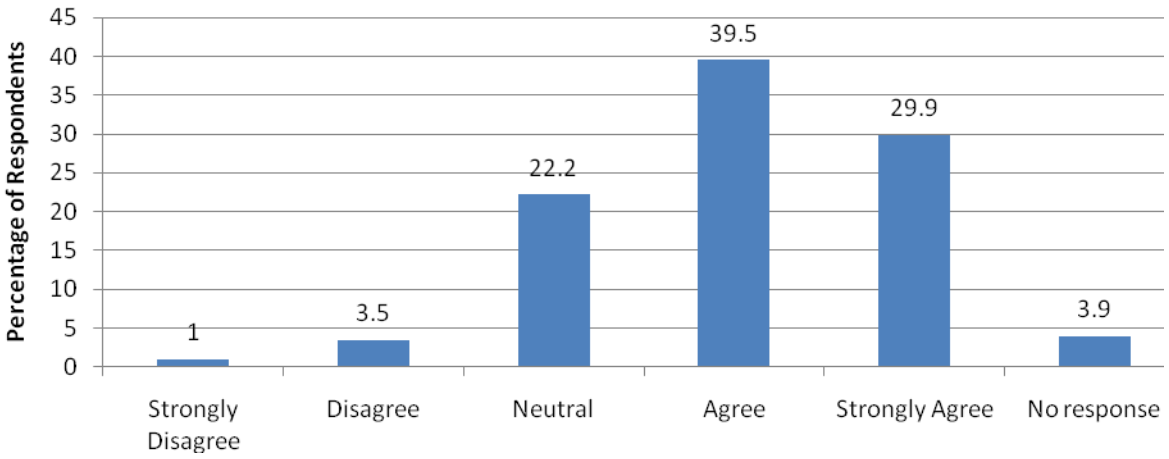

Figure 9: Responses to the question of whether the inductees' achievements were an example of accomplishment and inspired (n=311)

Media Suggestions

Respondents were asked for suggestions about media to be incorporated into a future WCHF (Figure 10). Many of the respondents suggested more hands-on activities to be more effective and they also felt that the WCHF needed to be larger. For instance:

> "Larger room with more info on each of the inductees' accomplishments"
>
> "Larger with more exhibits. Seems to only briefly touch on a few topics of conservation"
>
> "Add more, always makes it better"

Respondents did not feel that there was enough information about the WCHF inductees and that there "should [be] a key item for each Hall of Famer," "document home videos of inductees" and "more examples of inductees work, legacy."

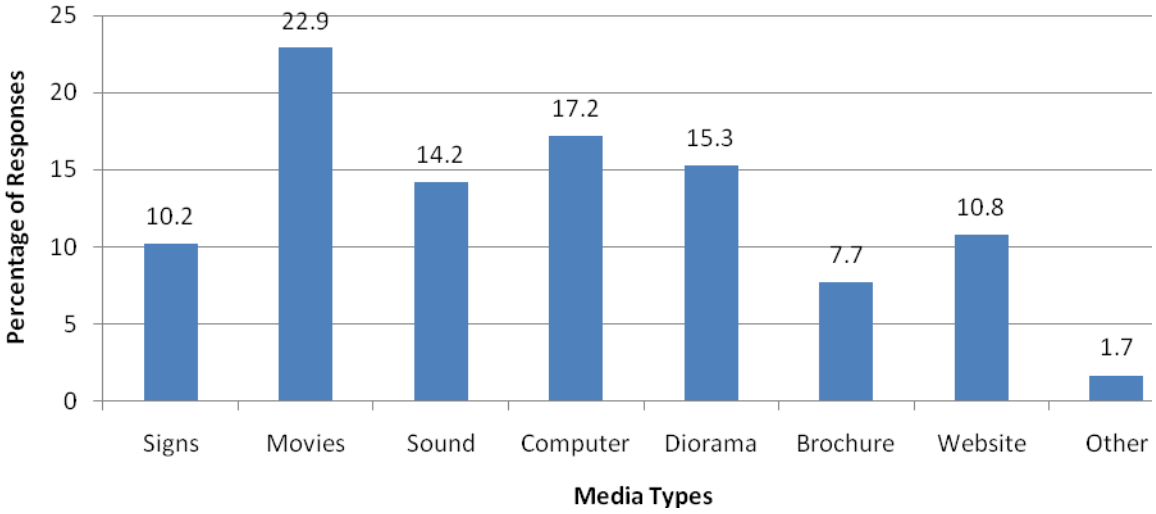

Figure 10: Media suggestions to be incorporated into a future WCHF (n=930)

Respondents were also asked what they would like to see for new exhibits in the future. The majority of respondents requested exhibits about wildlife (54%), followed by what can people do for the environment (36%), and more inductee info (36%) (Figure 11).

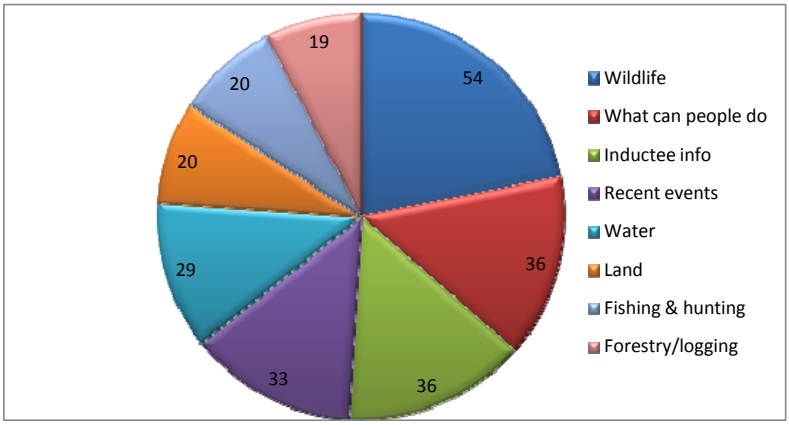

Figure 11: Suggestions for future exhibit topics (percentages) (n=247)
*Additional suggestions (less than 4%) -Energy, Pollution, Invasive species, Wetlands, Global warming, Sustainability, Successes, Native Americans, Recycling, Plants, Railroads, Law enforcement, Glaciers, CCC

Subproblem 2

Examine message effectiveness using different methods of delivery (prototypes) in museum exhibit work to connect visitors intellectually and emotionally to interpretive storylines.

Phase II

Favorite and Least Favorite Exhibit Prototype

After viewing the four exhibit prototypes (visual, audio, multi and kinesthetic) respondents were asked which exhibit prototype was their favorite (Table 7). Over 57% of the respondents (n=19) interviewed responded that their favorite prototype was the multi-modal exhibit. Reasons given for choosing the multi-modal included interactive (7 responses), emotional (3 responses) and it kept their interest the longest (4 responses). Responses from participants include,

> "Again it goes back to it touched on the emotional side. The WCHF conservationists did great things but it was because they cared about it so much that they dedicated their life to it and put something forth to make grand things, which is an emotional thing. Why do we think they're so great, what did they do, and that's what's so important and touching on the emotional side."
>
> "Interactive and could read at own pace and do what you wanted."
>
> "It kept my interest the longest and I was able to focus the most on that one."

People liked the audio exhibit because they were listening to an actual interview with George Archibald (4 responses) (Appendix N). One respondent said, "the audio of George Archibald speaking was really neat, maybe because of how clearly he spoke. It gave me a sense of who he is and that's where it was real clear that conservation is a people issue." The visual exhibit prototype was liked by respondents because, "it was most informational. It gave the whole picture that it is a worldwide endeavor" and "it was more traditional and very well done. I learned a lot and I really enjoyed it."

Table 7: Respondents favorite exhibit prototypes

Exhibit Prototype	**Number of Respondents**
Multi	11
Audio	4
Visual	4
Kinesthetic	0

Respondents were also asked what their least favorite exhibit prototype was and why (Table 8). Over 36% of respondents (n=19) did not like the kinesthetic exhibit and 31.6% did not like the audio exhibit. Reasons given for not liking the kinesthetic exhibit included that it was too simple and directed more towards a younger audience (5 responses). People did not like the audio exhibit because, "it didn't involve numerous senses, you just listened. My mind and ears were involved, but there weren't any sights" and "[they] need visual stimulation." People did not like the visual exhibit because it wasn't interactive enough and all that they had to do was look and read (3 responses).

Table 8: Respondents' least favorite exhibit prototypes

Exhibit Prototype (n=19)	**Number of Respondents**
Kinesthetic	7
Audio	6
Visual	4
Multi	2

When asked what to change about the visual exhibit, respondents mentioned that they wanted more about cranes (6 responses) and they had a few suggestions for creative touch-ups, such as write-up changes and larger photos (6 responses). One respondent also said, "I didn't mind, but it is a very busy exhibit. Some other people might find it too busy and move on. Different people learn different ways, I enjoyed it but my wife would have moved on in two seconds" and "I kind of like interactive exhibits more, but technology isn't always easy to come by." Suggestions for improving the audio exhibit included making the exhibit shorter (3 responses) and "put something visual, it's hard to just listen with nothing to stare at, it makes my mind wander" (9 responses). Respondents suggested that the multi-modal exhibit should be put with other exhibits (2 responses), should be a little more creative and attention-grabbing (5 responses) and improvements in the technology could be made (e.g.,"Might go to a touch screen so that it's easier for some people") (2 responses). The kinesthetic exhibit had the most suggestions for improvement. People wanted it to be put with other exhibits (3 responses) and to include more information and explanations (5 responses). One respondent said, "make a connection more to George Archibald. It is indirectly but I didn't pick up the connection. More explanations about items."

Enjoyment of Exhibit Prototypes

The respondents were asked to rank their enjoyment of each prototype on a Likert scale of one to ten, with one being did not enjoy at all, five being enjoyed somewhat and ten being enjoyed a lot (Table 9). All exhibits were ranked above five (enjoyed somewhat). The multi-modal exhibit was enjoyed the most and the kinesthetic exhibit was enjoyed the least. The multi-modal exhibit was enjoyed because it was interactive and multi-sensory (7 responses), as well as being informational (7 responses). Respondents also really liked the movie and visuals (5 responses). Examples of responses are:

> "How interactive it was, how I could look at what I wanted and do what I wanted with it."

> "The movie was nice because it gave a feel for George Archibald and some of the images of the cranes themselves."

Respondents enjoyed the visual exhibit because of the pictures and design (8 responses). It was informational (6 responses) and they liked being able to see the crane species' distributions (5 responses). Example responses included:

> "I liked how it was informational and it got to the point and it wasn't long and drawn out. It was the right amount of information that your brain can handle when you're looking at an exhibit."

> "I enjoyed the exhibit a lot. I really liked the red and ivory together, it was very catching to me. The bubbles going to the countries were excellent. I liked the wording, where it was and what they were doing there. There was great detail without being too wordy."

> "How it covered the distribution and species of cranes. How active the crane foundation is around the world."

The audio exhibit was enjoyed by the visitors because of how the information was presented (8 responses) and the fact that they were actually hearing George Archibald (10 responses). Responses included:

> "I liked hearing the actual person and hear them talk about why it's important to them and the things they learned in the process."

> "The things that he talked about, it was rather informative. Especially when he talks about all the Wisconsinites that were involved in conservation. Conservation is really about changing people's perceptions of the environment."

Although the kinesthetic exhibit was the least enjoyed exhibit, people liked getting to try on the isolation rearing costume (14 responses) as well as touch actual crane parts (8 responses). For instance, respondents said:

> "I wasn't going to try on the costume and then I thought, nah, I'm going to try it on since I've always wanted to. And then I thought, now I've tried a real one."

> "The fact that you had part of the bird. It's hands on and you can touch."

Table 9: Respondents enjoyment of the exhibit prototypes

Exhibit Prototype	**Mean (out of 10 point scale)**
Multi	8.5
Visual	7.3
Audio	7.1
Kinesthetic	7.0

Learned from Exhibit Prototypes

After viewing each exhibit prototype the respondents were asked to rate how much they learned on a scale of one to ten, with one being learned nothing at all, five being learned somewhat and ten being learned a lot (Table 10).

Table 10: Respondents learning experience from the exhibit prototypes

Exhibit Prototype	**Mean (out of 10 point scale)**
Multi	8.2
Visual	8.0
Audio	7.0
Kinesthetic	5.5

Respondents felt that they learned the most from the multi-modal exhibit and the least from the kinesthetic exhibit. The multi-modal exhibit taught people about the history of George Archibald and the ICF (11 responses). Many people also learned that the Siberian Crane is the rarest species and that 11 out of 15 crane species are endangered (4 responses). A number of respondents (3 responses) replied that they had never heard of the different rearing techniques used by ICF. For example:

> "The use of floodlights to change the crane's breeding behavior and the Brolga crane using the hoses."

Respondents learned from the visual exhibit about the distribution of the crane species around the world, as well as the many locations that George Archibald has traveled and worked (18 responses). For instance:

> "I learned there are 15 species of cranes and they're in 37 countries. That George started ICF and that he has gone to several different countries to make other places for cranes."

After listening to the audio exhibit people volunteered a variety of different learned topics. Many people did not know about the importance of cranes in different cultures (9 responses) and that South America doesn't have any cranes (4 responses). People also learned about Archibald's ideas of the steps taken in order to conserve a species (5 responses), and Wisconsin's conservation history was reiterated (3 responses). Sample responses included:

> "In talking about how the different cultures perceive the crane, in some cultures it's food or they hunt it and that's all, it's just another animal. But in others your house is blessed or your property is blessed by having them land on it, it's got spiritual meanings. That was interesting learning about the other cultures. Asian cultures show how predominant it is there. But it was interesting learning about the crane populations in Iran and in the Middle East are not there because of the hunting."

> "He really stressed how his work has graduated from being all about cranes to being about the people, so that's something that I wouldn't have guessed. So many people are focused on particular species, and that's all they care about, it's obvious that he knows if he really cares about the wildlife species then he has to work with the people to preserve the species."

After viewing the kinesthetic exhibit, people said they learned about the size of items (crane leg, transmitter, crane egg) (8 responses), Whooping crane food sources (7 responses) and how difficult it is to wear the isolation rearing costume (4 responses). One respondent said, "when you actually put it on and can't see through the screen and it's hot and you're using this claw thing and trying to get it into this tiny little baby to keep it alive, there's no better way to learn the whole process." Another expressed that "something about holding, touching and seeing everything will help me remember."

Subproblem 3

Examine whether a person's learning modality is related to the way a visitor learns from an exhibit.

Phase I

Learning Modalities

The learning modality self-assessment found that 50.5% of participants were visual learners, followed by 28.6% kinesthetic and 5.1% were auditory (Figure 12). The reliability of self-assessments has been shown to have high internal consistency. Overall there have been high correlations between self-assessment results and ratings based on a variety of external criteria (Ross, 2006).

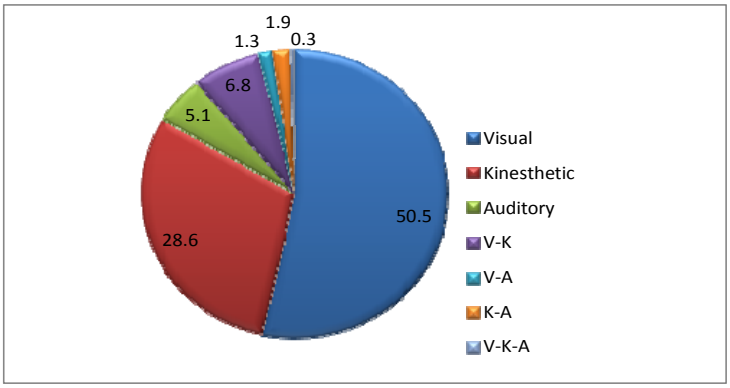

Figure 12: Percentage of learning modality types of questionnaire respondents (n=294)

Age and Learning Modalities

Based on a Chi-square test, the relationship between a respondent's age and their learning modality was not significantly different (χ^2=8.918, p=0.178) (Table 11).

