Summary Report of the NPS Evaluation of Interpretation and Education Services Project

Submitted by
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Executive Summary

The 2006 NPS Servicewide Interpretation and Education Evaluation Strategy identified key action items that will lead to a "culture of evaluation" including a review of existing research to identify lessons learned, pilot evaluation projects to establish best practices for interpretation and education evaluation, and an interpreters' and managers' toolkit of evaluation materials. In 2010, the Education Evaluation Coordination Team, a sub-group of the NPS National Education Council, received funding to implement these action items. The Evaluation of Interpretation and Education Services Project, awarded to MPR Museum Consulting, included three pilot park studies, a literature review, an evaluation manual, and an evaluation training webinar. This report summarizes the entire project, describes the three park studies, and suggests meaningful ways all NPS units can benefit from this work.

The purpose of the three park studies, conducted at Hawai'i Volcanoes National Park (HAVO), Cuyahoga Valley National Park (CUVA), and Kennesaw Mountain National Battlefield Park (KEMO), was to inform the relevancy and effectiveness of programs and media for underserved audiences. All of the studies employed different stages of evaluation and multiple data collection methods.

The Literature Review looked at what the published literature revealed about demography, the use of parks and other areas by a variety of groups, and the values that various groups hold that are consistent with or in opposition to parks and similar areas. The review also indicates what the literature suggests are practices that National Park Service staff and others should follow that will ensure the future of these special places.

The evaluation training was based on the three park studies to generate practical, economical, and useful evaluation methods all parks can use. More than sixty NPS interpreters, educators, and managers participated in the nine-hour "Fearless Evaluation" webinar and received the companion manual. The evaluation manual and training course provided participants with lessons learned from the three park projects, described the stages and methods of evaluation, and discussed possible applications of these studies.

A summative evaluation of the Evaluation of Interpretation and Education Services project was conducted in April 2012. The survey was sent to eleven HAVO, CUVA, and KEMO staff involved in the project to measure the value they placed on the experience and if they planned to conduct evaluation in the future. Four of the eleven participated and at least one staff person from each of the three parks was represented in the responses. All of the survey participants stated that the evaluation project at their park exceeded their expectations and a majority stated that they will conduct evaluation in the future.

Hawai'i Volcanoes National Park
The Hawai'i Volcanoes National Park (HAVO) study tested the effectiveness and relevancy of three different interpretation and education programs for local native youth

using front end, formative, and summative evaluation. The programs included in this study were: 'Ohana, a new program in development, Youth Internship Program, a leadership building internship program, and Digital Mountain, a film contest for school age youth. In addition to the three program studies, the HAVO project included classroom training for interpretive staff about the phases of evaluation and the different methods and techniques that may be used to conduct evaluation.

The studies at Hawai'i Volcanoes National Park required several phases of evaluation and multiple data collection methods were used. Front end evaluation for the 'Ohana program relied primarily on focus groups held within the local communities. Emphasis was placed on sensitivity to non-verbal actions that might hinder the trust building process. During the formative evaluation of the 'Ohana program unobtrusive observation was used to measure visitor satisfaction, tracking was used to measure visitor use patterns and thoroughness of use, and questionnaires were used to measure audience outcomes and feelings. Formative evaluation for the Youth Internship Program (YIP) and Digital Mountain programs was conducted using focus groups of past participants. Park staff applied the same sensitivity techniques used for the 'Ohana focus groups and applied the suggestions to 2011 recruitment strategies and programs. The summative evaluation of 'Ohana was conducted using questionnaires which measured audience outcomes and satisfaction. The Youth Internship Program summative evaluation used the retrospective post questionnaire method. This relatively new method is a form of pre/post testing that accounts for lack of understanding before a subject is exposed to an experience and is flexible enough to build a baseline during the summative evaluation phase. A questionnaire was also used for the Digital Mountain summative evaluation to measure effectiveness of advertising, park supplied resources, and participant engagement.

The HAVO study demonstrated that all three programs improved the park's effectiveness and relevancy for native youth who live near the park. The return on investment for each program was demonstrated in measureable ways. For 'Ohana, this was demonstrated in the development of a program that meets community needs. Confirmation of this is seen through the data reflected on questionnaires, through increased advertising, and through increased community member involvement in event planning and as practitioners. All of these factors resulted in doubling the attendance and increasing participant satisfaction. For the Youth Internship Program, validation came through improved satisfaction among staff with higher quality participants and among participants with improved leadership skills. This was confirmed through the data reflected on the retrospective post questionnaires, through staff reports of improved YIP candidates, and a comparison of pre/post experience skills. A 100% increase in the number of films submitted represented a measureable expression of program improvement for Digital Mountain.

Primarily reflected through the knowledge and skills gained by staff through the training, return on investment was demonstrated when park staff felt empowered to modify the 'Ohana summative evaluation questionnaires created by MPR Museum Consulting. In addition to conducting focus groups, collecting formative and summative data, and analyzing and reporting findings for the three projects, staff members applied these skills to evaluate the need for new and to improve existing interpretive media.

Cuyahoga Valley National Park
The goals of the Cuyahoga Valley National Park formative study were to evaluate the effectiveness of enhancing wayside exhibits with auditory and/or tactile elements; expand the topics addressed by the wayside exhibits to include more nature interpretation and broaden history interpretation; determine ways to increase visitor stops at the wayside exhibits; and determine which enhancements were most effective for select target audiences, under which conditions. The evaluation was conducted in two phases to incorporate as many exhibit modifications as possible. Information gathered from the study will be used to develop future wayside exhibits along the Towpath Trail, a 20-mile walking and bicycling trail that is heavily visited. A wayside exhibit system runs the length of the trail.

The project at Cuyahoga Valley National Park included two phases of formative evaluation using multiple data collection methods, testing stages, and audio and tactile features. Phase 1 relied on unobtrusive observation and participant questionnaires. Phase 2 methods included unobtrusive observation, participant questionnaires, and tracking.

The data indicates that two different audiences are visiting Cuyahoga Valley National Park. As a result, different wayside panels need to be developed to attract each audience. Approximately 70% of those that are willing to stop and read a panel are either new or infrequent visitors who are in the park spending time with friends and family. New or updated information is less critical to this audience than for those visitors that pass the panels daily or weekly. For the audience that comes to the park daily or weekly to bike, run, or walk, updated information and the delivery method are important.

The studies revealed the importance of determining the target audience and designing a product that best meets their needs. With further prototype testing, the final product will be more attractive to the target audience and staff outcome goals will be met. During Phase 2 park staff were trained and participated in the formative evaluation data collection techniques used. These skills will support future efforts to isolate more variables and to refine and test the prototypes.

Kennesaw Mountain National Battlefield Park
The goals of the Kennesaw Mountain National Battlefield Park study were to increase audience diversity in programs and exhibit spaces through program modifications that reflect African American interests and to measure the overall effectiveness, outcomes and relevancy of interpretive programs and media for the park's African American visitors. To accomplish these goals, the park conducted a three-stage (front end, formative, and summative) evaluation process and used multiple data collection methods. Front end evaluation included focus groups and questionnaires. Unobtrusive observation, questionnaires, and audience racial counts were the formative evaluation data collection methods. Summative evaluation data collection methods were unobtrusive observation, questionnaires, and timing and tracking.

While this project was initiated on the supposition that most African American visitors only used the park for recreation, this study revealed that 16% of the visitors who come into the visitor center are African American. Evaluation played a role in defining what some African American audiences want to see and do when they visit the park as well as the types of communication they prefer.

Although the data indicates that a higher percentage of African Americans are coming to the visitor center than park staff originally thought, there is still a gap between the percentage of African Americans coming to the park and African Americans living in Cobb County (where KEMO is located). The 2009 US Census Bureau statistics indicate that 24% of Cobb County is Black or African American. If staff members are interested in increasing the number of African American visitors to the park, they should consider conducting focus groups with the African American park visitors.

Conclusions
On the surface these three separate park studies may seem to be vastly different from one another. However, a closer inspection will show that they share a single core principle: *Success of any program or media is based on identifying, reaching out to, and responding to the target audience.* In each study, a target audience was identified, their needs and wants were heard, and a response that addressed those needs and wants was created. The success of the response was evaluated, and next steps were established to strengthen and increase the level of outreach to the target audience. Different stages and methods of evaluation were used to identify the audiences, clarify their needs, and measure the success of the interpretive services that were developed.

At Hawai'i Volcanoes National Park, the target audience was local, native youth. Through focus groups it was determined that the ways to develop relationships with local, native youth include specialization, outreach, and repetition. An invisible barrier existed between the local communities and the park. Trust between the two groups had to be established so the park reached out to the communities and conducted programs within each community. Programs needed to be specifically designed for each community and offered on a regular basis to allow the trust and program to grow in tandem. Formative and summative studies showed that the three programs were beginning to address those needs.

At Cuyahoga Valley National Park, the target audience was defined and redefined throughout the project. Findings indicated that there were at least two audiences using the Towpath Trail. The "focused visitors" (those at the park to bike, run, and walk for exercise) have distinctly different needs for content and delivery methods compared to the "unfocused" visitors (those that were at the park to sightsee, learn about the history, and spend time with friends or family). As additional prototypes are tested, these target audiences' needs will be better defined.

At Kennesaw Mountain National Battlefield Park, the target audience was African Americans. While they were visiting the park for recreational purposes, few African Americans attended programs or entered the museum. The study showed that a higher

percentage of African Americans were coming into the visitor center than park staff originally estimated, but the percentages were still low in comparison to recreational visitors and local demographics. Study participants provided information regarding where and how they choose to find out about events and the types of events they choose to attend. Findings indicated that African American audiences want programs of cultural relevance to them and want to be informed of these programs through specialized publications, e-mail, and websites.