Table 11: Respondent's age vs. Learning modality

Respondents Age	Visual modality	Kinesthetic modality	Auditory modality	Multi modality
Generation Y (n=159)	52.8%	35.8%	3.8%	7.5%
Generation X (n=25)	52.0%	24.0%	8.0%	16.0%
Baby Boomer (n=108)	53.7%	24.1%	7.4%	14.8%

Gender and Learning Modalities

The relationship between a respondent's gender and their learning modality was found to be significantly different based on a Chi-square test (χ^2=9.9, p=0.019) (Table 12). This suggests that males tend to be more auditory and less visual than females.

Table 12: Respondent's gender vs. Learning modality

Respondents Age	Visual modality (%)	Kinesthetic modality (%)	Auditory modality (%)	Multi modality (%)
Male (n=164)	47.0	32.9	8.53	11.6
Female (n=128)	60.9	27.3	1.6	10.2

Favorite and Least Favorite Exhibit

Due to the number of empty cells, statistical tests could not be run on the relationship between a respondent's learning modality and their favorite exhibit (Table 13). However, based on the percentages there does not appear to be a relationship. The relationship between a respondent's learning modality and their least favorite exhibit could also not be run and there does not appear to be a relationship (Table 14). Tables 15 and 16 provide a summary of respondents' favorite and least favorite exhibits. The favorite exhibit is in bold.

Table 13: Respondent's learning modality vs. Favorite exhibit

Learning modality	**Wolf (%)**	**Cutover**	**Settlement**	**Market Hunting**	**Law Enforcement**	**Timeline**	**CCC**	**Passing The Torch**	**Success Stories**	**Formal Gallery**
Visual (n=142)	9.2	17.6	6.3	14.8	**31.0**	7.7	4.9	0.07	2.8	4.9
Kinesthetic (n=81)	11.1	9.9	4.9	9.9	**37.0**	8.6	6.2	1.2	1.2	9.9
Auditory (n=16)	6.3	18.6	6.3	12.5	**43.8**	6.3	6.3	0	0	0
Multi modality (n=29)	6.9	17.2	20.7	10.3	**31.0**	3.4	3.4	0	3.4	3.4

Table 14: Respondent's learning modality vs. Least favorite exhibit

Learning modality	**Wolf (%)**	**Cutover**	**Settlement**	**Market Hunting**	**Law Enforcement**	**Timeline**	**CCC**	**Passing The Torch**	**Success Stories**	**Formal Gallery**
Visual (n=106)	**16.0**	9.4	4.7	10.4	**16.0**	12.3	2.8	10.4	15.1	2.8
Kinesthetic (n=62)	**14.5**	9.7	6.5	6.5	9.7	12.9	4.8	10	**14.5**	4.8
Auditory (n=11)	**27.3**	0	0	9.1	9.1	9.1	0	9.1	**27.3**	9.1
Multi modality (n=27)	7.4	7.4	7.4	7.4	14.8	11.1	7.4	7.4	**18.5**	11.1

Phase II

Learning Modalities and Learned from Exhibit Prototypes

The mean score of what the different learning modality types learned from each exhibit was calculated (Table 15). Visual modality types learned the most from the multi-modal exhibit. The auditory modalities learned the most from the visual exhibit. Kinesthetic modality types learned the most from the visual exhibit. People that were multi-modal learned the most from the visual and multi-modal exhibits. All of the learning modality types learned the least from the kinesthetic exhibit. On average people learned the most from the visual exhibit and the least from the kinesthetic exhibit.

Table 15: Mean of what the different learning modalities learned from exhibit prototypes (based on Likert 10 point scale)

Learning modality	**Visual prototype**	**Audio prototype**	**Multi prototype**	**Kinesthetic prototype**
Visual (9 people)	7.88	7.44	**8.78**	6.22
Auditory (2 people)	**7.5**	7.0	6.5	3.5
Kinesthetic (5 people)	**7.8**	5.6	7.6	3.8
Multi-Modality (3 people)	**8.6**	8.3	**8.6**	7.6
Total average	8.04	7.51	7.98	5.81

Learning Modalities and Enjoyed the Exhibit Prototypes

The mean score for how much respondents enjoyed the exhibit prototypes was separated by learning modality type (Table 16). The visual, kinesthetic and multi-modality learners enjoyed the multi-modal exhibit the most. The auditory learners enjoyed the visual, audio and multi-modal exhibits the most. The visual learners enjoyed the visual and kinesthetic exhibits the least. Auditory learners enjoyed the kinesthetic exhibit the least. The kinesthetic learners enjoyed the audio exhibit the least. Multi-modal learners enjoyed the visual exhibit the least. On average people enjoyed the multi-modal exhibit the most and the kinesthetic exhibit the least.

Table 16: Mean of what the different learning modalities enjoyed about the exhibit prototypes (based on Likert 10 point scale)

Learning modality	**Visual prototype**	**Audio prototype**	**Multi prototype**	**Kinesthetic prototype**
Visual (9 people)	7.3	7.5	**8.8**	7.3
Auditory (2 people)	**7.5**	**7.5**	**7.5**	5.5
Kinesthetic (5 people)	7.4	5.8	**8.2**	6.8
Multi-Modality (3 people)	6.6	7.6	**8.6**	7.3
Total average	6.9	7.27	8.3	6.6

CHAPTER 5

Discussion

Introduction

The results of this study gave insight into improvements that can be made in a future Wisconsin Conservation Hall of Fame, and supported interpretive exhibit design literature and the relationship between a person's learning modality and their exhibit preference. The following chapter summarizes conclusions drawn, recommendations, and additions to exhibit design and learning modality literature as well as limitations of the study.

Subproblem 1

Identify the effectiveness of the current Wisconsin Conservation Hall of Fame (WCHF) exhibition through stakeholder and visitor input.

Favorite and Least Favorite Exhibits

In 1999, Tucker completed an evaluation of the recently developed exhibits in the WCHF. She found that 27.1% of participants chose the Law Enforcement exhibit as their favorite exhibit, 9.5% of participants listed native tribe (Wolf and Timeline exhibits) exhibits and 9.4% chose the Market Hunting exhibit (n=702). This corresponds to the data collected in Phase I of this study, where 33.6% of participants liked the Law Enforcement exhibit best, 15.2% of participants chose the Cutover exhibit and 12.6% enjoyed the Market Hunting exhibit. Similar responses were given in both studies as to why the Law Enforcement exhibit was chosen, including the interactive experience of the

exhibit and that people got to pretend to be a warden. Participants in both studies enjoyed the Market Hunting exhibit because it showed how hunters can affect wildlife populations.

Tucker (1999) found that 13.7% of respondents picked the Success Stories exhibit as their least favorite exhibit that required the greatest future development, 13.1% chose the Market Hunting exhibit and 10.4% chose the Law Enforcement exhibit (n=336). In Phase I, participants chose the Success Stories exhibit (15.6%) and the Wolf exhibit (15.6%) as their least favorite exhibits, followed by the Law Enforcement exhibit (13.3%). Participants gave similar responses as to why they did not like the Success Stories exhibit, including that there needed to be more current environmental issues, more tips as to how citizens can become involved and that the exhibit needs to be further developed since it looks unfinished. The Wolf exhibit was chosen as a least favorite exhibit by the current study because of the need to update the mounted wolf, which was not an issue with Tucker's study since the wolf had recently been installed. The Wolf exhibit and Law Enforcement exhibits also were not liked currently because they included taxidermied mounts as opposed to sculpted or molded animal forms. This dislike of taxidermied mounts could be taken into account while designing future exhibits. Both studies found that people wanted more historical information about wardens (job duties, artifacts, dangers faced) added to the Law Enforcement exhibit, as well as the differences between current and historical wardens. Suggestions from participants can be taken into account when designing future exhibits for the WCHF.

Connection with Inductees

Over 40% of respondents remained neutral about the connection that they felt with the WCHF inductees. Tucker found that about 3% of her respondents thought that improvements needed to be made to involve the WCHF inductees more in exhibits (1999). Both studies suggested that more biographies should be included that tell the stories of the inductees' lives and accomplishments. In a future WCHF, exhibits about individual inductees should be incorporated. Many of the inductees were interconnected, so exhibits could be designed on multiple inductees at once. For example, William Aberg, Owen Gromme, Aldo Leopold, Louis Radke, A.D. Sutherland and Walter Scott all worked towards the restoration of the Horicon Marsh, and an entire exhibit could be focused on this momentous effort (Wisconsin Conservation Hall of Fame Board, n.d.). Participants suggested an "Inductee of the Month" or every six months so that one inductee could have an exhibit focused on them. The display would be changed so that repeat visitors would get new information, and individual inductees would have their accomplishments highlighted.

Based on a Chi-square test, the Baby Boomers and Generation X connected more with the inductees. This could be based on the fact that these generations may have personally known the inductees or watched their stories/accomplishments develop, while to Generation Y they are just historical figures. A connection needs to be made with Generation Y, possibly through more interactive exhibits or by making the inductees' accomplishments relevant to issues today. For example, Wakelin "Ranger Mac" McNeil tried to reach out to country and city kids through colorful and knowledge-filled radio messages about conservation and nature from 1933-54 (Wisconsin Conservation Hall of

Fame Board, n.d.). He recognized that children needed to learn to love the outdoors at an early age. This is a very similar idea to the "No Child Left Inside" movement that is currently occurring. Generation Y could relate to why McNeil was encouraging children to love the outdoors because they are being encouraged to explore the outdoors more as well.

Accomplishment of WCHF Mission

When respondents were asked whether the WCHF accomplished its mission, over 32% were either neutral or disagreed. The results indicate that the current exhibition isn't actively encouraging citizens to involve themselves in managing resources effectively. When asked for suggestions to improve the WCHF, 89 (36%) respondents suggested that an exhibit needed to be designed that gave them access to what today's individuals can do to help the environment. People wanted more of a take home message. In a future WCHF exhibit, a computer could be incorporated that displayed environmentally friendly websites (http://earthtrends.wri.org/, energyideas.org, www.nwf.org). The exhibit could be designed around positive environmental steps and WCHF inductees that helped to make them happen. For example, Joseph Hickey's (1907-1993) research found the damage that DDT had on wildlife and helped to make Wisconsin the first state to ban its use. Ingeborg Lothe (1915-) helped develop and implement the first recycling program in Columbia County, which then served as a model for other Wisconsin counties and was nationally recognized. Most people know about recycling but not many know about its roots and how one individual can have such an impact (Wisconsin Conservation Hall of Fame Board, n.d.). A pamphlet could include 10 simple steps that people can take in their everyday lives to conserve (Such as turn off the water while brushing your

teeth, use fluorescent light bulbs, or build your own composting bin). Many people don't know about the plethora of conservation groups located in Wisconsin, and including their contact information as well as projects in the exhibit could encourage people to get involved in managing resources (Examples include the Izaak Walton League, Wisconsin Wildlife Federation, and The Nature Conservancy).

Emotional Impact

Halls of Fame have three main goals, one of which is to connect visitors to the inductees intellectually and emotionally (Danilov, 1997). When respondents were asked whether their experience in the WCHF had an emotional impact on them, only 43.3% agreed. Respondents did not feel connected to the inductees because they were not familiar with many of the inductees or their accomplishments. Many felt that the information presented was good, but the methods of presentation didn't connect them. Oftentimes, Halls of Fame will renovate and update exhibits to provide more of a visitor draw, but the renovations can also be used to connect visitors through updated exhibits (Danilov, 1997). Respondents enjoyed being able to touch and feel items in the exhibit prototypes, which could then be used to design more hands-on activities in the WCHF. Inductees had personal items that could be on display for people to see or try, which would also stress the fact that the inductees were ordinary people who accomplished extraordinary things. Visitors of historic homes and locations enjoy seeing actual artifacts from specific time periods (Zimmerman & Gross, 2000). The WCHF can take advantage of this and incorporate inductee artifacts, such as a painting easel and brushes used by Owen Gromme or a gardening set used by Lorrie Otto to plant native flower gardens. Books written by the inductees could also be incorporated into a small library

that visitors could peruse to learn more about the insights written by the inductees. Incorporation of additional technologies, including home movies and interviews, would also give visitors a chance to see the inductees while they were alive, as well as hear their perspectives on issues.

The relationship between a person's age and the emotional impact of their experience in the WCHF was found to be significant. Over 18% of Generation Y were not emotionally impacted by the WCHF. Generation Y is defined based on the incorporation of technology into their everyday lives. Junco and Mastrodicasa (2007) found that 97% of Generation Y owns computers and 69% stay connected with peers and events through websites such as Facebook and MySpace. The current WCHF does not have any recent technology incorporated, which could be why technologically minded individuals aren't as connected. An interactive computer exhibit that allows visitors to read, watch movies and listen to interviews with the inductees may be much more effective in making connections than traditional visual exhibits with Generation Y. The exhibit would also have to simply be designed so that older generations can enjoy it too. The incorporation of exhibits that all ages of people will enjoy and connect with will be important in a future WCHF.

Future Media and Exhibit Suggestions

One of the main suggestions from questionnaire respondents was the need for a larger area to house the WCHF. An increase in size would allow for additional exhibits, especially exhibits that can be more interactive. Interactive exhibits are important since they respond to visitor's actions, which help lead visitors to a better understanding and discovery of messages (Gross & Zimmerman, 2002). Respondents wanted to see movies,

computers and interactive dioramas incorporated into future exhibits. Exhibits such as these can be used to bring inductees to life and tell the stories of individual inductees more emotionally then a static exhibit can.

Suggestions for future exhibit topics were also gathered. Over 54% of respondents requested exhibits about wildlife. Wisconsin's success with species such as the Whooping Crane (2006 WCHF inductee George Archibald), Prairie Chicken (1996 WCHF inductee Frederick and Frances Hammerstrom), Waterfowl (2004 WCHF inductee Laurence Jahn), and White-tailed deer (1985 WCHF inductee Aldo Leopold and 1986 WCHF inductee Ernie Swift) could all be chronicled and included in a future WCHF(Wisconsin Conservation Hall of Fame Board, n.d.). Respondents also requested exhibits that informed them of what they could do to help the environment, which ties directly into the WCHF mission. The third most prevalent suggestion for future exhibit topics was inductee accomplishments and stories. In the current WCHF a number of inductees are mentioned, but their stories aren't interpreted in any great depth. Since all of the inductees are in the WCHF because of their contribution to conserving natural resources, exhibits about the inductees and their individual conservation battles can be fabricated.

It is the hope of the researcher that future WCHF designers will follow recommendations given to enhance visitor experience and update the exhibits. If the mission of the WCHF is to be fully recognized, it is important that the input of visitors be considered. The variety of stakeholders involved will make the process very interesting, but in the long run it will allow the WCHF to operate at its fullest capacity and educate people about the history of Wisconsin conservationists.

Subproblem 2

Examine message effectiveness using different methods of delivery (prototypes) in museum exhibit work to connect visitors intellectually and emotionally to interpretive storylines.

Multi-modal Exhibits

Visitor studies have shown that by making exhibits multi-sensory, visitors will be more interested in spending time exploring and learning from them (Melton, 1936; Moscardo, 1999; Pearce, 1988; Peart, 1984; Wolf and Smith, 1993). When respondents were asked to choose their favorite exhibit prototype in Phase II, over 57% responded that their favorite prototype was the multi-modal exhibit. The reasons given for choosing this exhibit prototype included interacting with the exhibit, the emotional connection, and the fact that it kept their interest the longest. The data suggests that the effectiveness of the message regarding the WCHF inductee, George Archibald, was best when displayed using a multi-modal exhibit. Designers of exhibits for Halls of Fame can include a variety of multi-modal exhibits in their plans so that visitors are connected more intellectually and emotionally to the inductees.

Visual Inclusion in Exhibits

Although the majority of respondents chose the multi-modal exhibit, over 21% liked the visual exhibit best. Reasons given by respondents included that it was informational and a more traditional approach. People rely on an initial visual attraction to motivate them to view the exhibit. One respondent said, "the [visual] exhibit was visually appealing. There was a good color pattern that drew me in."

When respondents were asked for ways to improve the exhibit prototypes, nine people suggested that an incorporation of a visual component was needed with the audio exhibit and five people wanted more visual information and explanations included with the kinesthetic exhibit. When asked how to improve the audio exhibit, one respondent replied, "in combination with a visual would work nicely. A poster or something, I think everybody's got different learning styles and that's important too." The learning mean score of 5.5 demonstrated that individuals did not learn as much from the kinesthetic exhibit since the other exhibit prototype learning means were higher. This could be attributed to the fact that although people got to interact with the exhibit by touching objects, there weren't any detailed explanations of what the objects signified. This finding furthers the idea that including more than one learning modality into an exhibit will help enhance a visitor's experience.

Real Life Interviews

The audio exhibit prototype consisted of a recording from an interview with WCHF inductee, George Archibald, with crane calls in the background. In the interview, Archibald discussed his role in the creation of the International Crane Foundation, why cranes can play a role as international ambassadors, what cranes represent to different cultures and his philosophy on conservation. Ten respondents enjoyed the audio exhibit because of the fact that they were actually hearing George Archibald. People felt that they could connect more to the inductee because they were hearing his speaking style as he discussed his philosophies. Gross et al. (2006) suggests using natural sounds and background effects to set the mood in an audio exhibit. The incorporation of crane calls was liked by two respondents because it further connected George Archibald to the birds

that he has spent his life working with. One respondent suggested breaking up the interview into smaller pieces that could then be activated by different buttons that matched a visual such as a sign or poster. Halls of Fame and other public venues that want to connect visitors to relevant people should try and incorporate live recordings of the person speaking and on video. The connection that visitors make with the real person's voice, even if they are deceased, could be long lasting and give the visitor a better chance to retain what they learned.

Hands-on Activities

Although the kinesthetic exhibit prototype was rated as the lowest learning exhibit, it still received a favorable enjoyment rating. Respondents enjoyed getting to touch and explore actual crane artifacts. One respondent said, "I loved trying out the puppet costume and trying to grab the food, it was so much fun." People were also amazed by the size of food items and crane body parts that they got to examine. When asked what the favorite part of the kinesthetic exhibit was, one respondent answered, "[the] parts of the bird because you can't usually walk up to a crane or a wild animal and touch them. It's nice to be able to touch the egg and feathers; you can put a feeling with what you're seeing out in the wild." Gross and Zimmerman suggest the use of simpler devices for hands-on exhibits instead of always using computer games or simulations (2002). All of the crane items are simple but effective, and if they were paired with interpretive explanations and pictures then it would be a great teaching exhibit. The incorporation of items from inductees or tactile exhibits in museums can add another layer to the learning that can occur. Giving people a chance to interact with an exhibit through touch encourages mental participation.

Age Differences and Technology

The Baby Boomers learned the most from the visual exhibit prototype (sign panel), while Generation X and Y learned the most from the multi-modal exhibit prototype (interactive website). This difference could be contributed to the fact that Baby Boomers aren't as comfortable with computers and navigating a website. A number of participants in the Baby Boomer generation did not know how to click on links to navigate through web pages and, after becoming frustrated, did not view the whole exhibit. A suggestion made by a respondent was to incorporate a touch-screen so that knowledge of the mouse buttons and choosing links wouldn't be as important as exploring the exhibit. Having a written guide, either placed next to the exhibit with more in-depth instructions or as a choice on the computer screen, would have also made it easier for all participants to explore the exhibit. Computers are often included in exhibits because they incorporate touch, sound, movies, simulations and interaction, but the fact that some visitors may be excluded from using them due to limited knowledge is an important aspect exhibit designers should consider.

Subproblem 3

Examine whether a person's learning modality is related to the way a visitor learns from an exhibit.

Phase I

The relationship between a person's age and their learning modality does not appear to be correlated based on a Chi-square test. It seems that all generations have a mixture of learning modalities and that no matter the visitor age base, all learning

modalities should be taken into account when designing exhibits. These results substantiate what a number of researchers have already found in other studies (Kratzig & Arbuthnott, 2006; Cassidy & Eachus, 2000; Lu et al., 2003). Lujan and DiCarlo (2006) found similar results in a study of first-year medical students and suggested that based on their findings, the relationship between a person's gender and their learning modality should be studied. In this study, the relationship between a person's gender and their learning modality was significant based on a Chi-square test. A Hall of Fame that is planning exhibits could complete a visitor analysis and determine the sex ratio of visitors.

Phase II

Based on the results from the personal interviews about the exhibit prototypes, there doesn't appear to be a relationship between a person's learning modality and what they learned from an exhibit prototype. According to the data, each person's preference is different and has little relation to their learning modality. A future study with a larger sample size would help to further substantiate the fact that gearing an exhibit towards a certain learning modality might not be as advantageous as making the exhibit multi-modal.

A person's learning modality also doesn't appear to determine how much they enjoyed an exhibit prototype. Some of the kinesthetic learners liked the auditory exhibit because it was an actual recording of George Archibald speaking, while some visual learners enjoyed the kinesthetic exhibit because they got to try on a real costume rearing suit. It seems that the authenticity of an exhibit and the interactiveness is more important for enjoyment than an exhibit being geared towards a specific learning modality.

Limitations and Improvements of Study

There were limitations in this research that are important to acknowledge so that the results and recommendations can be used effectively. A recommendation will be made for each limitation in an attempt to lessen the effects of the limitation.

Sampling Technique

The participants of the questionnaire were a non-random convenience sample of targeted audience groups of the WCHF. The data from the questionnaire only represents the opinions and thoughts of the participants, so it cannot be generalized beyond that group. A future evaluation of the WCHF effectiveness should include the following groups as participants in order to expand the results:

-WCHF board members

-WCHF members

-Additional UWSP classes (English, art, business, etc.)

The participants of the personal interviews about the exhibit prototypes were self-selected from the questionnaire participant pool, which limited the gender, age and learning modality of the participants. The sample size was also very small which limited the analyses that could be done on the data collection. In a future study, approaching the questionnaire participants face-to-face instead of relying on the questionnaire for enlisting help might increase the sample size. An increased sample size would allow the researcher to find out additional information about what a person learns from an exhibit based on their learning modality.

Time of Study

The questionnaire was completed during four weeks in the spring of 2008. Participants were able to visit the WCHF during Schmeeckle Reserve visiting hours from 8 am to 5 pm. During one week of the study, the WCHF was open and the questionnaire was available for completion after hours from 5 to 8 pm. The time availability may have limited the amount of people that could participate in the survey due to working hours or ability to visit the WCHF. Making the survey available for a longer period of time may increase the sample size in a future study.

Exhibit Prototypes

The exhibit prototypes were designed using available resources that could be found at Schmeeckle Reserve or UWSP because of funding limitations. The computer programs that were used to design the multi-modal exhibit (Microsoft Expressions Web) and the audio exhibit (Audacity) were free programs that were available on campus. In the future, incorporating more advanced and expensive technology into the exhibits would help to make them more interactive and exciting. For example, a touch-screen computer would be more effective for the multi-modal exhibit, as would actual buttons to push for the audio exhibit.

Statistical Analysis

Due to the small sample size in Phase II of the study, statistical analyses could not be run. Additionally, because the participants were not evenly distributed by learning modality, age or gender, inferences could not be drawn about their preferences. In a future study a sample size of at least 30 participants would be enough to run statistical

analyses (Salkind, 2004). The sample would also need to be more evenly distributed by demographics.

Summary of Discussion

Based on the results of this study, a future Wisconsin Conservation Hall of Fame should incorporate more interactive exhibits that connect the visitor to the inductees through their life stories and accomplishments. New exhibits should include topics on a variety of Wisconsin wildlife species, what visitors can do for the environment and the WCHF inductees. This study also recommends that a new or updated WCHF should be larger so that more connections can be made.

Based on the findings, exhibit designers should think about incorporating multi-modal exhibits, as well as using a variety of techniques that cause the visitor to actively interact with the exhibit. Techniques may include incorporating a variety of visuals, real life interviews, and hands-on activities. Designers should also think about ways to include all age generations through a variety of exhibit styles and modes.

A person's learning modality does not appear to play a role in their preference for exhibits, but the incorporation of multiple modalities into exhibits is important. Designers should try and include a variety of senses that will reach out to the visitor regardless of their age, gender or learning modality.

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APPENDICES

Appendix A

Wisconsin Conservation Hall of Fame Voting Members

American Water Resources Association, Wisconsin Chapter
Bill's Musky Club, Inc.
Citizens Natural Resources Association
Dane County Conservation League
The Izaak Walton League, Wisconsin Division
Musky Clubs Alliance of Wisconsin, Inc.
The Nature Conservancy
Sierra Club, John Muir Chapter
Society of American Foresters, Wisconsin Chapter
Soil and Water Conservation Society of America, Wisconsin Chapter
Wild Ones Natural Landscapers, Ltd., Wisconsin Chapters
The Wildlife Society, Wisconsin Chapter
Wisconsin Association for Environmental Education
Wisconsin Association of Land Conservation Employees
Wisconsin Audubon Council, Inc.
Wisconsin Bowhunters Association
Wisconsin Conservation Congress
Wisconsin Conservation Wardens Association
Wisconsin Land and Water Conservation Association
Wisconsin Outdoors Communicators Association
Wisconsin Park and Recreation Association
Wisconsin State AFL-CIO Conservation Committee
Wisconsin Wildlife Federation
Wisconsin Woodland Owners Association

Appendix B

Wisconsin Conservation Hall of Fame Inductees

Aldo Leopold-1985
John Muir-1985
Ernie Swift-1986
Sigurd Olson-1987
Harley MacKenzie-1988
Gaylord Nelson-1988
Otto Zeasman-1988
Paul Olson-1989
A.D. Sutherland-1989
Wilhelmine LaBudde-1990
Virgil Muench-1990
Fred Schmeeckle-1990
Leslie Weorpel-1990
David Everest-1991
Richard Hemp-1991
Pearl Pohl-1991
Increase Lapham-1992
Melvin Taylor-1992
Wallace Grange-1993
Louis Radke-1993
Raymond Zillmer-1993
Owen Gromme-1994
Warren Knowles-1994
Sergius Wilde-1994
Walter Scott-1995
Fred Trenk-1995
Robert Ellarson-1996
Fred & Frances Hammerstrom-1996
Jacob Beuscher-1997
Henry Liebzeit-1997
William Peterburs-1997
Frederick Wilson-1997
Edward Griffith-1998
Gordon MacQuarrie-1998
Robert McCabe-1999
Lorrie Otto-1999
William Aberg-2000
E.M. Dahlberg-2000
Haskell Noyes-2000
Russel Lynch-2001
Carl Schurz-2001
Hilary Waukau-2001

Ruth Clusen-2002
George Wehrwein-2002
Joseph Hickey-2002
Ingeborg Lothe-2003
James Hall Zimmerman-2003
Forest Stearns-2003
Laurence Jahn-2004
Charles Van Hise-2004
Leo Nickasch-2004
Walter Kuhlmann-2005
Cedric Vig-2005
Harold Jordahl, Jr.-2005
Daniel Trainer-2006
George Archibald-2006
Wakelin McNeel-2006
Russell Peterson-2007
Guido Rahr, Sr.-2007
Henry Reuss-2007
C.D. "Buzz" Besadny-2008
Mel Cohee-2008
Paul Husting-2008
Herbert F. Behnke-2009
Martin Hanson-2009
Charles H. Stoddard-2009

Appendix C

Robert Steele's Seven Wisconsin Conservation History Eras

Living with the Seasons
Cognitive-Visitors will learn methods used to utilize resources
Behavioral-Visitors will be motivated to touch and manipulate objects that demonstrate the Indians' use of the land
Emotional-Visitors will feel respect for the Indians' harmonious relationship with the land

Whirling Winds of Change 1830-1850
Cognitive-Visitors will discover how European values disrupted the seasonal use of resources
Behavioral-Visitors will touch objects and view processes depicting change in the utilization of resources
Emotional-Visitors will feel discouraged by the effects of the influx of European values

Raid on Resources 1850-1890
Cognitive-Visitors will learn the environmental implications of resource exploitation and the transition of attitudes that came with it
Behavioral-Visitors will feel/observe objects and read labels to determine why people mismanaged resources
Emotional-Visitors will feel disappointment in the environmental degradation

Wise Use of Resources 1890-1915
Cognitive-Visitors will learn how ecological degradation led people to plan for more efficient use of natural resources
Behavioral-Visitors will be motivated to investigate the stories of early conservationists and preservationists
Emotional-Visitors will feel awareness of the overpowering need to regulate resource use

Resource Battles 1915-1940
Cognitive-Visitors will learn how setbacks in conservation practices were overcome by societal concerns and legislative action that allowed the public to be involved in a holistic conservation approach
Behavioral-Visitors will be impelled to discover how conservation successes outweighed failures
Emotional-Visitors will feel optimism as conservation becomes embedded in people nationwide

Passing the Torch 1940-1960
Cognitive-Visitors will discover how evolving views such as conservation education and the "land ethic" influenced the public's relationship with the land
Behavioral-Visitors will be motivated to rote the polygons in discovering how evolving views affected the public

Emotional-Visitors will be encouraged by emerging conservation processes

Environmentalism Awakens 1960-1980
Cognitive-Visitors will learn about the social unrest during this era
Behavioral-Visitors will be motivated to watch the video
Emotional-Visitors will feel disappointment with some of the attitudes during this period, but will feel inspired by people like Rachel Carson

A Sustainable Future 1980-future
Cognitive-Visitors will learn how people are living with the land today and into the future
Behavioral-Visitors will be motivated to discover how they can live sustainably with the land
Emotional-Visitors will be uplifted by the conservation successes of Wisconsin and the nation, and will be encouraged to become involved in future resource sustainability
(Tucker, 1999)

Appendix D

Phase I Questionnaire

Wisconsin Conservation Hall of Fame

Schmeeckle Reserve
2419 North Point Dr.
Stevens Point, WI 54481
(715) 346-4992

Dear Participant:

This questionnaire is part of a study to evaluate the effectiveness of the Wisconsin Conservation Hall of Fame gallery and "Land of Wealth" museum exhibition at Schmeeckle Reserve. Your opinions will help us with planning the development of conceptual designs for new exhibits.