The findings from these three studies can be applied to all NPS units when staff members are determining the best ways to identify, reach out to, and respond to target audiences. The front end evaluations conducted at Hawai'i Volcanoes National Park and Kennesaw Mountain National Battlefield Park provide examples of how to enlist the help of park neighbors, who may feel disenfranchised, to create programs that meet their needs and promote park stewardship. All three park studies serve as models for conducting formative evaluation for interpretive programs and media. The KEMO and HAVO summative evaluations provide evidence of this success as well as the challenges parks may encounter when trying to reach out to target audiences.

In addition to providing the foundation for higher quality interpretive programs and media and increased target audience involvement, evaluation provides parks with a credible demonstration of their intention to create the best possible product for a select audience. This alone carries significant weight with agencies and individuals with the power to provide financial and staff resources.

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Introduction

Resource stewardship and visitor enjoyment are enhanced by the NPS embracing evaluation. Evaluation at all levels of the NPS leads to sound decision making that ensures cost effectiveness, financial accountability, and interpretation and education that meet or exceed rigorous standards. Within a culture of evaluation, compelling evidence is used to continually improve programming and demonstrate that programs are relevant, engaging, and effective.

Vision Statement, 2006 NPS Interpretation and Education Evaluation Strategy

The 2006 NPS Servicewide Interpretation and Education Evaluation Strategy identified key action items that will lead to a "culture of evaluation" including a review of existing research to identify lessons learned, pilot evaluation projects to establish best practices for interpretation and education evaluation, and an interpreters' and managers' toolkit of evaluation materials. In 2010, the Education Evaluation Coordination Team, a sub-group of the NPS National Education Council, received funding to implement these action items. The Evaluation of Interpretation and Education Services Project, awarded to MPR Museum Consulting, included three pilot park studies, a literature review, an evaluation manual, and an evaluation training webinar. This report summarizes the entire project, describes the three park studies, and suggests meaningful ways all NPS units can benefit from this work.

The purpose of the three park studies was to inform the relevancy and effectiveness of programs and media for underserved audiences. All of the studies employed different stages of evaluation and multiple data collection methods. Park interpretive staff members assisted with the evaluation studies and have applied the results. The three parks that participated in the project were Hawai'i Volcanoes National Park (HAVO), Cuyahoga Valley National Park (CUVA), and Kennesaw Mountain National Battlefield Park (KEMO).

These evaluation studies are a form of research that measures visitor behavior and trends in an effort to improve visitor outcomes and satisfaction. Many visitor studies are conducted with a sample size of less than 60 visitors. Small sample sizes (less than 60 visitors) indicate trends in a population, but fall outside of the range that confidence levels can be measured. Confidence level explains the probability that the results of a test can be repeated. Larger sample sizes allow for measurable and greater confidence levels, but often require more resources than an organization has available.

The evaluation training was based on the work conducted within the three parks to generate practical, economical, and useful evaluation methods for all parks to use. More than sixty NPS interpreters participated in the nine-hour "Fearless Evaluation" webinar and received the companion manual.

This report is divided into project-specific sections. Each of the three park reports describes the programs or media being studied, the stages of evaluation conducted, and the data collection methods used. Lessons learned and returns on investment are also

documented. "Fearless Evaluation" details the studies conducted to create and evaluate the training manual and the webinar, the data collection methods used, and offers suggestions for future servicewide evaluation training. Conclusions generated by the overall project results and the summative evaluation of the three park studies are identified in the final section.

The instruments and reports created throughout this project are documented in the references section and a glossary is included to prevent redundancy and clarify unfamiliar terms. Glossary terms are identified with an asterisk (*) when first used.

Literature Review

When developing new interpretive programs and media, park staff must consider whether future visitors, representing a mixture of histories and cultures, will continue to support the NPS units that reflect a set of values perhaps different from their own? Will they continue to visit these areas, celebrate their history and their beauty, protect their existence, and provide future support with their money and their time?

Parks and Under-served Audiences: An Annotated Literature Review, compiled and written by Dr. James L. Pease, was commissioned to address these questions. The review looks at what the published literature reveals about demography, the use of parks and other areas by a variety of groups, the values that various groups hold that are consistent with or in opposition to parks and similar areas, and what the literature suggests are practices that National Park Service staff and others should follow that will enhance the future of these special places. The review includes articles from 17 different peer-reviewed journals, some conference proceedings, and some technical reports. Literature citations of nearly 100 articles are also included to give the reader a sense of the current state of the profession in regards to serving currently under-served audiences.

The literature review is included in a project zip file that is available for download on the Evaluation of Interpretation and Education Services webpage (http://www.nps.gov/hfc/products/FearlessEvaluations.htm).

The Three Park Studies

Hawai'i Volcanoes National Park (December 2010 – December 2011)

Introduction
The Hawai'i Volcanoes National Park (HAVO) component included testing the effectiveness and relevancy of three different interpretation and education programs for local native youth. Front end*, formative*, and summative* evaluation studies were conducted. The programs included in this study were: '*Ohana,* a new program in development, *Youth Internship Program,* a leadership building internship program, and *Digital Mountain,* a film contest for school age youth. The results of each stage of testing were applied directly to the development, improvement, and increased relevance of future interpretation and education programs. In addition to the three program studies, the HAVO project included classroom training for interpretive staff about the phases of evaluation and the different methods and techniques that may be used to conduct evaluation.

Staff Training
HAVO interpretive staff assigned to the project participated in three-day evaluation training sessions in January and March 2011. A manual was provided for each participant.

The January training focused on defining evaluation, clarifying phases, front end evaluation methods and techniques, and analyzing and reporting the results of focus group* findings. During the interactive sessions, park staff designed focus group questions, practiced conducting a focus group, and analyzed the focus group findings.

The March training focused on formative and summative evaluation techniques of unobtrusive observation*, questionnaires* (interviews* and surveys*), tracking*, and analysis and reporting of findings. Park staff created data collection instruments* using a template. The instruments were used to collect unobtrusive observation data at a park map talk program and at a park-sponsored, community-based event in the Puna District. During one of the classroom sessions, park staff discussed and analyzed the data collected at the map talk.

As a result of the training, the HAVO staff gained experience which allowed each of them to create the instruments, collect the data, and analyze and report the findings for at least one phase of the three program study.

'Ohana
Park staff had a goal of building stewardship for the park among local native youth. The path to build that stewardship was not yet determined, although a community-based program was being considered. A front end evaluation was planned to determine the need, if a need was identified, a formative evaluation would improve the program, and a summative evaluation would determine the effectiveness of the program at reaching the goal.

For the front end evaluation two focus groups were conducted. Leaders from two neighbor communities (Puna and Ka'ū) were selected and invited by the HAVO Education Specialist to participate. Selection criteria were based on community involvement and leadership. The HAVO Education Specialist was familiar with both communities and understood the preferred cultural communication styles.

To demonstrate focus group facilitation techniques, Monica Post, MPR Museum Consulting Director, led the first focus group which was held in the Puna District. Park staff was present, not in uniform, and observed the focus group. The Contracting Officer's Representative for the project took notes so that all park staff could observe the process. Invitees were community leaders. The invitation list was limited to nine participants; however, several invitees brought other family members. The unforeseen result was that the focus group exceeded the nine participant limit. To convey the park's genuine interest in their needs, and in order to proceed with good will, all were included in the conversation and no one was asked to leave.

Findings from the Puna District focus group revealed that community leaders felt the community needed a free or low cost event, offered outside of the park, located near the community, targeted to school age youth, instructive in cultural or traditional ways that emphasized the natural resources of the district, and led by native, local practitioners. It should start small, be offered repetitively for attendance to grow, and be marketed exclusively to the Puna community.

A second focus group was held in the Ka'ū District. Based on the observations of the Puna District group, HAVO staff modified the questions for the Ka'ū focus group. Dressed in street clothes, HAVO staff led the focus group and took notes. Focus group participants stated that the Ka'ū community needs youth-targeted programs. They were open to coming to the Kahuku Unit of the park located within their district. Nature-based and cultural programs were of the most interest. Most importantly, as with the Puna community, the park must continue to offer the programs and not make it a one-time only event.

The 'Ohana programs were developed based on the findings from these focus groups. 'Ohana is the Hawaiian word for family. While the Puna and Ka'ū Districts' 'Ohana programs were going to be very different, the following factors were common to both:

- Family-oriented programs. Both programs were designed to involve all ages of youth who must be accompanied by adults.
- Hands-on involvement. Both programs involved families in a hands-on, interactive way.
- Cultural connections. Both programs transferred cultural knowledge to multigenerational audiences.

In April 2011, the first 'Ohana program was presented at the Maku'u Farmer's Market in the Puna District. A formative evaluation was conducted during this pilot event. Maku'u Farmers Market is a well-known outdoor community gathering place. The Puna 'Ohana event was a cultural fair with practitioners that involved participants in lei, bark cloth,

rain cape, rope, print, and kite making and ukulele playing. While park staff had hoped for at least 50 participants, approximately 30 attended the event. Unobtrusive observation data, questionnaires, and tracking data were collected from participants. The tracking data showed that none of the individuals tracked went to every station. It was not determined if this was due to lack of time or lack of interest in the activity. The unobtrusive observation data indicated, and the questionnaires confirmed, that all of the event participants were very engaged in their chosen activities.