We invite you to complete part one of the questionnaire before entering the Wisconsin Conservation Hall of Fame. Once you have finished walking through the Hall of Fame stop back at the front desk for part two of the questionnaire. Completion of this questionnaire will take approximately 10-15 minutes.

Your responses are confidential and anonymous. We will not release information that could identify you. All completed surveys will be kept in a locked cabinet and will not be available to anyone not directly involved in the study.

Once the study is completed, we would be glad to give you the results. In the meantime, if you have any questions, please contact Ginamaria Javurek at the phone number or email address listed below. If you have any complaints about your treatment as a participant in this study, please call or write:

Dr. Jason Davis, Chair
Institutional Review Board for the Protection of Human Subjects
Department of Business/Economics
University of Wisconsin-Stevens Point
Stevens Point, WI 54481 (715) 346-4598

Thank you very much for your assistance!

Sincerely,

Ginamaria Javurek
Graduate Assistant-Schmeeckle Reserve/UWSP
(715) 346-4992
gjavu971@uwsp.edu

Ron Zimmerman
Director of Schmeeckle Reserve
(715) 346-4992
rzimmerm@uwsp.edu

Your completion and submission of the survey represents your consent to serve as a subject in this research. This research project has been approved by the UWSP Institutional Review Board for the Protection of Human Subjects.

Please complete the following questions before entering the Wisconsin Conservation Hall of Fame

1. Have you visited the Wisconsin Conservation Hall of Fame (WCHF) prior to today? (check one)

_____ Yes
_____ No

2. The topic of Wisconsin conservation is important to me. (circle one)

1	2	3	4	5
Strongly disagree		Neutral		Strongly agree

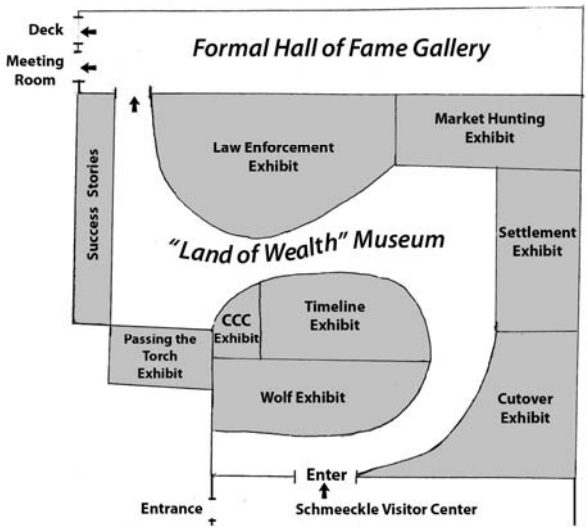
3. List the names of up to three WCHF inductees if you are aware of any. If not, turn this into the Visitor Center front desk and walk through the WCHF.

_____

_____

_____

Please complete the following questions after walking through the Wisconsin Conservation Hall of Fame



4a. What was your favorite exhibit?

b. Why?

5a. What was your least favorite exhibit?

b. Why?

Please rate how you felt after walking through the WCHF…

6a. After experiencing the museum and formal gallery, how would you rate your interest in Wisconsin conservation? (circle one)

1	2	3	4	5
No interest		Neutral		Strong interest

b. Comments:

7a. Indicate how much you learned about the history of conservation. (circle one)

1	2	3	4	5
Nothing at all		Neutral		I learned a lot

b. Comments:

8a. I thought information about conservation in Wisconsin was clearly presented. (circle one)

1	2	3	4	5
Strongly disagree		Neutral		Strongly agree

b. Comments:

9a. There were unexpected and new things that I learned during my experience in the Wisconsin Conservation Hall of Fame. (circle one)

1	2	3	4	5
Strongly disagree		Neutral		Strongly agree

b. Comments:

10a. The Wisconsin Conservation Hall of Fame contained exhibits that involved several of my senses such as sight, sound, and touch. (circle one)

1	2	3	4	5
Strongly disagree		Neutral		Strongly agree

b. Comments:

11a. The mission of the WCHF is to "*Encourage citizens to involve themselves in efforts to manage resources effectively and beneficially promote an interest in conservation among Wisconsin youth and to encourage continued education about conservation issues so they inspire leadership in future resource conservation efforts*." The WCHF accomplished the mission. (circle one)

1	2	3	4	5
Strongly disagree		Neutral		Strongly agree

b. Comments:

12a. My experience in the Wisconsin Conservation Hall of Fame had an emotional impact on me. (circle one)

1	2	3	4	5
Strongly disagree		Neutral		Strongly agree

b. Comments:

13a. I felt a strong connection with the inductees. (circle one)

1	2	3	4	5
Strongly disagree		Neutral		Strongly agree

b. Comments:

14. Feel free to describe your thoughts about any of the inductees in particular…

15a. The inductees' achievements are an example of accomplishment and inspire me. (circle one)

1	2	3	4	5
Strongly disagree		Neutral		Strongly agree

b. Comments:

16. Can you name 3 WCHF inductees?

_____
_____
_____

17. What other conservation topics are you interested in learning about or seeing presented in the Wisconsin Conservation Hall of Fame?

18. After viewing the Formal Hall of Fame Gallery, describe any interactions that you had with exhibits.

19. In a future WCHF I would like to see the following types of media incorporated. (Check all that apply)

_____ Informative signs & panels
_____ Movie clips
_____ Sound clips
_____ Touch-screen computers with information
_____ Interactive dioramas
_____ Brochures
_____ Website
_____ Other: _____

20. Do you have any additional ideas for improvement of the Wisconsin Conservation Hall of Fame?

And finally, a few questions about you

We would like to compare people's learning styles with their responses to different types of exhibits. The next series of questions will allow us to design more effective exhibits for you.

Fill in a number in each blank that corresponds to yourself.

Often (3) **Sometimes (2)** **Seldom/Never (1)**

_____ I remember information better if I write it down.
_____ Looking at the person helps keep me focused.
_____ My papers and notebooks always seem messy.
_____ I have trouble following lectures.
_____ I need a quiet place to get my work done.
_____ I need to write down directions, not just take them verbally.
_____ I take frequent study breaks.
_____ I doodle and draw pictures on the margins of my notebook pages.
_____ When I take a test, I can see the textbook page in my head.
_____ I don't always get the meaning of a joke.
_____ I react very strongly to colors.
_____ If I hear something, I will remember it.
_____ I have to rewrite or type my class notes to reinforce the material.
_____ I would rather listen and learn than read and learn.
_____ Writing has always been difficult for me.
_____ When I read, I need to use my index finger to track my place on the line.
_____ I do not follow written directions well.
_____ I'm not very good at interpreting an individual's body language.
_____ I often misread words from the text-(i.e., "them" for "then").
_____ Pages with small print or poor quality copies are difficult for me to read.
_____ I start a project before reading the directions.
_____ I prefer first to see something done and then to do it myself.
_____ Music or background noise distracts my attention from the task at hand.
_____ I use the trial and error approach to problem-solving.
_____ I hate to sit at a desk for long periods of time.
_____ I use my hands when describing things.
_____ I like to read my textbook while riding an exercise bike.
_____ My eyes tire quickly, even though my vision check-up is always fine.
_____ I have a difficult time giving step-by-step instructions.
_____ I enjoy sports and do well at several different types of sports.

23. Age group (Check one)
_____ 18-25
_____ 26-35
_____ 36-45
_____ 46-55
_____ 56-70
_____ Over 70

24. Gender (Check one)
_____ Male

_____ Female

Thank you for completing this questionnaire. Please return it to the front desk of the Schmeeckle Reserve Visitor Center.

If you are interested in participating in a focus group in the fall of 2008 to discuss exhibit prototypes, please include your name and contact information below.

Name: _____
Phone number: _____
Email: _____

Thank You!

Appendix E

Institutional Review Board Protocol and Consent- Phase I

University of Wisconsin-Stevens Point
Institutional Review Board for the Protection of Human Subjects

Protocol for Original Submissions

A complete protocol must be submitted to the IRB for approval prior to the initiation of any investigations involving human subjects or human materials, including studies in the behavioral and social sciences.

If the research does not involve vulnerable subjects such as minors or inmates, send **6 copies** of (1) the completed protocol; (2) project abstract; and (3) samples of informed consent forms to the IRB chairperson. PROTOCOLS LACKING ANY ONE OF THESE THREE ELEMENTS WILL NOT BE APPROVED. In addition, copies of questionnaires or interview questions MUST be attached. If the research does involve subjects that may be considered vulnerable, please send 12 copies.

PLEASE TYPE
Project Title: **An examination of the Wisconsin Conservation Hall of Fame's effectiveness in interpreting stories of inductees**

Principal Investigator: **Ginamaria Javurek**

Department: **College of Natural Resources** Rank: **Graduate assistant**

Campus Mailing Address: **Schmeeckle Reserve-2419 North Point Dr**.

Telephone: **(715) 577-2069** E-mail address: **gjavu971@uwsp.edu**

Faculty Sponsor (if required): **Dr. Brenda Lackey**
(Faculty sponsor required if investigator is below rank of instructor.)

Expected Starting Date: **March 2008** Expected Completion Date: **May 2009**

Are you applying for funding of this research? **Yes**

If yes, what agency? **The UWSP Student Research Fund, Wisconsin Conservation Hall of Fame Board**

Please indicate the categories of subjects to be included in this project. Please check all that apply.

X Normal adult volunteers	_____ Minors (under 18 years of age)
_____ Incarcerated individuals	_____ Mentally Disabled
X Pregnant women	_____ Other _____(specify)

(**Faculty Member**) I have completed the "Human Subjects Protection Training" (available at http://www.uwsp.edu/special/irb/start.htm) and agree to accept responsibility for conducting or directing this research in accordance with the guidelines.

_____

(Signature of Faculty Member responsible for research)

(**Department Chair or equivalent**) I have reviewed this research proposal and, to the best of my knowledge, believe that it meets the ethical standards of the discipline.

_____

(Signature of Department Chair or equivalent)

******************************* Do not write below this line – for IRB use only *******************************

IRB approval_____
Date_____
(Signature of IRB Chair)

Approval for this research expires one year from the above date.
If research is not completed by this date, a request for continuation must be filed and approved before continuing. **Revised form: January 2001**

Proposal Abstract

Write a brief description of the purpose of the proposed research project. (100-200 words)

The purpose of this study is to evaluate the impacts of multi-sensory methods of delivery for interpreting the stories and lives of Hall of fame inductees, as well as determine whether a person's learning modality type plays a role in their preferred mode of exhibit delivery. The strengths, limitations and effectiveness of the current Wisconsin Conservation Hall of Fame (WCHF) exhibition will be determined by gathering opinions from the public using a questionnaire. The questionnaire will also be used to determine the respondents' learning modality type. Based on the questionnaire responses, research of the most effective methods that other Hall of fame organizations use to interpret their inductees' stories will be completed and prototypes (brochures, interactive computer programs, dioramas) will be fabricated.

Please complete the following questions for all research.

1. Describe the characteristics of the subjects, including gender, age ranges, ethnic background, health/treatment status and approximate number.

The subjects are broken down into four sample groups. The first group is made up of 150 members of various organizations from around Wisconsin that use the conference room at Schmeeckle Reserve during March and April of 2008. The second group is the 565 individuals that are on the Schmeeckle Reserve mailing list and are generally community members of the Stevens Point area. The third group will be made up of 25 UWSP students in the Natural Resources 369-Interpretive Media and Design class and 25 students in the History 366-Environmental history class. The fourth group will be the 30 people that are on the Wisconsin Conservation Hall of Fame board. The subjects will be predominantly Caucasian, between 20 and 75 years of age and both genders will be included.

2. Indicate how and where your subjects will be obtained. Describe the method you will use to contact subjects.

The subjects from the organizations using the conference room at Schmeeckle Reserve will be contacted directly on site. They will be asked to fill out the questionnaire when they arrive at Schmeeckle Reserve. The Schmeeckle Reserve mailing list subjects will be sent a postcard informing them of the study and asking for their participation. The Natural Resources 369 class and History 366 class will be told about the study during their class time. The Wisconsin Conservation Hall of Fame board will be emailed and asked to complete the questionnaire during their spring 2008 meeting.

3. What are you going to ask your subjects to do (be explicit) and where will your interaction with the subjects take place?

The subjects will be asked to complete section one (3 questions) of the questionnaire as soon as they arrive at the Schmeeckle Reserve Visitor Center. They will then be asked to take 10-15 minutes to walk through the Wisconsin Conservation Hall of Fame located at Schmeeckle Reserve and when finished complete section two of the questionnaire. Once respondents complete the anonymous questionnaire, they can return it to the Schmeeckle Reserve Visitor Center front desk.

4. Will deception be used in gathering data? Yes _____ No **X**
If yes, describe and justify.

5. Are there any risks to subjects? Yes _____ No **X**
If yes, describe the risks (consider physical, psychological, social, economic, and legal risks) and include this
description on the informed consent form.

6. What safeguards will be provided for subjects in case of harm or distress? (Examples of safeguards include having a counselor/therapist on call, an emergency plan in place for seeking medical assistance, assuring editorial rights to data prior to publication or release where appropriate.)
The researchers have identified no apparent need for safeguards in this research.

7. What are the benefits of participation/involvement in this research to subjects? (Examples include obtaining knowledge of discipline, experiencing research in a discipline, obtaining course credit, getting paid, or contributing to general welfare/knowledge.) Be sure to include this description on the informed consent form.

The benefits of participating in this research are the subjects will gain knowledge of Wisconsin conservation history, as well as contribute to the general knowledge about the connections made between visitors and exhibits. The subject will also receive a 10% off coupon for the Schmeeckle Reserve Browse Shop.

8. Will this research involve conducting surveys or interviews? Yes ~~X~~ No ———
If yes, please attach copies of all instruments or include a list of interview questions.

A sample questionnaire is attached

9. If electronic equipment is used with subjects, it is the investigator's responsibility to determine that it is safe, either by virtue of his or her own experience or through consultation with qualified technical personnel. The investigator is further responsible for carrying out continuing safety checks, as appropriate, during the course of the research. If electronic equipment is used, have appropriate meas~~ures bee~~n take~~n to ens~~ure safety? Yes No **Not applicable X**

10. During this research, what precautions will be taken to protect the identify of subjects and the confidentiality of the data?

Questionnaires completed by respondents will not include personal information, and will be tracked using a numbering system. Those who are willing to participate in the second phase of the research will voluntarily provide their contact information to the researcher. All data will be stored in locked computers and file cabinets to ensure confidentiality.

11. Where will the data be kept throughout the course of the study? What provisions will be taken to keep it confidential or safe?

The hard copies of the data will be kept in the office of Dr. Brenda Lackey. Dr. Lackey's office door is locked at all times when she is not present. Electronic copies of the data will be kept on the computer of Ginamaria Javurek. The computer is locked and only Ms. Javurek can access its contents.

12. Describe the intended use of the data by yourself and others.

The data will be used to develop a visitor experience plan that will assist Schmeeckle Reserve by enhancing and improving the existing Wisconsin Conservation Hall of Fame.

13. Will the results of the study be published or presented in a public or professional setting?
    Yes **X** No _____
    If yes, what precautions will be taken to protect the identity of your participants? **State whether or not subjects will be identifiable directly or through identifying information linked to the subjects.**

The researchers intend to publish the results of this study in a peer-reviewed journal. All subjects will remain anonymous. Subjects will only be identified by their assigned numbers.

14. State how and where you will store the data upon completion of your study as well as who will have access to it? What will be done with audio/video data upon completion of the study?

Upon completion of the study, all data will be stored in Dr. Brenda Lackey's office. The only people that will have access to the data will be Ginamaria Javurek (lead researcher), Dr. Brenda Lackey (graduate advisor), Jim Buchholz (graduate committee member), Dr. Bob Holsman (graduate committee member) and Dr. Greg Summers (graduate committee member).

A completed protocol must include a copy of the Informed Consent Form or a statement as why individual consent forms will not be used. Revised form: January 2001

(Include this page ONLY if information on this page applies to your project)

15. Please identify personnel assisting in conducting this research project. Include students or others who will be carrying out or directly supervising the carrying out of the research.

    Name: **Ginamaria Javurek**
    Position: **Graduate assistant** Campus Phone: **x4992**
    Campus Address: **Schmeeckle Reserve-2419 North Point Dr.**

    Name: **Dr. Brenda Lackey**
    Position: **Graduate advisor** Campus Phone: **x2076**
    Campus Address: **TNR 182**

    Name: **Jim Buchholz**
    Position: **Assistant Director of Schmeeckle Reserve, Graduate committee member**
    Campus Phone: **x4992**
    Campus Address: **Schmeeckle Reserve-2419 North Point Dr.**

    Name: **Dr. Bob Holsman**
    Position: **Graduate committee member** Campus Phone: **x4546**
    Campus Address: **TNR 346**

    Name: **Dr. Greg Summers**
    Position: **Graduate committee member** Campus Phone: **x4478**
    Campus Address: **CPS 424**

    Please note: Everyone having contact with human subjects must have reviewed the "Guidelines for Human Subject Research" (available at http://www.uwsp.edu/special/irb/start.htm**). The principle investigator assumes responsibility for insuring this requirement has been met.**

16. Complete the section below if you will obtain access to all or some of the subjects through cooperating institutions not under the University of Wisconsin's control. Use the following format for each institution with responsibility for human subjects participating in this activity:

    Not applicable

    Name of official:
    Title: Phone:
    Name and address of institution:

    Subject Status: (wards, residents, employees, patients, etc)
    Number of subjects: Age Range of subjects:

17. If subjects from another institution are involved, and approval was obtained from a legally constituted IRB at that institution, please attach a copy of the approval. (Please note that this does not release you from the obligation to obtain approval from the UWSP IRB for Human Subjects.)

Not applicable

A completed protocol must include a copy of the Informed Consent Form or a statement as why individual consent forms will not be used.

Revised form: January 2001

Informed Consent to Participate in Human Subject Research

Dr. Brenda Lackey, Professor of Environmental Education and Interpretation at the University of Wisconsin-Stevens Point, and her graduate student, Ginamaria Javurek, are conducting a study to evaluate the current Wisconsin Conservation Hall of Fame's effectiveness in interpreting stories of the inductees. We would appreciate your participation in this study, as it will assist us in creating a holistic visitor experience plan that will interpret the story of conservation in Wisconsin.

While this information could be obtained by interviewing you, we feel that the questionnaire is the quickest and easiest method for obtaining this information. We anticipate no risk to you as a result of your participation in this study other than the inconvenience of the time to complete questionnaire.

If you complete this questionnaire, you will receive a 10% discount coupon good for any item in the Schmeeckle Reserve Browse Shop. A long-term benefit of your participation in this study is that the researchers will gain valuable information about visitors' opinions of the current Wisconsin Conservation Hall of Fame exhibition so that in the future the exhibit design will be more effective.

The information that you provide will be recorded in anonymous form. We will not release information that could identify you. All completed surveys will be kept in a locked file cabinet in the office of Dr. Brenda Lackey and will not be available to anyone not directly involved in the study.

If you want to withdraw from the study at any time, you may do so without penalty. The information contained about you up to that point would be destroyed.

Once the study is completed, we would be glad to give you the results. In the meantime, if you have any questions, please ask us or contact:

Ginamaria Javurek
Schmeeckle Reserve Visitor Center
University of Wisconsin-Stevens Point
Stevens Point, WI 54481 (715) 346-4992

If you have any complaints about your treatment as a participant in this

study, please call or write:

Dr. Jason Davis, Chair
Institutional Review Board for the Protection of Human Subjects
Department of Business & Economics
University of Wisconsin-Stevens Point
Stevens Point, WI 54481
(715) 346-4598

Although Dr. Davis will ask your name, all complaints are kept in confidence.

Your completion and submission of this questionnaire to the researchers represents your consent to serve as a subject in this research.

Appendix F

Conference room organizations

Audubon Society Board
Citizens for a Scenic Wisconsin
Master Woodland Stewards
Public Health SPHERE Lead Group
Retired Natural Resources Conservation Service
Wisconsin Department of Natural Resources-Waste Management Working Group
Wisconsin Department of Natural Resources-Watershed Group
Wisconsin Department of Natural Resources-Watershed Special Projects Working Group
Wisconsin Wildlife Federation Board
UW-Extension

Appendix G

Postcard sent to Schmeeckle Reserve mailing list

Dear Schmeeckle Reserve patron,

We need your help! The Wisconsin Conservation Hall of Fame (WCHF) will be updating its museum to share even more conservation stories with hands-on exhibits.

We invite you to visit the WCHF (located at the Schmeeckle Reserve Visitor Center) sometime during:

April 7th-April 13th, 2008 from 8 am-8 pm

and help us by filling out a 15-20 minute questionnaire after walking through the museum. Just stop by the front desk to pick up a questionnaire.

In appreciation for your time, you will receive a **10% off coupon** for the Schmeeckle Browse Shop.

If you have any questions, please contact Ginamaria Javurek at the phone number or email address listed below.

Thank you very much for your assistance!

Sincerely,

Ginamaria Javurek
Graduate Assistant
(715)346-4992
gjavu971@uwsp.edu

Ron Zimmerman
Director of
Schmeeckle Reserve
(715)346-4992
rzimmerm@uwsp.edu

2419 North Point Drive Stevens Point, WI 54481

Appendix H

Institutional Review Board Protocol and Consent- Phase II

University of Wisconsin-Stevens Point
Institutional Review Board for the Protection of Human Subjects

Protocol for Original Submissions

A complete protocol must be submitted to the IRB for approval prior to the initiation of any investigations involving human subjects or human materials, including studies in the behavioral and social sciences.

If the research does not involve vulnerable subjects such as minors or inmates, send **6 copies** of (1) the completed protocol; (2) project abstract; and (3) samples of informed consent forms to the IRB chairperson. PROTOCOLS LACKING ANY ONE OF THESE THREE ELEMENTS WILL NOT BE APPROVED. In addition, copies of questionnaires or interview questions MUST be attached. If the research does involve subjects that may be considered vulnerable, please send 12 copies.

PLEASE TYPE
Project Title: **An examination of the Wisconsin Conservation Hall of Fame's effectiveness in interpreting stories of inductees**

Principal Investigator: **Ginamaria Javurek**

Department: **College of Natural Resources** Rank: **Graduate assistant**

Campus Mailing Address: **Schmeeckle Reserve-2419 North Point Dr**.

Telephone: **(715) 577-2069** E-mail address: **gjavu971@uwsp.edu**

Faculty Sponsor (if required): **Dr. Brenda Lackey**
(Faculty sponsor required if investigator is below rank of instructor.)

Expected Starting Date: **October 2008** Expected Completion Date: **May 2009**

Are you applying for funding of this research? **Yes**

If yes, what agency? **The UWSP Student Research Fund**

Please indicate the categories of subjects to be included in this project. Please check all that apply.

__X__ Normal adult volunteers	_____ Minors (under 18 years of age)
_____ Incarcerated individuals	_____ Mentally Disabled
__X__ Pregnant women	_____ Other _____(specify)

(**Faculty Member**) I have completed the "Human Subjects Protection Training" (available at http://www.uwsp.edu/special/irb/start.htm) and agree to accept responsibility for conducting or directing this research in accordance with the guidelines.

_____

(Signature of Faculty Member responsible for research)

(**Department Chair or equivalent**) I have reviewed this research proposal and, to the best of my

knowledge, believe that it meets the ethical standards of the discipline.

_____

(Signature of Department Chair or equivalent)

********** **Do not write below this line – for IRB use only**
****

IRB approval_____
Date_____
(Signature of IRB Chair)

Approval for this research expires one year from the above date.
If research is not completed by this date, a request for continuation must be filed and approved before continuing. **Revised form:**
January 2001

Proposal Abstract

Write a brief description of the purpose of the proposed research project. (100-200 words)

The purpose of this study is to evaluate the impacts of multi-sensory methods of delivery for interpreting the stories and lives of Hall of fame inductees, as well as determine whether a person's learning modality type plays a role in their preferred mode of exhibit delivery. The strengths, limitations and effectiveness of the current Wisconsin Conservation Hall of Fame (WCHF) exhibition were determined by gathering opinions from the public using a questionnaire in phase one of this study (IRB approved February 2008). The questionnaire was used to determine the respondents' learning modality type as well. Based on the questionnaire responses, the second phase will involve the fabrication of four exhibit prototypes about a WCHF inductee (interpretive sign, audio clips, movie, and interactive exhibit). The prototypes will be shown to people that volunteered to participate on their questionnaire. Each person will be shown the prototypes and personally interviewed after each prototype regarding what they learned, felt and gained from the exhibit.

Please complete the following questions for all research.

4. Describe the characteristics of the subjects, including gender, age ranges, ethnic background, health/treatment status and approximate number.

The subjects will be from a subgroup that is self-selected from phase one of this study. In phase one three groups of respondents particpated. The first group was made up of 117 members of various organizations from around Wisconsin that used the conference room at Schmeeckle Reserve during March and April of 2008. The second group was 83 individuals that were part of the Schmeeckle Reserve mailing list or participated in a UWSP Schmeeckle Practicum program and are generally community members of the Stevens Point area. The third group was made up of 111 UWSP students in the Natural Resources 369-Interpretive Media and Design class, the History 366-Environmental history class and the Natural Resources 150-People, Resources and the Biosphere class. Individual respondents indicated in phase one whether they would be willing to participate in phase two. Approximately 30 respondents will participate in this part of the study. The subjects will be predominantly Caucasian, between 20 and 75 years of age and both genders will be included.

5. Indicate how and where your subjects will be obtained. Describe the method you will use to contact subjects.

The subjects volunteered to participate in the prototype evaluation during the first phase of this project. They gave their contact information on the questionnaire that they completed. They will be contacted via phone or email.

6. What are you going to ask your subjects to do (be explicit) and where will your interaction with the subjects take place?

The subjects will be asked to view and interact with the four exhibit prototypes. After each exhibit they will be personally interviewed.

4. Will deception be used in gathering data? Yes _____ No X_____
If yes, describe and justify.

5. Are there any risks to subjects? Yes _____ No X_____
If yes, describe the risks (consider physical, psychological, social, economic, and legal risks) and include this
description on the informed consent form.

6. What safeguards will be provided for subjects in case of harm or distress? (Examples of safeguards

include having a counselor/therapist on call, an emergency plan in place for seeking medical assistance, assuring editorial rights to data prior to publication or release where appropriate.)
The researchers have identified no apparent need for safeguards in this research.

7. What are the benefits of participation/involvement in this research to subjects? (Examples include obtaining knowledge of discipline, experiencing research in a discipline, obtaining course credit, getting paid, or contributing to general welfare/knowledge.) Be sure to include this description on the informed consent form.

The benefits of participating in this research are the subjects will gain knowledge of Wisconsin conservation history, as well as contribute to the general knowledge about the connections made between visitors and exhibits.

8. Will this research involve conducting surveys or interviews? Yes ——X—— No ——
If yes, please attach copies of all instruments or include a list of interview questions.

A sample of the personal interview questions is attached

18. If electronic equipment is used with subjects, it is the investigator's responsibility to determine that it is safe, either by virtue of his or her own experience or through consultation with qualified technical personnel. The investigator is further responsible for carrying out continuing safety checks, as appropriate, during the course of the research. If electronic equipment is used, have appropriate measures been taken to ensure safety? Yes No **Not applicable X**

19. During this research, what precautions will be taken to protect the identity of subjects and the confidentiality of the data?

Each subject will be assigned a number so that interview questions will be entered anonymously into the data set. All data will be stored in locked computers and file cabinets to ensure confidentiality.

20. Where will the data be kept throughout the course of the study? What provisions will be taken to keep it confidential or safe?

The hard copies of the data will be kept in the office of Dr. Brenda Lackey. Dr. Lackey's office door is locked at all times when she is not present. Electronic copies of the data will be kept on the computer of Ginamaria Javurek. The computer is locked and only Ms. Javurek can access its contents.

21. Describe the intended use of the data by yourself and others.

The data will be used to determine whether a person's learning modality type plays a role in their preferred exhibit delivery.

22. Will the results of the study be published or presented in a public or professional setting?
Yes ___X___ No _____
If yes, what precautions will be taken to protect the identity of your participants? **State whether or not subjects will be identifiable directly or through identifying information linked to the subjects.**

The researchers intend to publish the results of this study in a peer-reviewed journal. All subjects will remain anonymous. Subjects will only be identified by their assigned numbers.

23. State how and where you will store the data upon completion of your study as well as who will have access to it? What will be done with audio/video data upon completion of the study?

Upon completion of the study, all data will be stored in Dr. Brenda Lackey's office. The only people that will have access to the data will be Ginamaria Javurek (lead researcher), Dr. Brenda Lackey (graduate advisor), Jim Buchholz (graduate committee member), Dr. Bob Holsman (graduate committee member) and Dr. Greg Summers (graduate committee member).

A completed protocol must include a copy of the Informed Consent Form or a statement as why individual consent forms will not be used. Revised form: January 2001

(Include this page ONLY if information on this page applies to your project)

24. Please identify personnel assisting in conducting this research project. Include students or others who will be carrying out or directly supervising the carrying out of the research.

    Name: **Ginamaria Javurek**
    Position: **Graduate assistant** Campus Phone: **x4992**
    Campus Address: **Schmeeckle Reserve-2419 North Point Dr.**

    Name: **Dr. Brenda Lackey**
    Position: **Graduate advisor** Campus Phone: **x2076**
    Campus Address: **TNR 182**

    Name: **Jim Buchholz**
    Position: **Assistant Director of Schmeeckle Reserve, Graduate committee member**
    Campus Phone: **x4992**
    Campus Address: **Schmeeckle Reserve-2419 North Point Dr.**

    Name: **Dr. Bob Holsman**
    Position: **Graduate committee member** Campus Phone: **x4546**
    Campus Address: **TNR 346**

    Name: **Dr. Greg Summers**
    Position: **Graduate committee member** Campus Phone: **x4478**
    Campus Address: **CPS 424**

    Please note: Everyone having contact with human subjects must have reviewed the "Guidelines for Human Subject Research" (available at http://www.uwsp.edu/special/irb/start.htm**). The principle investigator assumes responsibility for insuring this requirement has been met.**

25. Complete the section below if you will obtain access to all or some of the subjects through cooperating institutions not under the University of Wisconsin's control. Use the following format for each institution with responsibility for human subjects participating in this activity:

    Not applicable

    Name of official:
    Title: Phone:
    Name and address of institution:

    Subject Status: (wards, residents, employees, patients, etc)
    Number of subjects: Age Range of subjects:

26. If subjects from another institution are involved, and approval was obtained from a legally constituted IRB at that institution, please attach a copy of the approval. (Please note that this does not release you from the obligation to obtain approval from the UWSP IRB for Human Subjects.)