The pilot Ka'ū District 'Ohana program was also held in April 2011 at the Kahuku unit of Hawai'i Volcanoes National Park. The event was a GPS-guided scavenger hunt and tour for families. Queen Lili'uokalani Children's Center co-sponsored the event and provided lunch for everyone. After the tour, participants made cultural crafts. The tour and crafts focused on the area's natural resources and traditions. Unobtrusive observation data and questionnaires were collected from participants. Findings from the unobtrusive observation data were inconclusive. Park staff was looking for interest and engagement throughout the event. Individuals and activities varied so much that no trends were identified. Findings from the questionnaires revealed that the participants enjoyed learning about the culture and participating in the activities. All but 12% of the participants stated that they would come back for another event like this one. Due to the success of the April Ka'ū 'Ohana program, additional programs were conducted at the Kahuku unit in July and November 2011. Neither formative nor summative evaluation data was collected at either of these events.

A summative evaluation was conducted at the second Puna 'Ohana program held in October 2011 at Maku'u Farmers Market. This program, also a cultural fair, was co-sponsored by HAVO, Maku'u Farmers Market, and Queen Lili'uokalani Children's Center. Community members were much more engaged in planning the October event. As a result, more community practitioners participated, and the program was better advertised. Participants made their own leis, petroglyphs, prints, and coconut fish. They assisted in making a rain cape and learned hula and ukulele. Attendance increased 100% with nearly 60 participants. A pre-registration was conducted so organizers were better prepared. Questionnaires were used to collect the summative evaluation data including information about the program as well as participant feelings about the park, park staff, and the program. Unobtrusive observation sheets were designed, but not used. Data indicated that the participants had strong positive feelings for the program (Chart 1) and that they want more programs like this to be offered again in the Puna District. The responses also showed that repetition will be critical to building the relationship between the park and the community; participants wanted their families coming to the event together and hands-on involvement in the learning experience.

Overall success of the 'Ohana program cannot be assumed until a summative evaluation of the Ka'ū program is conducted. Trust is being built within both communities so park staff should continue to offer and sponsor 'Ohana programs. If the program is discontinued or if the community anticipates that the park will no longer participate, that trust may be lost. Holding the Ka'ū 'Ohana program in the Kahuku Unit provides a non-threatening way for the community to become active park stewards. Now park staff must

work with the Puna community to determine non-threatening ways that they can be encouraged to visit the park. For both communities a visitation baseline needs to be created. There is no data currently available that shows how many community members are visiting the park. The baseline data will help determine whether 'Ohana or future community-focused programs are effective at attracting local community members to the park.
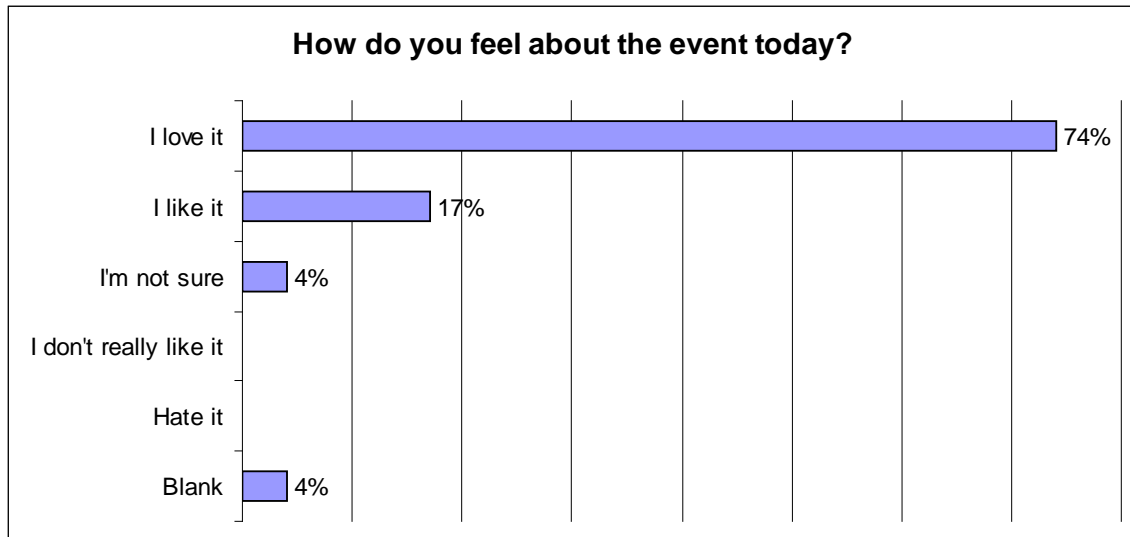
How do you feel about the event today?

I love it	74%
I like it	17%
I'm not sure	4%
I don't really like it	
Hate it	
Blank	4%

Chart 1 – Strong positive ratings for the October 2011 Puna District 'Ohana Program

Youth Internship Program

Through the Youth Internship Program (YIP), island youth are recruited and hired to work part-time during the summer at Hawai'i Volcanoes National Park. The youth receive nine weeks of training, are given work assignments, and share their resource knowledge with visitors. The program also provides opportunities for youth to learn skills and values that will help them become successful adults.

Because YIP was an established program, park staff and Monica Post determined that a formative and summative evaluation should be conducted. Findings from a formative evaluation focus group of past participants, conducted by the HAVO Supervisory Park Ranger in February 2011, indicated that they valued the program and felt that it influenced their career choices. Several suggestions for improving youth dependability were implemented before the start of the 2011 YIP season including requiring youth to sign a contract and holding them accountable for unsatisfactory actions.

One of the most significant changes that came out of the focus group was applied to recruiting and interviewing. In the past, YIP participants were recruited by teachers in the schools. These teachers had limited knowledge of the YIP program and recruitment of applicants was not as successful as staff had hoped. Applicants had no prior knowledge of the interview process or program before they were encouraged to visit with park staff for an interview. During the 2011 recruitment period, park staff provided more information to teachers and spoke in the schools about the program. Applicants were

given details about the program and interview questions before the interview. To lessen the potential for intimidation, park staff did not wear uniforms when speaking with the youth about the program. In May 2011, park staff indicated that they were pleased by the changes made in the recruiting and interviewing processes and were especially happy about the candidates that were recruited after the changes were implemented.

In August 2011, YIP participants and leaders were asked to complete a summative evaluation 13-question "retrospective post*" questionnaire designed to better understand a participant's growth interval from the beginning of the summer season to the end. Participants were asked to retrospectively assess their behavior and leadership skills when they began working in the park and then answer the same question about their behavior and leadership skills once the season ended. Leaders were asked similar questions about each participant and also answered from a retrospective and current viewpoint. The surveys were originally intended to be distributed to parents; however, park staff was unable to include them in this study.
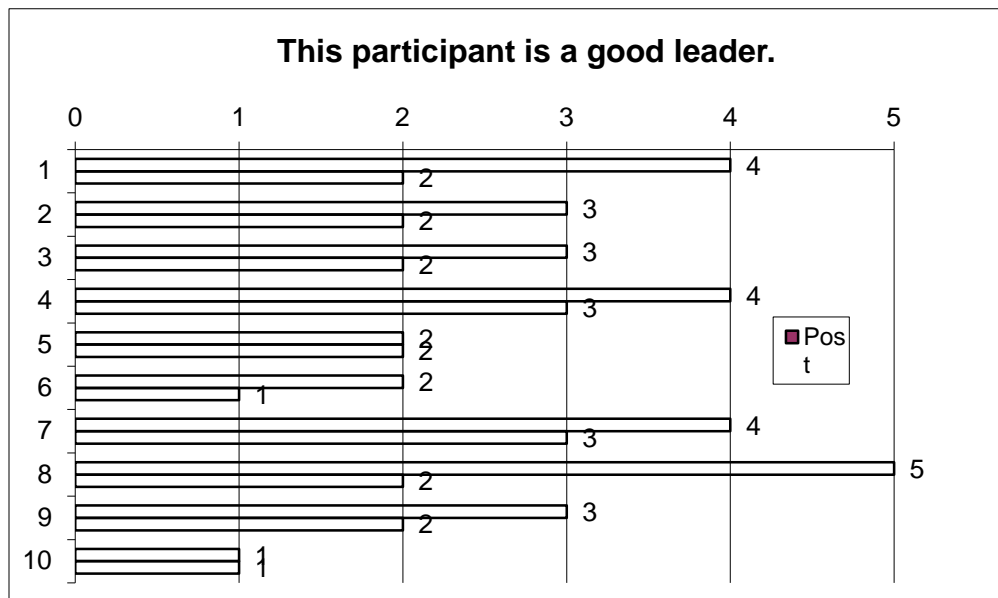

Chart 2 – Question #7 on Retrospective Post Questionnaire (1 = low skill; 5 = high skill) indicates the leaders believe the participants' leadership abilities improved as a result of participation in the YIP program.

Leadership skills being measured were initiative, dependability, communication, and responsibility. The leader and youth findings both showed that youth grew in every skill. Some skills showed more growth than others. Individually, certain youth did not show growth in all areas. These youth gave themselves a high score at the beginning of the summer. Since they came into the program with the highest score, in their mind there could be no room for improvement. The program influenced growth in all areas, but not all individuals grew in all areas. Chart 2 shows how leaders scored the participants before and after the YIP experience and Chart 3 shows how participants scored themselves before and after their experience.
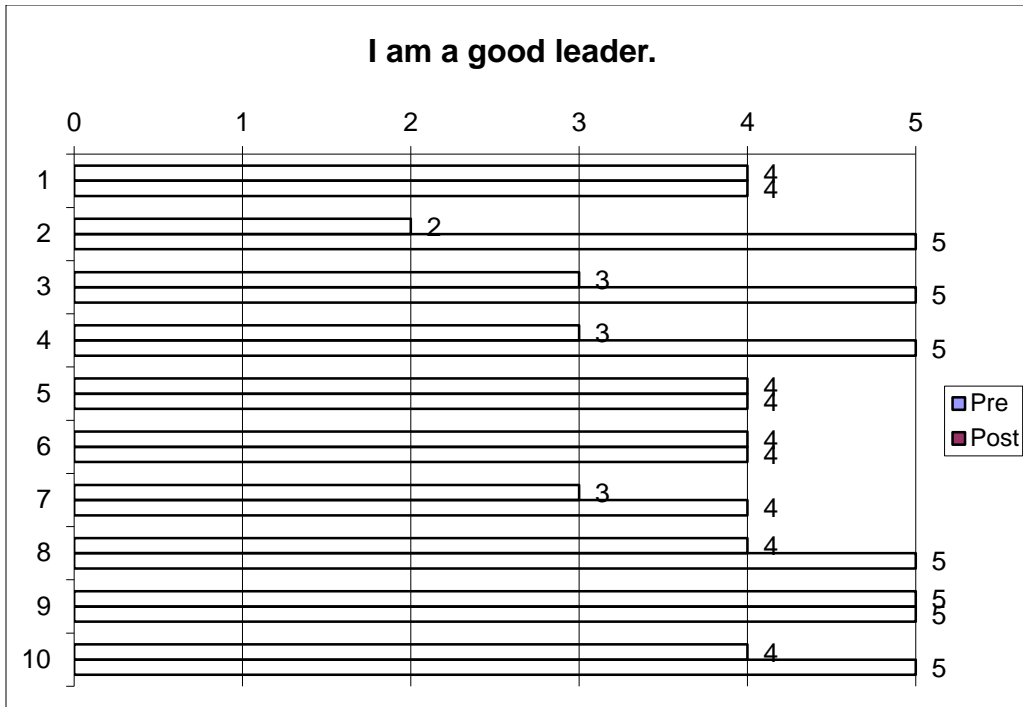
I am a good leader.

Chart 3 – Question #7 on Retrospective Post Questionnaire (1 = low skill; 5 = high skill) indicates the participants believe their leadership abilities increased as a result of participation in the YIP program

Participants were pleased with their involvement and valued the YIP experience as both a developmental experience and as a "fun" summer experience. Eight of the 10 youth expressed how the experience gave them "confidence," and four stated that it "prepared them for life."

Based on the results of the summative evaluation, a retrospective post questionnaire should be given to participants, supervisors, and parents every year. Findings from these questionnaires give measurable outcomes to program planners and provide credibility for potential funding and support sources.

Digital Mountain
Digital Mountain is a Hawai'i Volcanoes National Park-sponsored film competition designed to create stewardship opportunities for middle and high school youth. Local 7th – 12th grade students are invited to create three-minute films highlighting a specific park resource. The completed films are posted online and screened at a film festival held in the park visitor center theater. The park provides cameras, editing equipment, instruction, and transportation from local communities to the park. The winning film maker(s) receives a laptop computer.

Since the program's inception in 2009, park staff has been pleased by the quality of the films submitted and disappointed in the number of submissions. Ten films were submitted in 2009 and seven in 2010. A formative evaluation was conducted to try and discover why there was a decrease in submissions and how the competition could be improved to encourage more participation.

In April 2011, the Volunteer Program Manager for Hawai'i Volcanoes National Park, conducted a formative evaluation focus group with six Digital Mountain past participants. A second focus group was planned, but did not occur. The purpose of the formative evaluation was to identify the motivating factors that drive participating youth to become involved in the program and the obstacles that are keeping other youth from submitting films to the contest. The focus group findings indicated that past participants were getting the information about Digital Mountain from friends, family members, and park staff. Two of the participants mentioned seeing flyers. The participants recommended that better ways to increase future participation would include expanding the contest to include other forms of art, advertising the program through the schools, and changing the theme. All of the participants felt that the prizes were desirable, and the park-provided resources were helpful.

Data collection for the summative evaluation took place during October 2011. Park staff completed a questionnaire for each of the 14 film entries and each participant, or participating team, was asked to complete a questionnaire. Only six participants completed questionnaires. While there was a 100% increase in the number of submissions, given the amount of time and effort put into the program, park staff had hoped for more.

The summative evaluation questionnaire responses revealed:
- Most participants learned about the program from teachers and park staff. Based on this information and depending upon future printing costs, flyers and posters may not be the most cost effective means for communicating the program to potential participants.
- Park-provided cameras were well utilized, transportation was not well utilized, and the use of editing equipment and instruction should be studied further. The cameras were used by 86% of the 2011 participating teams and only 14% of the teams used park-provided transportation. Little conclusive data was received regarding the use of the editing equipment and instruction.
- Participation in the 2011 Digital Mountain contest was twice as high as 2010, and the highest in three years. More teacher involvement, a distinctive difference from earlier competitions, may have contributed to the increase in participation. A focus group with teachers should be conducted to better understand their perceived role with the program and to identify improvements that may lead to increased student and teacher participation.

To effectively analyze the "return on investment" of Digital Mountain more data needs to be collected. Film participants should be required to submit a completed summative questionnaire with their final entry. There is no incentive for completing a questionnaire after the film entry has been made. By including it in the required paperwork, more questionnaires may be submitted. Park staff should continue to complete a summative questionnaire for each entry. This information can be used to gauge the amount of staff labor and involvement that the program requires.

HAVO Lessons Learned
The projects at Hawai'i Volcanoes National Park required several phases of evaluation and multiple data collection methods were used. Front end evaluation for the 'Ohana program relied primarily on focus groups held within the local communities. Emphasis was placed on sensitivity to non-verbal actions that might hinder the trust building process. For example, staff did not wear uniforms at the focus groups, and uninvited participants were not asked to leave. Staff listened to all of the suggestions from both community groups and acted on those suggestions. Formative evaluation of the 'Ohana program relied on unobtrusive observation, tracking and questionnaires. Unobtrusive observation was used to measure visitor satisfaction, tracking was used to measure visitor use patterns* and thoroughness of use*, and questionnaires were used to measure audience outcomes and feelings. Formative evaluation for the Youth Internship Program and Digital Mountain programs was conducted using focus groups of past participants. Park staff applied the same sensitivity techniques used for the 'Ohana focus groups and applied the suggestions to 2011 recruitment strategies and programs. The summative evaluation of 'Ohana was conducted using questionnaires which measured audience outcomes and satisfaction. The Youth Internship Program summative evaluation used the retrospective post questionnaire method. This relatively new method is a form of pre/post testing that accounts for lack of understanding before a subject is exposed to an experience and is flexible enough to build a baseline during the summative phase. A questionnaire was also used for the Digital Mountain summative evaluation to measure effectiveness of advertising and park supplied resources and participant engagement.

The HAVO study demonstrated that all three programs improved the park's effectiveness and relevancy for native youth who live near the park. The return on investment for each program was demonstrated in measureable ways. For 'Ohana, this was demonstrated in the development of a program that meets community needs. Confirmation of this is seen through the data reflected on questionnaires, through increased advertising, and through increased community member involvement in event planning and as practitioners. All of these factors resulted in doubling the attendance and participant satisfaction. For the Youth Internship Program, validation came through improved satisfaction among staff with higher quality participants and among participants with improved leadership skills. This was confirmed through the data reflected on the retrospective post questionnaires, through staff reports of improved YIP candidates, and a comparison of pre/post experience skills. A 100% increase in the number of films submitted represented a measureable expression of program improvement for Digital Mountain. The success of these three programs has demonstrated improved relationships between the park and the local communities.

HAVO Return on Investment
Primarily reflected through the knowledge and skills gained by staff through the training, return on investment was also demonstrated when park staff felt empowered to modify the 'Ohana summative evaluation questionnaires created by MPR Museum Consulting. In addition to conducting focus groups, collecting formative and summative data, and analyzing and reporting findings for the three projects, staff members applied these skills

to evaluate the need for new and to improve existing interpretive media. For the media evaluation, they constructed questions, collected data, and ran an analysis of the findings.

All three of the Hawai'i Volcanoes National Park projects demonstrated the value of incorporating evaluation into program design. Each program increased audience involvement and that alone is an indication of trust building between the community and park. An increase in numbers, however, is only an *indicator* of improved relations. Questionnaires completed by audience members verified participant feelings about the park and staff. Ninety-one percent of the 'Ohana participants stated that they "loved" or "liked" the park and park staff. YIP participants said the program has had and will continue to have an impact on their lives. Eight participants even said they gained confidence as a direct result of their experience.

Cuyahoga Valley National Park (December 2010 – August 2011)

Introduction

The goals of the Cuyahoga Valley National Park formative study were to evaluate the effectiveness of enhancing wayside exhibits with auditory and/or tactile elements; expand the topics addressed by the wayside exhibits to include more nature interpretation and broaden history interpretation; determine ways to increase visitor stops* at the wayside exhibits; and determine which enhancements were most effective for select target audiences, under which conditions. The evaluation was conducted in two phases to incorporate as many exhibit modifications as possible. Information gathered from the study will be used to develop future wayside exhibits along the Towpath Trail, a 20-mile walking and bicycling trail that is heavily visited. A wayside exhibit system runs the length of the trail.