Not applicable

A completed protocol must include a copy of the Informed Consent Form or a statement as why individual consent forms will not be used.

Revised form: January 2001

Informed Consent to Participate in Human Subject Research

Dr. Brenda Lackey, Professor of Environmental Education and Interpretation at the University of Wisconsin-Stevens Point, and her graduate student, Ginamaria Javurek, are conducting a study to evaluate the current Wisconsin Conservation Hall of Fame's effectiveness in interpreting stories of the inductees. We would appreciate your participation in this study, as it will assist us in creating a holistic visitor experience plan that will interpret the story of conservation in Wisconsin.

We anticipate no risk to you as a result of your participation in this study other than the inconvenience of the time to complete the personal interviews and prototype evaluations.

A long-term benefit of your participation in this study is that the researchers will gain valuable information about visitors' opinions of the current Wisconsin Conservation Hall of Fame exhibition so that in the future the exhibit design will be more effective.

The information that you provide will be recorded in anonymous form. We will not release information that could identify you. All completed interviews will be kept in a locked file cabinet in the office of Dr. Brenda Lackey and will not be available to anyone not directly involved in the study.

If you want to withdraw from the study at any time, you may do so without penalty. The information contained about you up to that point would be destroyed.

Once the study is completed, we would be glad to give you the results. In the meantime, if you have any questions, please ask us or contact:

Ginamaria Javurek
Schmeeckle Reserve Visitor Center
University of Wisconsin-Stevens Point
Stevens Point, WI 54481 (715) 346-4992

If you have any complaints about your treatment as a participant in this study, please call or write:

Dr. Jason Davis, Chair
Institutional Review Board for the Protection of Human Subjects

Department of Business & Economics
University of Wisconsin-Stevens Point
Stevens Point, WI 54481
(715) 346-4598

Although Dr. Davis will ask your name, all complaints are kept in confidence.

Your completion and submission of this questionnaire to the researchers represents your consent to serve as a subject in this research.

Appendix I

Visual exhibit prototype (interpretive sign panel)

Appendix J

Auditory exhibit prototype script

George Archibald said, "I'm most proud of having help create the International Crane Foundation. Because year in we have thousands of people supporting the cause, dozens of people working for the cause that will go on and on, long beyond my life and that's definitely something that brings me the greatest hope for the future."

"The cranes are really the ambassadors for international goodwill because they move; they don't see national boundaries, international boundaries. And just like the cranes we have to move with them and meet the people in these different countries and then get them talking together. So the cranes really necessitate that kind of interaction. A very important cultural significance, I should say from India and East. When you come into the Islamic world the connection to wildlife is not nearly as strong and that's where we've had so many problems with hunting. We've lost our Siberian crane population that went to India and went to Iran, likely because of hunting, so in that area they're not very important. But in the Orient in particular, they're symbols of good luck and long life. In Tibet and India, if cranes come on their land then people feel that their land is blessed. In Russia, the local indigenous people feel that the crane represents good overcoming the forces of evil, the ying and the yang, and the crane represents the spiritual entity that overcomes the forces of darkness. In Africa the crane is not as important to the people, it's just one of the many animals in the environment. But in South Africa, Nigeria and Uganda it's the national bird. In North America the Whooping crane is really a symbol of survival, coming back from just 15 individuals in 1940 and they're sort of a household bird that's metaphorical to success in conservation. And of course there are no cranes in South America."

"There are three vital ingredients for conservation. The first is you have to listen to the local people. You have to understand what their problems are and you have to try and help them. And second thing, among those local people you have to look for leaders, people that would benefit from training and become effective conservationists. And then when you have the sympathy of the local people and you have some infrastructure, people that are going to continue, you can approach the conservation of biodiversity, conserving the wetlands and so on. At first we were more interested in the cranes, the local people were the second interest, but step-by-step we've learned that we have to hear the people because conservation is a people problem. The cranes would be just fine if you left them along, so to solve it you've got to work with the local people."

"The destiny of many things are determined by humans, and human values, what's important to people determine policies. And that's why it's very, very important to educate people about the environment, to know how fragile it is and to know the effects of our behavior. Unless the population is supportive of conservation, ultimately it will not succeed, and we are certainly not the first to do this. Here in Wisconsin we have such an incredible array of conservationists through its history. John Muir the founder of the national parks was raised in Wisconsin, Aldo Leopold did most of his adult, professional work in Wisconsin, Georgia O'Keefe a famous artist was from Wisconsin and Frank Lloyd Wright, leader in architecture was from Wisconsin. He wanted to make buildings compliment rather than dominate landscapes. All of these things blended

together to give Wisconsin very, very strong conservation values, and we feel very blessed to be in such a hotbed of environmentalism. And from here our work radiates out all over the world, when we bring our foreign colleagues here we show them a lot of the great things that have happened in Wisconsin through these great heroes of conservation and many more."

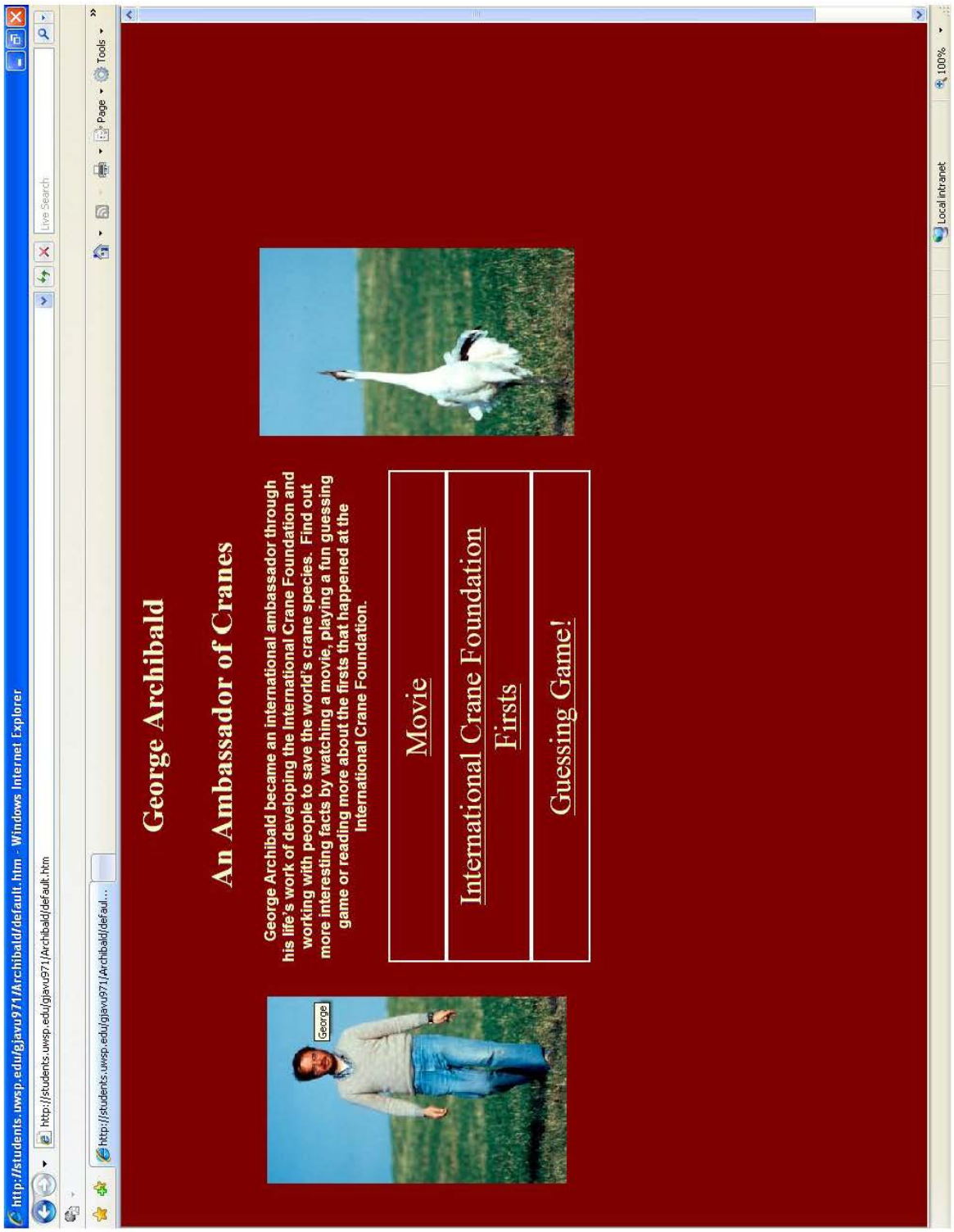
"So education is absolutely a vital ingredient for conservation because conservation is a people problem, so we have to correct human behavior in order to be affective conservationists. People will only care about something if they know about it."

Appendix K

Kinesthetic exhibit prototype (Hands-on exhibit)

Appendix L

Multi-modal exhibit prototype (Interactive website)



Home page

Movie about George Archibald

ICF First Home pages

ICF "Firsts" page

ICF "Firsts" page

ICF "Firsts" page

ICF "Firsts" page

ICF "Firsts" page

ICF "Firsts" page

ICF "Firsts" page

ICF "Firsts" page

ICF "Firsts" page

Guessing Game home page

Guessing game question 1

Guessing game question 2

Guessing game question 3

Guessing game question 4

Guessing game question 5

Guessing game question 6

Guessing game question 7

Guessing game question 8

Guessing game question 9

Appendix M

Phase II Interview questions

1. Did you know who WCHF inductee George Archibald was before today? (only after first prototype)
   ___ Yes ___ No

2. How much did you enjoy the exhibit?

   1 2 3 4 5 6 7 8 9 10

   Did Not Enjoy at All — Enjoyed Somewhat — Enjoyed A lot

3. Describe what you enjoyed about the exhibit.
4. How much did you learn from the exhibit?

   1 2 3 4 5 6 7 8 9 10

   Learned Nothing at All — Learned Somewhat — Learned A lot

5. Describe the new information that you learned.
6. What was your favorite part of the exhibit and why?
7. How do you feel about the WCHF inductee?
8. How interested in the inductee are you after viewing the exhibit?

   1 2 3 4 5 6 7 8 9 10

   Not Interested at All — Somewhat Interested — Very Interested

9. What would you change about the exhibit?

Additional questions after the last exhibit prototype

10. What was your favorite exhibit overall
11. Why was it your favorite?
12. What was your least favorite exhibit overall?
13. Why was it your least favorite?
14. What other types of exhibits would you like to see in the WCHF?

Appendix N

Interview responses from Phase II

Describe what you enjoyed about the visual exhibit.

Informational (6)

It was informative. Good job of showing the broad extent across the many countries and the many different ways that George interacted with various countries and people, it showed the depth of international work.-1

I liked the historical continuum of all that has transpired over the years. This individual, George Archibald has had tremendous influence across the world and I'm always amazed by people who have such an impact wherever they go. I liked the stories, the little chick hatching in the suitcase, it must have been a great time for that to happen. Just seeing that it was a vision of somebody and that it happened, seeing what is going on now with the cranes being more stable and the environment being preserved and enhanced.-2

I liked how it was informational and it got to the point and it wasn't long and drawn out. It was the right amount of information that your brain can handle when you're looking at an exhibit.-3

All of the different areas that Archibald was involved with. I didn't realize that ICF was world-wide and involved in a lot of aspects around the world, a lot of other countries.-7

It was very informative. I liked the fact that cranes are all over the world, except in Greenland and South America. -12

Very informational. Pretty decent visual. The world laid out. The information pieces were pretty good, maybe a little long in some places. Can browse through them quickly.-13

Visuals (8)

The flow as far as from the beginning to present time.-4

It seemed to proceed in a logical manner from left to right. The narrative part with the picture located the country on the map, so that there was a connection between the activity and the location.-8

I enjoyed the exhibit a lot. I really liked the red and ivory together, it was very catching to me. The bubbles going to the countries was excellent. I liked the wording, where it was and what they were doing there. There was great detail without being too wordy.-9

Visually appealing. Good color pattern that drew me in. I liked the big map in it, the map actually drew me in more than anything. It was more than just dialogue about a person and you could see where he's been, I liked that.-10

The information, the colors, the map and the pictures.-14

The images of George Archibald on the left and the crane on the right side looked like they jumped off the page. It was real clean looking. If you didn't have a lot of time, you could still get a lot out of it by skimming. The colors.-15

I liked how you incorporated all of the different countries that he went, set up very straight forward. I liked the color use, it all fits well together. I liked all of the pictures of Archibald and the people he worked with, good information.-18

It was very informative. I liked how you took the bubbles and then pointed out where in the world it was happening, made it easier to see.-19

Crane species distribution (5)

How it covered the distribution and species of cranes. How active the crane foundation is around the world.-5

I didn't realize that South America didn't have cranes. It didn't surprise me that Greenland didn't, but South America surprised me. The variety of cranes in different parts of the world, the wintering grounds in Korea.-6
I was interested in the fact that the crane projects are scattered all around the world and focus on limited species. Since I spent time in Vietnam I was interested in the Sarus cranes, although I don't remember seeing them.-11
Quite taken that there are a lot of cranes in Africa and the Far East. All of the different kinds.-16
Just raising awareness of the different crane species in the world, what is being done to preserve these crane species. It would be nice if there were more explanations of how the species are in trouble and more pictures of the cranes throughout the world.-17

Describe what you enjoyed about the audio exhibit.

Hearing George (10)

I enjoyed hearing George's voice describing what was going on, that was the best part of it.-1
I liked how he talked about his own shift in thinking about what is necessary to preserve the cranes, which it's not about dealing with the animals but that you have to work with the people, understand the people and educate the people. That it's a people problem not an animal problem and I thought he did a nice job since he's obviously dealt with a lot of cultures through his work. He was very non-judgmental, he was just stating matter of factly this is how it is.-2
It was nice to actually hear him talk about it and see his point of view.-3
I enjoyed listening to the real person. I liked the explanations of how environmentalism and conservation started out. It was a little long but very informational. I didn't mind listening to it all because I'm interested but I think some people would have drifted off after 4 minutes or so.-6
Archibald talks with passion, he talks about things that I'm interested in. He talked about how cranes cross our human boundaries and international lines, and about their roles in a human dominated world. He talked about Wisconsin conservationists that I was familiar with and that familiarity helped me to connect.-9
I think he had some good points. It was nice after seeing an image of him in the last exhibit, to put a voice with a face.-10
I enjoyed hearing his opinion on how the cranes are ambassadors of good will in some countries and that some countries recognize them as state bird or as symbols of prosperity and peace. Also how some countries are infringing on their populations. The one comment that caught me, he mentions how you go about getting the sympathy of the people, the locals and the leadership.-11
I liked hearing the actual person and hear them talk about why it's important to them and the things they learned in the process.-12
I got a good feel for his personality and his wisdom. I liked the very distant sound of cranes in the background. His manner of speaking was very slow and deliberate, really easy to understand. Sounds like the kind of guy I'd like to meet.-15
The birds in the background. George's voice is very calming and it's very instrumental and informative. He comes down to a level that the average person can understand.-14

Information presented (8)

Just how the respect of the crane around the world relative to each region.-4
I liked the fact that the foundation was initiated in Wisconsin and how they take in the whole world and look at the big picture.-5
The things that he talked about, it was rather informative. Especially when he talks about all the Wisconsinites that were involved in conservation. Conservation is really about changing people's perceptions of the environment.-7

The subject matter was interesting as I got into it. Inclusion of the interviewer asking the questions might have helped me more to follow better.-8

I'm an audio person, a combo of the visual and audio would have been nice. It adds some personality because of the voice, it seemed more personable, much more real. -13

I enjoyed finding out more about the cranes. The fact that the Far East and Tibet is the largest concentration, that there are none in South America. Education to conservation is so important to get people to know about cranes, what we can do in our communities and areas to help support the cranes and conservation.-16

I enjoyed how he explained how they identified that they initially thought they only had to work with cranes to save the species, but that they learned they had to work with the local people, that conservation is a people problem and you'll have to change people's ideas to save the species.-17

I really liked the crane noises in the background. It was a really powerful speech. I liked when he talked about cultures interacting with the animals, the importance of the cranes symbolically. It was a very hopeful message of how people in Wisconsin have had a passion for conservation.-18

I liked the interview, he had a lot of good things to say. But depending on where this exhibit would be it might seem too lecturey.-19

<u>Describe what you enjoyed about the multi-modality exhibit</u>.