In December 2010, Monica Post made a scoping trip to the park to meet the staff, become familiar with the park, and discuss the plan. During this visit, discussion centered on target audiences, ways to attract these audiences such as the addition of audio and tactile elements, clustering versus single wayside exhibits, and providing experiences or resources that match the audiences' motivations.

Park staff felt that visitor behavior might be influenced by the location and quantity of wayside exhibits. As a result, it was decided to test two different types of wayside sites: clusters and single waysides. Clusters (groups of more than one wayside exhibit component at a specific location), already exist in a few destination areas such as Canal Visitor Center and Beaver Marsh. Single wayside exhibits tend to be located in areas like Stumpy Basin and Lock 27 that visitors pass through on the way to a destination site.

Phase 1

Phase 1 of the formative evaluation was conducted in May 2010. Baseline data was collected using unobtrusive observation at the four sites (Canal Visitor Center, Beaver Marsh, Stumpy Basin, and Lock 27) to determine how visitors are currently using the existing wayside exhibits. The wayside panels at each site consist of text, illustrations, and black and white photographs. An audio station with four different recordings is located at Beaver Marsh.

Following baseline data collection, prototypes with audio and tactile elements were installed over the existing panels and data was collected on visitor use of the prototypes. Additional audio elements included recordings activated by push buttons attached to the panels and recordings accessed through a cell phone or QR code. A variety of tactile elements were installed on or near the wayside exhibits including vegetation, reproduction artifacts, and turtle shells. Unobtrusive observation and questionnaires were used to collect data during the first phase of testing.

Findings from Phase 1 indicated that visitor motivation influences the use of waysides at the park. Monica Post suggested that visitor motivation be described as "focused," those at the park to bike, run, or walk for exercise, and "unfocused, "those that were at the park

to sightsee, learn about the history, and spend time with friends or family. The focused visitors were so focused on their method of exercise that they did not stop or interact with the waysides. The unfocused visitors were casually moving along the trail with friends or family, and more willing to stop or interact with the waysides.
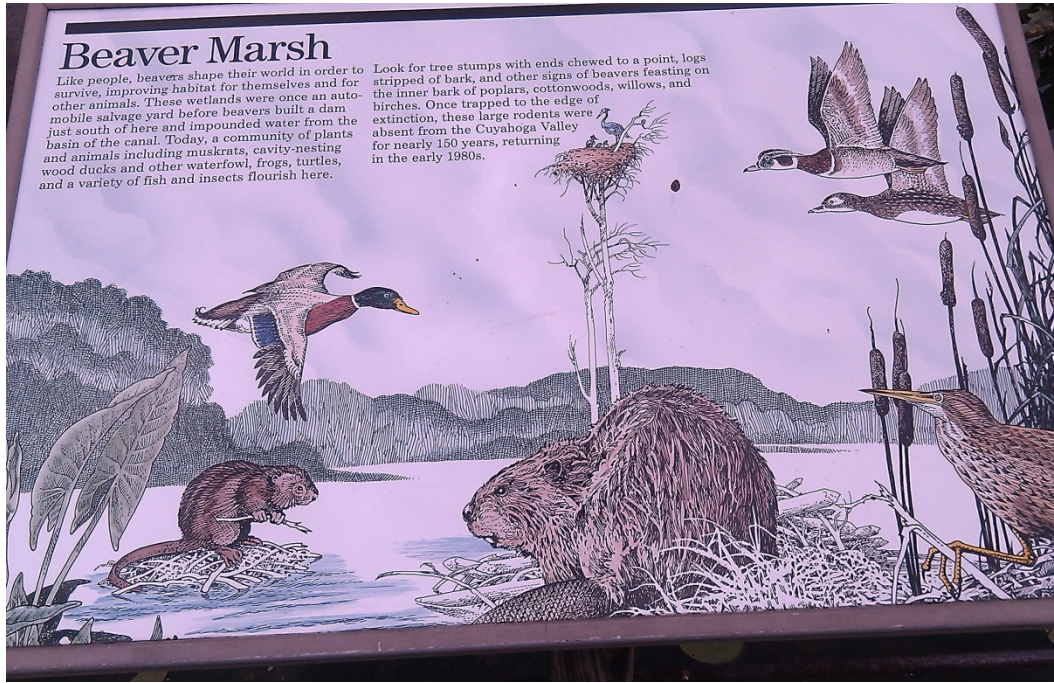

Image 1 – Beaver Marsh existing panel has only text and an illustration. There are no audio, tactile, or interactive components.

Phase 1 findings also revealed that fewer visitors stopped at single waysides than at clusters. Visitor motivation (focused versus unfocused) appeared to be the reason for fewer stops than location or quantity of panels. The data also showed fewer unfocused visitors in the areas where the single waysides were located. Future and further study of these variables (motivation and location) is recommended.

Prototype panels featuring colorful backgrounds, borders, text, and graphics were tested at two cluster sites (Beaver Marsh and Canal Visitor Center). These prototypes attracted the fewest visitors. Seven percent of the visitors at Beaver Marsh read* the "Observing Beaver Marsh" panel. Thirty-one percent of the visitors at Canal Visitor Center read the "Lock Gates" panel. The difference in readership between the two panels is believed to be influenced by the content and location. Content on the "Lock Gates" panel was directly related to the historic resource adjacent to the panel. The content of the Beaver Marsh panel addressed wildlife that was not visible during testing. Visitor attention* was instead focused on turtles in the water near the panel.
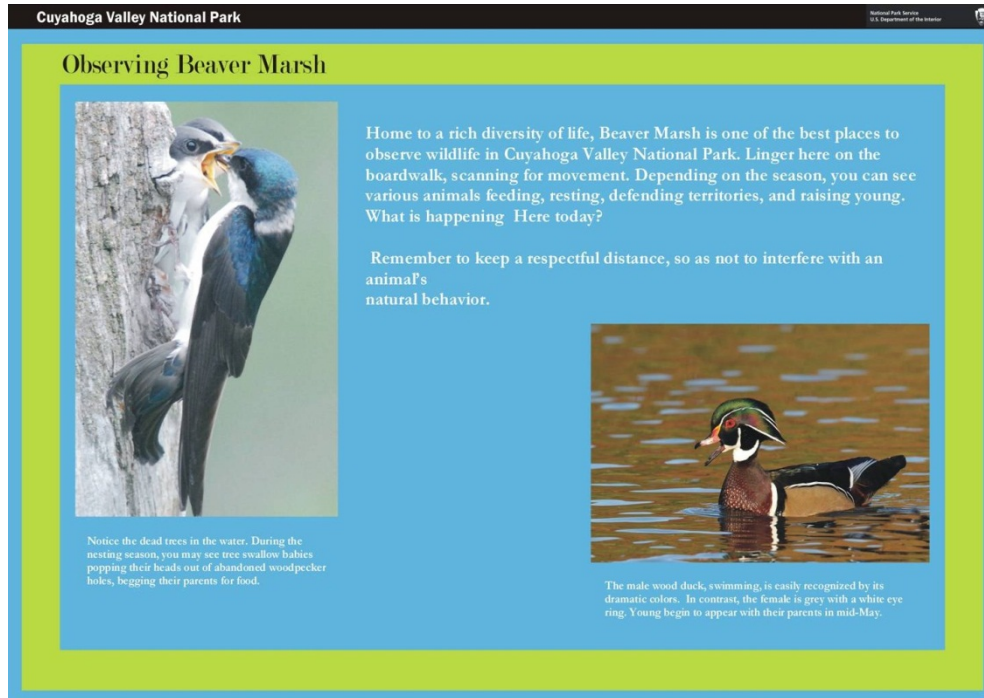
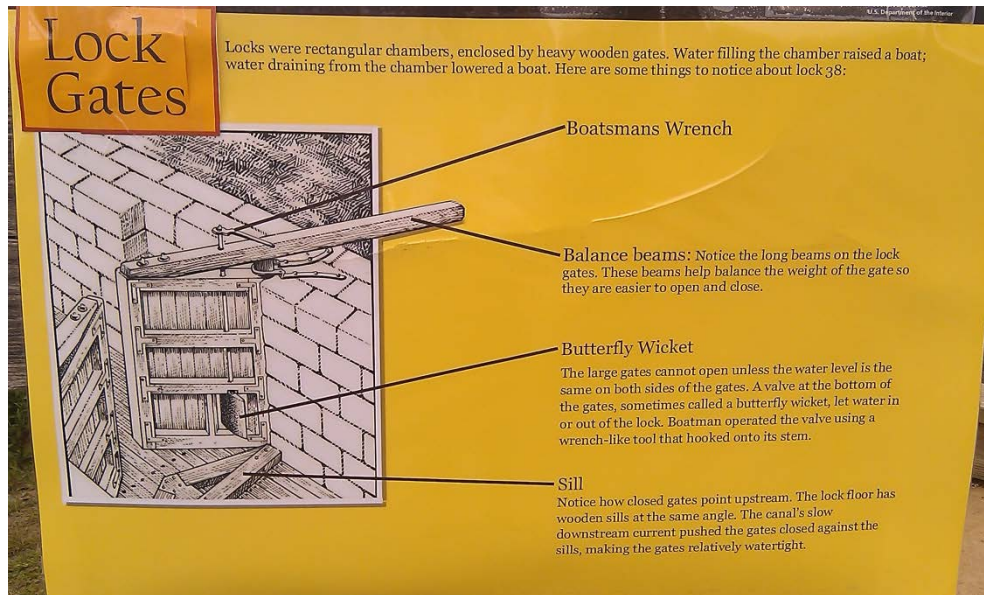Image 2 – Phase 1 prototype panel tested at Beaver Marsh

Image 3 – Phase 1 prototype panel tested at Canal Visitor Center

Panels with tactile elements at the single wayside and cluster sites had a mixed amount of attention. "Stumpy Basin's wet prairie," the single wayside panel at Stumpy Basin, had a reed attached to the prototype throughout testing, yet less than **.5** % of the visitors touched the reed. At Beaver Marsh, "Survey the Shells," a panel with text and two turtle shells, attracted 41% of the visitors through touch or an unintended interaction*. This

difference may have been due to the content. Turtles were highly visible during the testing period and the primary focus of visitor attention at Beaver Marsh. The novelty and visibility of the turtle shells located so close to where the turtles were swimming may have been an attractant. At Stumpy Basin, the reed was mounted to the side of the panel and may not have been as visible as the shells were at Beaver Marsh. Visitors could also reach out and touch the reeds anywhere along the trail near the Stumpy Basin panel.
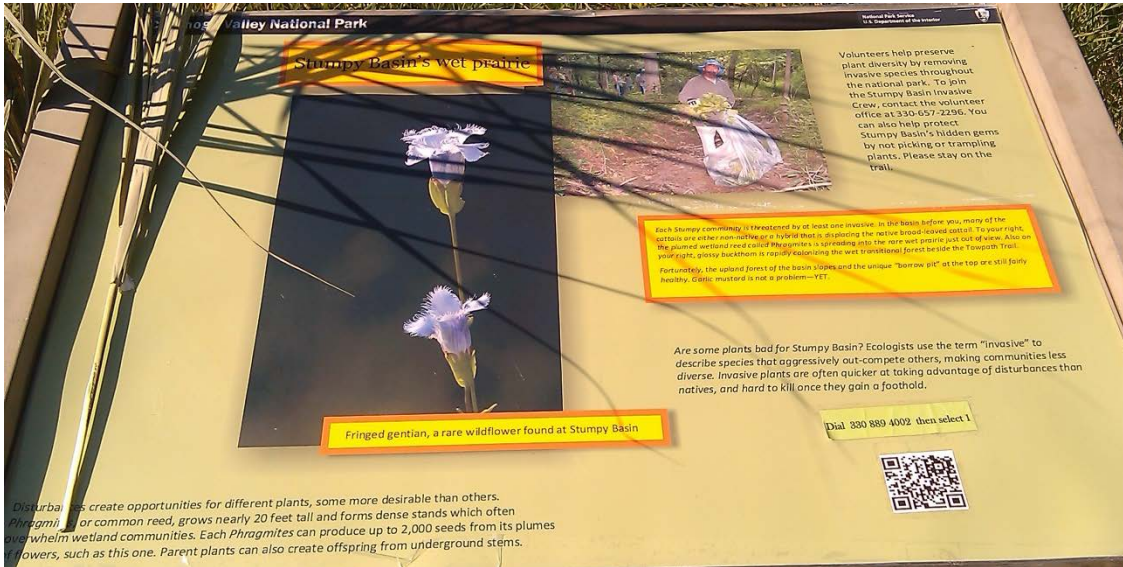

Image 4 – Phase 1 tactile prototype panel tested at Stumpy Basin

Image 5 – Phase 1 tactile prototype panel tested at Beaver Marsh

The most successful prototypes had an interactive feature (other than an audio push button). Fifty-eight percent of the observed visitors manipulated pieces on "Reverend Chidlaw's Trip," an interactive canal map with movable pieces, located at the Canal Visitor Center, 33% of the sample* turned the pages on a flip book located at Beaver Marsh, and 33% of the sample cranked the Beaver Marsh audio box to hear a recorded message.

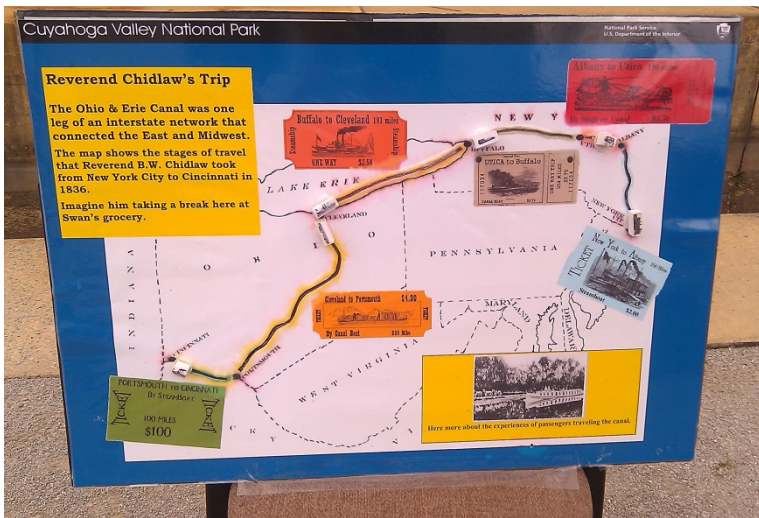Image 6 – Audio box installed at Beaver Marsh

Image 7 – Phase 1 interactive prototype "Reverend Chidlaw's Trip" tested at Canal Visitor Center

The success of the audio prototypes was mixed. Audio components (push button, cell phone, and QR code) were added to three of the prototypes and a fourth piece (the audio box) was present throughout the testing. The percentage of visitors that interacted with any of the audio components varied from 0% at the single wayside Lock 27 panel to nearly 33% of the visitors that interacted with push buttons on the "Canal Rest Stop" panel at Canal Visitor Center and 33% that interacted with the audio box at Beaver Marsh.

All of the Phase 1 prototypes reflected an increase in the percentage of visitors who read or interacted with the panels compared with the baseline. Chart 4 shows the percentage of visitors who read or interacted with the panels before and after prototypes were installed.

Location	Baseline	Prototypes
Canal Visitor Center (cluster)	18% read	47% read or interacted
Beaver Marsh (cluster)	4% read 19% interacted with audio box	25% read 33% interacted with audio box
Stumpy Basin (single wayside)	4% read	8% read or interacted
Lock 27 (single wayside)	1% read	5% read

Chart 4 – Percentage of visitors who read or interacted with the panels at the four testing sites during Phase 1.

Phase 2
The second and final phase of formative evaluation at Cuyahoga Valley National Park was conducted in August 2011. The purpose of Phase 2 was to further define features that attracted "unfocused" visitor attention to the prototypes and to test features that engaged visitors in the prototype either through reading, touching, interacting, or using a cell phone. Testing was conducted at a pass through site with a single wayside (Stumpy Basin) and at a destination site with a cluster of waysides (Canal Visitor Center).

Three forms of data were collected on a weekday and a weekend day at each location: the number of visitors passing without stopping, unobtrusive observation of the visitors that stopped, and interviews with the visitors that stopped.

Four stages of prototypes were tested using a cluster of exhibits located at Canal Visitor Center. The panels included text, cell phone number, and a QR code through all four stages of testing. Larger titles, tactile elements, and interactive features were then added to the panels and tested.

Seven stages of prototypes were tested on the single wayside located at Stumpy Basin. The panel included a reed, text, cell phone number, and a QR code through all seven stages of testing. A larger title, lift flap, standing magnifying glass, Hazmat mannequin, and telescope were then added on or were positioned adjacent to the wayside panel and tested. The telescope color was changed during one of the stages.

The data does not indicate that the larger title attracted more visitors to the sign, because

there was no increase in the number of visitors stopping to read during that phase of testing.

Nearly 33% of the visitors lifted the flap affixed to the "Canal Rest Stop" panel at Canal Visitor Center. However, no one lifted the flap on the "Locking Through" panel that was located on the opposite end of the testing space. More visitors passed by the "Canal Rest Stop" panel than the "Locking Through" panel. As a result, park staff and Monica Post believe the higher attraction* rate for the "Canal Rest Stop" lift flap may be attributed to the location of the panels and should be studied further. At Stumpy Basin, the flap was lifted by 56% of the visitors that stopped.
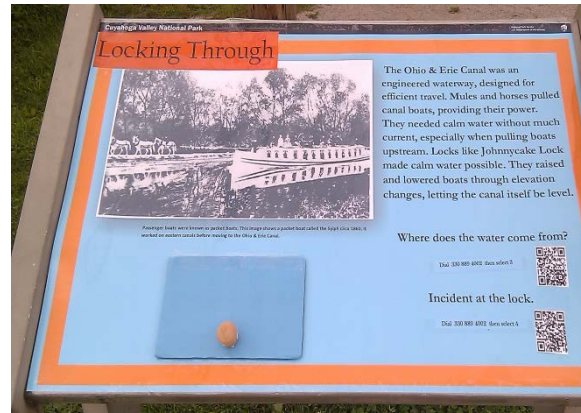

Image 8 "Canal Rest Stop," Image 9 "Locking Through," and Image 10 "Stumpy Basin's Prairie" panels feature lift flaps, cell phone numbers, QR codes, and larger titles.

The data does not show a definite correlation between the addition of a 3-dimensional (3-D) element and attraction. As seen with the lift flaps at Canal Visitor Center, the location of a specific panel may have had an effect on the attraction power of the 3- D element. A variety of 3-D elements including reproduction pieces, canal boat model, and a mannequin were tested.