Interactive and multi-sensory (7)

One always likes watching videos, as well as the information. The questions at the end were interesting.-7

Very active. There was a change in the picture about every three seconds which was good. It was either a flowing picture or a change in the still picture, good narration explaining everything. It was very professionally done and it held my attention. -8

I liked all of the pictures and the sounds, seeing the Siberian cranes calling. I also enjoyed seeing the face to face interview with George Archibald because he talks with such passion and conviction. He gave me the feeling that what he was saying was so important.-9

The video because you see the cranes and watch him interact with them. I liked some of the "Firsts", about Pookie and the lamps they used. It was interesting to learn about the migration and feeding them.-12

Mainly the movie. The fun facts provided more insight into the different crane species.-17

I liked that it involved a lot of different medias, like the video. I liked how it was interactive, the little questions. I liked the set-up with the pictures of the crane and also how the colors were coordinated with the poster-18

How interactive it was, how I could look at what I wanted and do what I wanted with it.-19

Movie/Visuals (5)

The movie was fantastic, it was emotional. To be able to see the actual birds was fantastic, because that's what he did, and in education that's so important. -10

Learning more about some of the activities of the crane foundation over the years. -11

The movie catches your attention, it gives hearing, speaking and pictures. Can tie everything together.-13

The movie was nice because it gave a feel for George Archibald and some of the images of the cranes themselves.-15

I liked the visuals, obviously the color. What stood out was you actually saw the birds that he was working with.-1

Informational (7)

It was very uplifting and a gratifying piece of the story.-2

I liked how they gave a short background of him.-3
It was very informative, as far as how it started and how it progressed.-4
It was quite informational and gave a good background on the International Crane Society. It was quite impressive how they started the foundation. The Siberian crane endangered. Tex came up again, although I wasn't sure if she came from Germany or if that was a different crane.-5
Quite a variety. Lots of information and good information. The 15 species of cranes and I started thinking about having seen three of them in the wild.-6
Learning more about George's work-14
Learning about how the foundation was started and how it's gone in the last 30 years.-16

Describe what you enjoyed about the kinesthetic exhibit.

Crane costume (14)

Fun. Used the head to try and feed the chick. Tried some of the food, but I'm surviving it. Interesting to see the leg of the crane.-1
It gave me appreciation of what is involved in caring for the infant cranes, it took me quite a few tries to get the food in the beak thing, obviously you have to be very, very patient. I probably wouldn't be the right person to feed baby cranes.-2
It was interactive, you could touch and feel, feed the chick.-3
I wasn't going to try on the costume and then I thought, nah, I'm going to try it on since I've always wanted to. And then I thought, now I've tried a real one one.-6
The costume and how it worked was interesting, I always wondered and now I know.-7
Initially I wasn't super excited about exploring, but when I put on the costume and tried it out I came away with an appreciation of what people do so the birds don't imprint and survive. Grade school kids and high school kids might enjoy it. Having them touch would help them to remember.-8
I loved that you had the costume, it was excellent. I didn't actually put the costume on, except for the head, but I did look through the face part. I laughed out loud as I tried to pick up the crane chow and almost spilled it all over. I found out how difficult it was to actually pick up food, so I did enjoy that.-9
I liked feeding the chick, that was cool. Just seeing the size of the leg.-10
What they feed on and the egg.-11
The crane outfit, especially for kids. -12
See the crane costume and the crane leg.-13
I tried on the suit, so I got a feel for what it's like and how important it is to disguised oneself so as not to have imprinting problem.-15
Just seeing the costume that people wear in order to feed and rear cranes.-17
I liked how it was so hands-on, could feel a lot of stuff and play with the costume to feed the chicks. -28

Crane parts (8)

The feathers.-4
Seeing the egg and the, it didn't say what kind of a leg it was. It was informational to see the detail of the food and the foot.-5
The individual pieces.-6
The fact that you had part of the bird. It's hands on and you can touch.-14
The leg of the crane, just getting a sense for what they're built like and size. The size of the claw is pretty amazing. -15
I liked seeing the different foods that cranes eat. I didn't put the suit on, but I did see now what it's like. The egg was interesting, it was smaller than I thought it would be.-16
Seeing the crane leg for some reason.-18

How hands on it was. It would be good for kids.-19

Describe the new information that you learned from the visual exhibit.

Archibald & ICF work around the world (18)

He and Ron Sauey went to Cornell. Work done in Korea in DMZ. Youth groups in Bhutan-1

I learned George Archibald founded the International Crane Foundation. Went to Baraboo. There's 12 or 13 crane species. He's working with all of these different countries to protect marshes, estuaries, rivers where some of these endangered cranes overwinter. -3

The white-naped crane was found in the DMZ in Korea, that was quite interesting. There's 15 species of cranes.-5

The distribution of cranes, I knew a little bit, but it was a nice visual to see the whole world and see where the different species of cranes are. I've only seen the ones that we have here, except for sometimes seeing others in the zoo.-6

Didn't realize they were all over the world.-7

The involvement in the south east part of the world. I didn't know there was activity in the DMZ.-8

I didn't know that there weren't any cranes in South America, I wouldn't have even guessed that. It also left me with some questions which is a sign of a good exhibit.-9

Who exactly George Archibald was. The part about the volunteers working to fund-raise. I think Africa contains the most crane species.-10

Cranes are scattered all around the world. That we had professors in the area start a movement that has now carried on to this day.-11

I didn't know that it was set up in Baraboo, WI. I didn't know they had projects everywhere. -12

15 species of cranes. The different countries they came from. The cooperation and how ICF got started and what they do.-13

I learned there are 15 species of cranes and they're in 37 countries. That George started ICF and that he has gone to several different countries to make other places for cranes.-14

That the international crane foundation had been around for that long. I didn't realize how many countries around the world that they're involved in, and how huge of a career commitment George Archibald has made. The names of other crane species, I didn't know how many species there were.-15

The various types of cranes in Japan.-16

ICF is working on a global scale, didn't realize that they were working on so many species across the globe.-17

Didn't realize there were that many cranes around, and there were so many people in various countries that are involved. Neat to see.-18

I didn't realize the crane foundation did so many things around the world, just thought they did stuff in the US.-19

All of it. What's going on around the world is all new, so it was good.-2

Describe the new information that you learned from the audio exhibit.

Cranes in culture (9)

In talking about how the different cultures perceive the crane, in some cultures it's food or they hunt it and that's all, it's just another animal. But in others your house is blessed or your property is blessed by having them land on it, it's got spiritual meanings. That was interesting learning about the other cultures. Asian cultures show how predominant it is there. But it was interesting learning about the crane populations in Iran and in the Middle East are not there because of the hunting.-2

The respect that the crane has relative to each region and the lack of respect that it has in other regions.-4

Some of the people he mentioned and then him talking about the different cultures of the world. I knew that eastern cultures revered cranes and Middle east basically almost exterminated theirs. I didn't know that three African nations had it as their national bird, that was kind of cool.-7
The one thing that struck me was that he mentioned the Islamic world and the lack of interest in the preservation or conservation of this species. He also mentioned African countries where the crane is the national symbol and in Russia the bird is looked upon positively was well.-8
How cranes are perceived, in India they're special if they're on your land, in Africa they're just another animal on your land, and in South Africa they're the national bird.-9
The symbolism of cranes to different cultures. Whether the conservationists just want to focus on the resource they want to save is then juxtapositioned against the culture where it's found.-12
The symbolism of cranes to different cultures.-12
Different cultures views of cranes.-17
In Asia the cranes kind of symbolize the yin and the yang. -18
How conservation is a people effort and how we have to get along with different countries of the world in order to benefit the cranes.-19

Conservation steps (5)

His philosophy of how you go to an area and actually protect cranes in an area, the actual steps.-1
The development of leaders in other countries, that we as people have to take the lead in conservation because the animals can't do that themselves since the problems come from us. It was good reinforcement.-6
Whether the conservationists just want to focus on the resource they want to save is then juxtapositioned against the culture where it's found.-12
The relationship with the cranes and people. I learned that some of the famous people were associated with Wisconsin and conservation.-14
He really stressed how his work has graduated from being all about cranes to being about the people, so that's something that I wouldn't have guessed. So many people are focused on particular species, and that's all they care about, it's obvious that he knows if he really cares about the wildlife species then he has to work with the people to preserve the species.-15

No cranes in South America (4)

The cranes are hunted in the Middle East. That there's no cranes in South America. -5
No crane species in South America.-10
Would never have guessed that there were no cranes in South America. -15
He told me that there aren't any cranes in South America.-9

Wisconsin's conservation role (3)

I'd have to question why Frank Lloyd Wright was included in the group from Wisconsin, other than that he was a famous.-5
Georgia O'Keefe was from Wisconsin.
He reinforced the Wisconsin conservation history.-11

Other

I kind of, well he was just generally speaking and I didn't learn anything new.-3

Describe the new information that you learned from the multi-modality exhibit.

George Archibald& ICF history (11)

That George Archibald and his partner got the farm for a dollar a year. That the farm has stayed the crane foundation ever since. That they have every species of crane, fifteen species.-16

More history behind George Archibald, it seemed to expand on what I learned in the first two exhibits.-17

Watching him in the movie interactive with the bird and the little birdies, seeing the plane that they took for the migration. It was interesting about the floodlights and mimicking their breeding grounds. How he talked about the cranes being ambassadors.-18

That people weren't surprised by the career path that he took, he was an environmentalist from since he was a toddler.-3

I've probably heard it before but the reiteration of how it started and how it came about. Them creating and getting all 15 birds.-4

The Indianapolis Award that he received. The Siberian crane is the most endangered. The fact that the land ICF was on cost one dollar.-8

The different foundations that he's set up to bring together other countries and flyways. The success that they've had on breeding captive populations and individuals.-13

The name Tex, the crane that he was helping.-14

The land they used in Baraboo was rented from his partner's parents for a dollar a year. The fact that they have all 15 crane species, I didn't realize that-7

I learned that when he was a boy that he imprinted on the ducks in the farmyard, which is hilarious. It was very cute and memorable to me. I learned a little more of the details, who imprinted on him, him telling the stories and being conversational about it, made me learn.-9

Seeing the cranes and the beginning of the crane foundation, that was interesting that his friend's family, it was interesting to know how it ended up in Baraboo. It's interesting how things happen just because of one little circumstance, it's just weird.-1

Siberian crane (4)

Didn't know that the Siberian crane had to go through 11 countries which is one of the dangers.-1

15 crane species, 11 endangered. 1970 ICF was founded in Baraboo, rented it for a dollar. The Siberian crane is the most endangered, I thought it was a Whooping crane.-10

Siberian crane is the most endangered. A little more about crane species.-11

The Siberian crane is the most endangered. 11 out of 15 species endangered overall.

The Siberian crane is the rarest.-15

Crane rearing techniques (3)

The use of floodlights to change the crane's breeding behavior and the Brolga crane using the hoses.-1

Particularities of them trying to rehabilitate and the things that they do to increase the populations.-12

Different ways of how they went about procuring the cranes and getting them to reproduce.-19

Other (3)

I don't know, I learned a lot, trust me.-2
I'd repeat it again just to pick up bits and pieces. I liked the quiz.-6
It pushed me a little bit more because of the quiz, I got them all right. It was a little bit of informational overload for me, it was hard after reading all of the "Firsts". I learned that there are 15 species of cranes. -15

Describe the new information that you learned.from the kinesthetic exhibit.

Size of items (8)

I didn't realize their eggs were so big-3
It was nice to hold the egg to learn about the size. The transmitter, it was heavier than I thought, I thought it would be lighter.-6
Not much. Just realizing how heavy the transmitter was and what it looked like. The length of the crane leg was cool in comparison.-10
A feel for the size of the animal from the leg and the egg.-15
The size of the egg. The size of the leg was interesting.-16
That the cranes were that tall, based on the leg. The transmitter size.-12
I had no idea that the femur was so long, it left me with more questions. I didn't remember ever seeing how big a crane egg was and it's coloration for camouflage.-9
Neat to see the egg replica and get a good idea of the size, just like the leg.-18

Food items (7)

Eat blue crabs. Good exhibit for kids because it would get them involved and teach them alot.-1
The blue crab is really big and mice, I didn't think a crane would eat them. I suppose they find mice in the cornfields, so getting an appreciation for what they eat and the range of size.-2
and I learned the wider variety of food that they ate.-3
The color of the whooping crane egg. I didn't realize that they were that into crabs, I thought they were more into bugs and cranes.-5
They eat crabs. The egg was heavy. I didn't realize that they ate all of that stuff.-7
The intricacy of the leg. The different food species and the costume used to imprint.
The blue crab, crayfish and mice are food items-11
What the cranes ate.-14
The various different foods that they eat. -16

Costume (4)

When you actually put it on and can't see through the screen and it's hot and you're using this claw thing and trying to get it into this tiny little baby to keep it alive, there's no better way to learn the whole process. -2
When you see people wearing it and then you put it on it makes you think.-8
How the mouth works on the crane costume and the size of a crane egg.-13
Seeing the costume that they would wear.-19

Thesis quote

*Something about holding, touching and seeing everything will help me remember.-18

Didn't learn anything (2)

Didn't learn anything new.-17
I knew a lot of the information already.-4

What was your favorite part of the visual exhibit and why?

Photographs (5)

Photographs were very important. It really adds a personal touch, or a human touch to the issue in that the conservation efforts are always related to the animals, but without the immense human support it wouldn't work.-1

The first picture explaining Archibald & Sauey because it gave them a background of them coming from Cornell which is a prestigious bird university.-8

I think, one of my favorite parts was just seeing the large picture of Archibald sitting with his boots and his binoculars, the expression on his face was just like, this is what I like to do.-9

The visuals in the pictures.-13

Pictures. Because I'm a photographer and that's what I do.-14

Just bringing out that continuum of a person's vision and where it started and where it is today, and all the ways that it's traveled in between.-2

Map of crane world (8)

Just actually seeing where they are in the world since there aren't many places where they're not-3

The impact of knowing that there are no cranes in South America. I wonder why since the habitat seems like it would be good, why don't they migrate down there?-6

That's a hard one. The fact that it showed the whole world and had the countries highlighted that had cranes and those that don't.-7

The map, seeing it draws me in and it helps break apart the information.-10

I liked how you pointed out where in the world the different spots were, so that you knew it was right there.-18

Pointed things out, could visualize where things were happening around the world.-19

The different types of cranes and that they're pretty much across the world.-16

Seeing where different species of cranes are in the world. The work that people are putting into preserving these species.-17

Layout (4)

Just the overall layout of it.-4

I liked the overall idea of putting the ideas together on one board. It was quite interesting.-5

A lot of information in a relatively small amount of space, and yet still very clean looking.-15

Information (2)

Reading more about the cranes in general. Interesting that there aren't any cranes in South America.-11

The information, since most of it I didn't know.-12

What was your favorite part of the audioexhibit and why?