Image 11– A barrel, china cup and saucer, and pipe were added to the "Canal Rest Stop" panel.
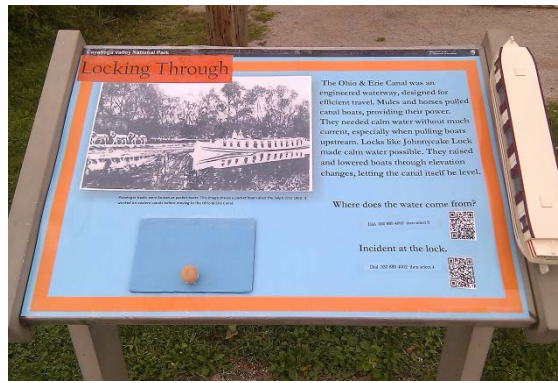
Image 12 – A canal boat model was added to "Locking Through."

Interactive elements including visual directors* were also tested. At Canal Visitor Center, "Reverend Chidlaw's Trip" panel (See Image 7) was tested again. During this phase of testing, 19% of the visitors interacted with the panel and 44% read the sign. Three different types of visual directors were tested at Stumpy Basin including a telescope in neutral and bright colors and magnifying glass. Twenty-two percent of the nine visitors that stopped, looked through a visual director.

Image 13 - Telescope and Image 14 - Magnifying Glass were tested at Stumpy Basin.

Throughout all of the stages of testing, a cell phone number and QR codes were featured on the panels at both locations. Visitors could call the number or scan the code to access recorded information. Five percent of the visitors at both locations took a photograph of a panel. It is not known if they were scanning the QR code. One visitor who completed a questionnaire did mention seeing the QR code.

CUVA Lessons Learned
The project at Cuyahoga Valley National Park included two phases of formative evaluation using multiple data collection methods, testing stages, and audio and tactile features. Phase 1 relied on unobtrusive observation and participant questionnaires. Through unobtrusive observation gender, age, number of people in the group, and an assessment of visitor motivation ("focused" or "unfocused") was noted. Behaviors were recorded for visitors that glanced, commented, or stopped in the testing space. Questionnaires were given to participants that stopped and looked at the waysides. Phase 2 methods included unobtrusive observation, participant questionnaires, and tracking. To identify the number of "focused" visitors, tracking was used to count the number of people who passed through the testing space without commenting, glancing, or stopping. Data collectors unobtrusively observed the behavior of visitors who glanced, stopped, read, interacted, or commented at any of the panels within the testing space. A random sample was used to select visitors to complete a questionnaire.

Both phases of evaluation showed a correlation between motivation and behavior. Visitor motivation ("focused" or "unfocused") influences behavior at the park. During the two days of Phase 2 testing at Stumpy Basin, only 3% of the visitors stopped at the single wayside compared to the 97% of the visitors who did not stop. The majority of the Stumpy Basin visitors were identified as "focused." At Canal Visitor Center, 17% of the visitors were attracted to at least one of the clustered panels, and 83% of the visitors did not stop inside the testing area.

Phase 1 testing revealed and Phase 2 testing reinforced the need to filter out the variable of motivation and limit data collection to "unfocused" visitors. Questionnaire data collection was specifically directed at "unfocused" visitors during Phase 2 by inviting only those that stopped at a panel to participate. "Focused" visitors were recorded to determine how many were not attracted to the panels.

In both Phase 2 testing areas, the majority of visitors that stopped were not "regular" park visitors. At Canal Visitor Center, 71% of the visitors that stopped and participated in the questionnaire had never been to the park before or had been to the park four times or less in the past year. At Stumpy Basin, 67% had never been to the park or had been to the park less than eight times in the past year.

The data indicates that two different audiences are visiting Cuyahoga Valley National Park. As a result, different wayside panels need to be developed to attract each audience. Approximately 70% of those that are willing to stop and read a panel are either new or infrequent visitors who are in the park spending time with friends and family. New or updated information is less critical to this audience than for those visitors that pass the

panels daily or weekly.

For the audience that comes to the park daily or weekly to bike, run, or walk, updated information and the delivery method are important. "Make signs vertical for bikers to read" was a suggestion offered by a questionnaire participant. Data showed that these "focused" visitors were unlikely to stop at the existing waysides. Park staff should consider testing a vertical panel placed perpendicular to the Towpath with simple, large text and photos or illustrations that are changed frequently to determine the efficacy of this suggestion.

Future testing should focus on isolating variables. During Phase 2 testing the motivation variable was filtered out, but there were still many other variables affecting the study results including panel location, types of interactive features, types of 3-D elements, topics, and physical resource features such as the lock. Perhaps the most significant variable to isolate in future testing is location. The influence of location becomes most apparent when comparing two similar panels located at Canal Visitor Center. Both panels originally had black and white photographs, a QR code, and a cell phone tour number. Larger titles, 3-D elements, and interactive elements were added in subsequent stages of testing. The only differences between the panels were content, quantity of text, and location. Data showed a vast difference between the number of visitors that stopped at the "Canal Rest Stop" panel and those that stopped at the "Locking Through" panel. The Canal Rest Stop panel influenced visitors to read or interacted with "Canal Rest Stop" 37 times compared to 10 visitors who read or interacted with "Locking Through." Location appears to be the reason why. Sixty-four percent of the visitors in the Canal Visitor Center testing area passed "Canal Rest Stop" and only 13% of the visitors passed in front of "Locking Through."

CUVA Return on Investment
The studies revealed the importance of determining the target audience and designing a product that best meets their needs. With further prototype testing, the final product will be more attractive to the target audience and staff outcome goals will be met. During Phase 2 park staff were trained and participated in the formative evaluation data collection techniques used. These skills will support future efforts to isolate more variables and to refine and test the prototypes.

Kennesaw Mountain National Battlefield Park (Nov. 2010 – July 2011)

Introduction
The goals of the Kennesaw Mountain National Battlefield Park study were to increase audience diversity in programs and exhibit spaces through program modifications that reflect African American interests and to measure the overall effectiveness, outcomes and relevancy of interpretive programs and media for the park's African American visitors.

To accomplish these goals, the park conducted a three-stage (front end, formative, and summative) evaluation process. Before the NPS Evaluation of Interpretation and Education Services project was awarded, the park, in partnership with Kennesaw State University, completed a front end evaluation. A series of focus groups were held during the summer 2010 with African Americans to explore if they visited Kennesaw Mountain National Battlefield Park, if they visited the programs and exhibits at KEMO, and if not, what were the reasons they were not visiting. The focus groups revealed that by telling the historical stories of African Americans, target audience members would become more interested, participants were concerned that the real African American story might not be interpreted accurately, and any "new" interpretation might lead to criticism and denial from traditional white Southerners that might threaten African American visitors' sense of safety at Kennesaw Mountain National Battlefield Park.

Front End Evaluation Follow Up
Based on the focus group responses, the park staff, in consultation with Monica Post, decided to address the following questions before developing a specific program or event that would best reflect African American visitors' needs and interests:
- Why does the park see audience diversity reflective of the urban greater Atlanta population, whereas the visitor center sees very few African Americans?
- What does the local African American community understand and know about the visitor center exhibits and programs?
- In what types of programs will African Americans be more likely to participate?
- Where does the target audience get information regarding programs and events in which they choose to participate?

Four different sets of questions were created and distributed at a reception for the focus group participants held at the park in November 2010. Twenty-three questionnaires were completed by reception participants many of whom were members of history organizations and had a special interest in history. Responses indicated that 78% of the participants had not been to either the park or the visitor center, and that 43% of the participants looked to target publications such as the newsletter for the Afro American Historical and Genealogical Society for information about events that they attend.

Formative Evaluation
Park staff requested that the formative evaluation study include everyone visiting the park with a special emphasis on learning more about the activities African Americans engage in while visiting the park. Unobtrusive observation and questionnaires were used to collect data during a special event held at the park in April 2011.

Random samples of visitors who went inside the museum and attended the five programs were asked to complete a questionnaire. Results of the questionnaires showed that 15% of the respondents considered themselves African American. Twenty-five percent of the questionnaire respondents came specifically for the event. Of the 26 questionnaire participants, 10% mentioned visiting the park for the museum or programs only. Fifty-three percent stated that they came to the park for recreational purposes, and 29% mentioned that their visits were both museum- and recreation-related.

Baseline data was not collected prior to the event so to better understand the current audience demographics, baseline data was collected on the Sunday following the event. In the area around the visitor center, 923 visitors were unobtrusively observed and 15% were estimated to be African American. To strengthen the baseline data on visitors coming into the visitor center, during May 2011, park staff collected racial count data in the visitor center on weekends. This data revealed that 16% of the visitors entering the visitor center on weekends were estimated to be African American. More baseline data should be collected to compare non-event and event visitation.

The formative evaluation study results suggested that African American attendance may increase at future events, if park staff:
- Offer programs that tell African American stories and publicize the programs more aggressively.
- Increase the on-site visibility of an event and the individual programs to attract the recreational visitors.
- Utilize rangers and volunteers as on-site event promoters.

Summative Evaluation
Using the focus group suggestions and formative evaluation recommendations, the park held an African American-focused event in July 2011. A summative evaluation was conducted during the event that featured textile artist Annie Greene and storyteller/performer Joanna Maddox. Three data collection methods were employed for the summative evaluation including tracking and timing*, unobtrusive observation, and questionnaires.

In an attempt to generate more publicity and encourage more African American participation in the event, park staff sent a press release out a few days before the event to a variety of local newspapers, event calendars, and online publications. An e-mail announcement was sent to the Kennesaw State University consultant for distribution to the front end evaluation participants. Anecdotal evidence suggested that the press release was not published or posted online and the e-mail was not distributed.