What he said (8)

The part where he talked about how he went to a place and initially thought only about an animal, but then as they learned quickly you have to learn about the people and their needs. And then find leaders and work with those leaders to compliment the animals needs.-1

I liked when he was talking about all of the environmentalists that came from Wisconsin and it made me happy and proud to have come from this flat state.-3

It was all interesting. When he talks about Wisconsin, being a Wisconsinite, it really showed how many people in the conservation world came from here.-7

The statement that he made about how the birds don't know human boundaries and it is a way to get different groups of people communicating by using a species that most people care about and see as important, it can tie people together. It was powerful.-9

Discussion of how different cultures adhere to different species and how the species cross country borders without caring or worrying about the culture of the country.-11

How he talked about Wisconsin's long conservation history-George O'Keefe, Frank Lloyd Wright-12

Just the knowledge of finding out where cranes are or aren't.-16

Learning about how groups are finally grasping the concept that we need to work and educate people in order to help wildlife.-17

Listening to the person (7)

Just listening to him. Listening to the real person tell and his thinking of what he's learned and what he's implementing, the life experience that he has had.-2

Just listening to him talk about his life and the countries he has visited. The different types of cultures and barriers. I enjoyed hearing about the Middle East and their differences of viewpoints in conservation and they don't value the animals as much as they do in other countries, the fact that three countries in Africa have the crane as their national bird.-6

It was putting the voice with a face, made it more personal and more real. He spoke about the key concepts of conservation and working with other countries, I liked that part.-10

The voice. The background cranes were a nice touch, but the voice made me feel like I was just sitting and talking to him.-13

The information and he's got a very soothing voice to listen to. It was a really good message.-18

Him speaking because he is a very good speaker. How he phrased things and what he was saying.-19

Easy to understand his manner of speaking, he speaks in layman's terms. You can tell he's a people person. That also makes me understand why he's been so successful at what he does.-15

Other (4)

What I learned-4

The, overall it was quite well done.-5

No favorite part as it was just a bland recording. It needed to be categorized or put into some sort of package.-8

The sounds. How you presented it made it seem like you were outside.-14

What was your favorite part of the multi-modality exhibit and why?

Movie (10)

Movie. Got to see George and the animals. Lots of facts-1

I liked the movie, why because it kind of reiterated what I have learned and read before.-3

The movie part.-4

The movie by far, just to see him interacting with the cranes and explaining why he does what he does. It was the best and made you want to listen more to find out what else he was going to say.-10
The video, although I liked some of the random facts. Humor was included, but they were educational too.-12
The movie. It's easy to sit back, but it also connects the picture with the individual voice.-13
The movie was the easiest because it was more passive. You just basically watched something, I kind of like things where you can get a feel for the person and what they're doing. The quiz and the "Firsts" was more something that I could get out of a book.-15
The visual, listening to him talk about how he got started. I liked the story of his childhood interest in birds and the fact that he went to Cornell University. His passion really came through.-6
I can't think of a favorite part. It flowed well and it kept me interested. The Johnny Carson clip was very interesting and it was a program that somebody my age would recognize.-8
Seeing him and hearing his story allowed me to feel like I know him as a person. Seeing him with people in government in China or Japan, made me see how amazing he is.-9

Quiz

Quiz. Just to check my retention.-11

Fun Facts (3)

The fun facts because I had control over what I wanted to look at and had time to digest the information.-17
I liked the "Firsts" where you read and looked at the pictures.-18
The "Firsts" could click on them with a little blurb, not overwhelming but gave information.-19

Other (5)

Seeing what actually happens at the foundation, seeing how the staff work and how they interact with the cranes. Seeing the cranes and I did learn how all 15 of the different species came to be there. Or that there are only 15 species of cranes, there seems like there are so many other species for animals.-2
The Whooping crane kind of caught my attention, I guess that's what the crane society is most famous for.-5
I liked all three parts actually. The quiz made me think.-7
The pictures, it brought back being at the crane foundation.-14
How he co-mingled with the birds. Also, how they teach them to eat and fly, wear the costume to hide their human aspect.-16

What was your favorite part of the kinesthetic exhibit and why?

Hands-on puppet (11)

Favorite part-Head and the puppet part. How difficult it is to feed the chick.-1
Feeding the baby because I was interacting and it just really made me understand what a commitment it is to take on this project.-2

Feeding the chick because it was fun.-3
The hand puppet. I wondered how they did that.-7
I liked the interaction with putting the costume on. Really came away with an actual experience.-8
I loved trying out the puppet costume and trying to grab the food, it was so much fun. I liked seeing the leg as well.-9
Playing with the crane puppet and getting to feed. Just to see what the volunteers have to go through.-10
The crane costume. The first time I saw it, I was curious.-12
The crane costume.-13
Costume that workers used to rear cranes, just because of how much work it takes to rear them and return the species back to the wild.-17
Costume. Gave me an idea of what Archibald did to raise the chicks.-18

Parts of crane (5)

The feathers.-4
The leg. How often do you get to hold a crane leg. You see tracks and you don't get to see the foot up close. The bone structure of the leg was interesting.-6
The part that shows what the cranes feed on.-11
Parts of the bird because you can't usually walk up to a crane or a wild animal and touch them. It's nice to be able to touch the egg and feathers, you can put a feeling with what you're seeing out in the wild.-14
The leg. Gave me a sense of how big the animal was and when I saw the foot I realized they probably could be a little dangerous.-15

Food source

The food source because there's various sources, from rodents to bugs to water animals.-16

Thesis quotes

*How hands it was, a lot of people learn like that.-19

Other

Getting out of the costume, haha.-5

<u>What would you change about the visual exhibit?</u>

More about cranes (6)

The only thing that I was looking for is to see a picture of particular cranes. I wanted to know what they looked like compared to other cranes.-2
The ICF abbreviation, I know that one tends to write it out first and then abbreviate from now on, but you might want to spell it out again in the later half just to remind people if they forget. You might want to include more pictures of all the cranes.-4
A poster or a flipbook of pictures of all the crane species would have helped to make it even more enjoyable.-9
Add more about individual species.-11
Change the pictures of having just pictures of him and dignitaries, have more actions of cranes and habitats.-13
It would be cool if some of the images, were 3-D. A lot of people pictures, good to show Archibald with so many contacts, but incorporate more images of cranes.-15

Thesis quotes

*I didn't mind, but it is a very busy exhibit. Some other people might find it too busy and move on. Different people learn different ways, I enjoyed it but my wife would have moved on in two seconds.-1
*I kind of like interactive exhibits more, but technology isn't always easy to come by.-12

Creative touches (6)

The photos aren't very clear and the pictures aren't very distinctive.-5
Some of the smaller print needs to be just slightly larger.-6
Some of the photos don't have names of the people in them.-8
The picture of the volunteers was a little blurry. The title that started with 6 cranes, I was a little lost. Some were really good, but others needed to draw you in more.-10
The one picture with the crane in the lower left hand corner, the edging looks like it needs to be cleaned up.-18
Some of the parts were a little wordy-19

What would you change about the audio exhibit?

Include visual (9)

Put something visual, it's hard to just listen with nothing to stare at, it makes my mind wander.-3
Because I am a visual person, not just a video of him speaking, but maybe rolling pictures of him in remote places, or him and chicks or pictures of Leopold and Muir that followed along with what he was saying.-9
You've gotta have something visual. I'm a visual person and I wouldn't have listened to it normally. Maybe if you had it split up into shorter parts with buttons under a picture, the message would get across to people better.-10
In combination with a visual would work nicely. A poster or something, I think everybody's got different learning styles and that's important too.-12
Add something visual. Mix and match the two. Even if it's a stationary visual at least it gives you something when you're listening to him.-13
Need to have something visual.-17
I wanted to be looking at a picture of cranes or of him, maybe an interactive video/pictures of him and cranes-18
A little long. It would be nice to listen to that and look at the visual one.-6
Shorter or more interactive.-19

Time (3)

I'm impatient and hearing that kind of conversational voice didn't allow me to learn fast enough.-1
If it was in a museum like this I would probably listen to it if I came by myself, but if we brought my grandchildren then I would not listen to it because it's 6 minutes and they would probably be crawling on the wolf. If I came here alone then I would listen to it, but with children they don't have that attention.-2
The ending was a bit abrupt, but maybe it was the end of the interview.-7

Other

Get into more specifics of each crane in each region.-4
It was audible instead of visual.-5
Make sound of cranes in background a little louder.-15

What would you change about the multi-modality exhibit?

Put with other exhibits

If it were in combination with some of the other pieces that I've seen, so that people who want to get into some more specifics, the additional knowledge of the "Firsts" was valuable. If I were going through a center with exhibits I don't know if I would take the time to go through everything.-15

Technology improvements (2)

Might go to a touch screen so that it's easier for some people.-6

The video started over so you need a link right back from the video to the homepage.-7

Creative touches (5)

Maybe a question at the beginning, "have you ever wondered about this or heard this sound?" Something that kind of sets up the scene for it.-9
The "Firsts" were just words, maybe if the titles had pictures they would draw you in more.-10
On some of the "Facts" the titles were catchy, and then some of them could have been more catchy.-12
On the homepage, the picture of him is a little blurry and put something that would catch your eye and make you interested.-18
A few more questions on the quiz-19

Length (2)

It depends on what age group you're targeting. For a young crowd there might be too in-depth info and it would take them a while to go through it.-13
Make it a little shorter, keep all the good info, but make it shorter.-14

Other

Is it about Archibald or the cranes?-11

What would you change about the kinesthetic exhibit?

More information (5)

More things…the scat from the animal, other things. What would help something like that would be size, maybe a scale of the animal showing how big they are.-1
I wouldn't change anything because it was interactive.-2
What type of crane is the leg from? Where are they getting the different food sources? Do the chicks look like that? More explanations and more information would have helped me to appreciate it more. Maybe put the egg in a mock nest to show how big it would be.-9
A little confusing because not enough direction as to what I was doing. A little more for kids.-15
Add more explanation of why stuff is on there. Such as food items of cranes, explain the life history and when they're eating each type.-17

Put with other exhibits (3)

I was thinking about how they all go together, and blending them all together makes me think about how the information would have all of the elements then.-6
Put it in conjunction with something visual, maybe the video. It would reinforce it. Maybe some pictures of George using the costume with chicks. An anatomical description of the leg could be interesting for some people.-8
Having a backdrop, of cranes flying or the cranes and their landscape. Maybe a picture of Archibald with the chicks kind of feeding the chicks to connect him to seeing the stuff. Especially for kids.-18

More information about Archibald (2)

It's got to have some information about him, otherwise I wouldn't learn anything about George Archibald.-10

Make a connection more to George. It is indirectly but I didn't pick up the connection. More explanations about items.-13

Other

I would have somebody there showing you how to pick up the food using the crane costume.-14
More for the younger crowd.-19

What was your favorite exhibit overall and why?

Multi (10)

Multi. Able to provide information quickly, a lot of information. It could bring George to you because of the video. Could actually see and hear him, see him in context with the animals and the people that he worked with. Could get into a lot more detail on different webpages. Gives lots of options-1
Multi. Although they all had a role to play. The movie where you could see and hear everything together.-2
Multi. It kept my interest the longest and I was able to focus the most on that one.-3
Multi. It was a little bit more in depth. The fact that you were able to interact and go through a quizzing of your knowledge.-4
Multi. Because of the interaction and the video. People like to sit and be entertained.-7
Multi. The movement, the photos, the sound, it was a real active exhibit.-8
Multi. Again it goes back to it touched on the emotional side. The WCHF conservationists did great things but it was because they cared about it so much that they dedicated their life to it and put something forth to make grand things, which is an emotional thing. Why do we think they're so great, what did they do, and that's what's so important and touching on the emotional side. -10
Multi. More like watching tv and then the quiz afterward was interesting.-11
Multi. Interactive, seeing, hearing and doing.-13
Multi. Because it gave a thorough history of George Archibald and the crane foundation.-16
Multi. Interactive and could read at own pace and do what you wanted.-19

Visual (4)

Visual. It was most informational. It gave the whole picture that it is a worldwide endeavor.-5
Visual. The visualness of the world, I liked it.-6
Visual. It was more traditional and very well done. I learned a lot and I really enjoyed it.-9
Visual. Garner the most information from looking, it's more eye-catching then sitting down and looking at a computer.-17

Audio (4)

Audio. It was very informative and just hearing his voice.-12

Audio. I learned the most, I learned what type of a person he is. I wouldn't see more exhibits unless I thought he was a caring person about his endeavors.-14
Audio. The audio of George Archibald speaking was really neat, maybe because of how clearly he spoke. It gave me a sense of who he is and that's where it was real clear that conservation is a people issue.-15
Audio. I liked hearing him talk, it was very powerful.-18

What was your least favorite exhibit overall and why?

Kinesthetic (7)

Kinesthetic. Less for adults, very basic.-1
Kinesthetic. Just too simple. I guess it is relative to your audience.-4
Kinesthetic. To me there wasn't a whole lot to it. It was interesting. If you put everything together it would be good.-7
Kinesthetic. It was a bit simplistic.-11
Kinesthetic. I couldn't pick up the message. There were things of interest but they needed to be mixed in with the other exhibits. It would have given a bigger picture then.-13
Kinesthetic. It was a little confusing and there wasn't a lot of direction as to what to do with the stuff on the table. If I was going to improve it, I would have them follow a specific order or path.-15
Kinesthetic. To me it seems to be directed at a younger audience.-17

Audio (6)

Audio. Just cuz it was kind of boring I guess. I need visual stimulation.-3
Audio. It has its place and it might be a great one to listen to while you play with the costume. Maybe it could be put into two parts. I enjoyed it since it has its place.-6
Audio. It didn't involve numerous senses, you just listened. My mind and ears were involved, but there weren't any sights. It was a monotone presentation.-8
Audio. I do learn better with visuals, I was still able to learn but it would have been better if it was shorter.-9
Audio. I don't pay attention to that as well, I tend if I don't have a visual to look at I started to focus on other things around me instead of listening to the recording.-10
Audio. It was kind of lecturing, maybe because I've been in class all day.-19

Visual (4)

Visual. Because there wasn't any interaction, it was me looking at that, which is fine, if that's all there was I would have learned plenty but the audio brought you into engaging a conversation more, you're hearing this man talking about what he's done instead of just reading about it. In the activity you're doing something.-2
Visual. Because I'm a hands-on person, I like interaction.-12
Visual. Because the other exhibits covered the same thing and I really didn't need maps to show me the various parts of the world.-16
Visual. I don't really like reading things.-18

Multi (2)

Multi. Because I don't know computers at all, although I thought the program itself was well done.-5
Multi. It was too much information to see and read. If you came with young kids they wouldn't allow you to read everything.-14