The lack of publicity for the July event was confirmed by the data. The majority of the July visitors found out about the event after coming to the park. Only two people knew about the event prior to coming to the park and they were associated with the presenters or heard about it from the presenters. Volunteers stationed in front of the visitor center were able to generate some visitor interest in the April event and yet had little to no

influence in visitor participation during the July event. While 15% of the April participants found out about the event through email, none of the July participants received an email announcement.

The summative evaluation questionnaires found that 47% of the visitors coming into the visitor center were recreational visitors who came to walk or hike up the mountain. They only entered the visitor center to use the restroom and vending facilities. Before coming to the park, they did not intend to see the museum exhibits, come to an event, or visit the battlefield. Twelve percent of the African American visitors who completed a questionnaire stated that they came to the park to walk or hike. Chart 5 summarizes all of the reasons visitors came to the park.

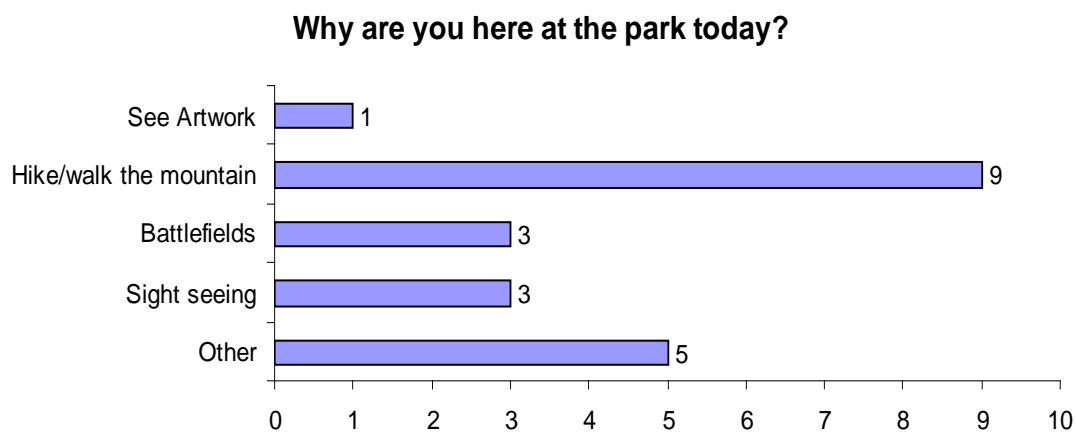**Why are you here at the park today?**

Chart 5 – KEMO summative evaluation responses reveal the reasons why visitors came to the park

Summative evaluation questionnaires also asked visitors to state the types of post-Civil War African American programs and events they would like to see at the park. Ironically, given the small number of attendees at the African American textile artist exhibition and storyteller/performer's program, the responses indicated that participants wanted more programs, exhibits, or art shows, and almost a third of the participants wanted programs that focused on or about African Americans.

KEMO Lessons Learned
The study at Kennesaw Mountain National Battlefield Park used three stages of evaluation and multiple data collection methods. Front end evaluation included focus groups and questionnaires. Unobtrusive observation, questionnaires, and audience racial counts* were the formative evaluation data collection methods. Summative evaluation data collection methods were unobtrusive observation, questionnaires and timing and tracking.

Although baseline data collection results indicates that there is a higher percentage of African Americans coming to the visitor center than park staff originally thought, there is still a gap between the percentage of African Americans coming to the park and African Americans living in Cobb County (where KEMO is located). The 2009 US Census

Bureau statistics indicate that 24% of Cobb County is Black or African American. If staff members are interested in increasing the number of African American visitors to the park, they should consider conducting focus groups with African American *park visitors*. Possible questions may include: What types of programs would be of interest to African American visitors and their families? How do they prefer to find out about these programs? What times and days would they participate in these programs? How will they get to the park for these programs? What might prevent them from coming to a program at the park? Data from a focus group that more accurately represents African American park visitors (the desired target audience) rather than African Americans who have an interest in history and genealogy, yet never have never visited the park will provide clearer direction for future program and exhibit planning.

Baseline numbers are still uncertain. Baselines that were established for the study were conducted on one day in April 2011, and only on weekends in May 2011. The brief data collection period and the data collection method provide an idea of target audience visitation, but the results are not completely accurate. It should be noted that the baseline data was measured though unobtrusive observation which is often used in studies of informal learning organizations. *Paying Attention: Visitors and Museum Exhibitions*, a study conducted by Beverly Serrell, shows dramatic results from unobtrusive observation data.

Demographics are a part of all unobtrusive observation studies, however, racial assessments are not usually a recorded demographic. For KEMO, unobtrusive observation was the most efficient data collection method available for determining the audience in a high visitation area. The most accurate method to measure racial identity would have been to ask each person coming into the visitor center to self-identify their race. Since there were more than 450 visitors coming into the visitor center on Saturdays and Sundays in May, approaching each person would have been impossible and might make them uncomfortable.

KEMO Return on Investment
While this project was initiated on the supposition that most African American visitors only used the park for recreation, this study revealed that 16% of the visitors who come into the visitor center are African American. Evaluation played a role in defining what some African American audiences want to see and do when they visit the park as well as the types of communication they prefer.

Fearless Evaluation

The final component of the Evaluation of Interpretation and Education Services project was the development of a manual and presentation of a training course. The evaluation manual and training course will provide NPS interpreters, educators, and managers with lessons learned from the three park projects, describe the stages and methods of evaluation, and discuss possible applications of these studies.

Front end Evaluation
A front end survey was conducted in October 2011, to determine what NPS interpreters know about evaluation, what they think they know about evaluation, and how useful they feel evaluation is. Questions were also asked to determine what types of evaluation, if any, interpreters may have conducted or contracted; and what barriers including cost may prevent a park from conducting an evaluation. Interpreters throughout the NPS, including front-line staff, Chiefs of Interpretation, superintendents, educators, regional interpretive staff, and media specialists, were contacted through direct e-mail, regional e-mail lists, and tell-a-friend solicitations. Over 200 responses were received. Based on the results of the survey, the title "Fearless Evaluation" was created.

Fearless Evaluation Manual and Webinar
The training was based on the work conducted within the three parks to generate practical, economical, and useful evaluation methods for all parks to use. More than sixty NPS interpreters participated in part, or all, of the nine-hour "Fearless Evaluation" webinar and received the companion manual.

The content focused on a different phase (front end, formative, and summative) of evaluation each day. Video testimonials from HAVO, CUVA, and KEMO staff and interactive, experiential learning opportunities were presented. Homework assignments provided participants with the opportunity to create a front end focus group script, formative evaluation questionnaire, and conduct an unobtrusive observation of an interpretive program or media. Each of these assignments could then be used to conduct a future in-park study. The last assignment was completed during the webinar. The participants helped develop the questions that would be used to create the summative evaluation survey.

Fearless Evaluation webinar participants received a manual that contained an overview of evaluation, detailed information about each phase of evaluation, and study guides and worksheets featuring detailed instructions for creating evaluation instruments and conducting evaluation.

Summative Evaluation
A summative evaluation was conducted a week after the Fearless Evaluation webinar, and 50% of the participants completed the online survey. During the webinar, participants generated many of the questions that were included in the survey. Monica Post created additional questions to ensure that all aspects of the webinar and manual were evaluated.

Fifty percent of those that completed the survey indicated the webinar "exceeded" or "exceeded and surpassed" their expectations and 77% of the survey participants felt the manual was "effective" or "most effective."

One of the most significant findings comes from a retrospective post question that asked participants how comfortable they felt conducting evaluation before and after the webinar. Before the webinar, 27% of the survey participants felt "comfortable" conducting evaluation and no one felt "supremely comfortable." After participating in the webinar 81% of the participants felt "comfortable" or "supremely comfortable" conducting evaluation.

Another notable statistic is that 90% of the webinar survey participants plan to conduct evaluation. The 10% who do not plan to conduct evaluation gave reasons such as "perhaps in the future, but just finished evaluation w/OMB approval" and "I'm a front line interpreter not an interpretive planner."

Based on the front end survey results, a goal of the webinar was to take all fear out of conducting evaluation. To achieve this goal, participants not only received instructions on how to conduct evaluation, they were provided with the materials necessary to conduct evaluation. A survey question was asked to determine whether the participants felt they had the materials and resources needed to conduct evaluation. Almost everyone responded that they did.

Conclusions

On the surface the three separate park studies may seem to be vastly different from one another. However, a closer inspection will show that they share a single core principle: *Success of any program or media is based on identifying, reaching out to, and responding to the target audience.* In each study, a target audience was identified, their needs and wants were heard, and a response that addressed those needs and wants was created. The success of the response was evaluated, and next steps were established to strengthen and increase the level of outreach to the target audience. Different stages and methods of evaluation were used to identify the audiences, clarify their needs, and measure the success of the interpretive services that were developed.

At Hawai'i Volcanoes National Park, the target audience was local, native youth. Through focus groups it was determined that the ways to develop relationships with local, native youth include specialization, outreach, and repetition. An invisible barrier existed between the local communities and the park. Trust between the two groups had to be established so the park reached out to the communities and conducted programs within each community. Programs needed to be specifically designed for each community and offered on a regular basis to allow the trust and program to grow in tandem. Formative and summative studies showed that the three programs were beginning to address those needs. 'Ohana programs were developed in cooperation with and offered to locals from the Puna and Ka'ū communities at least three times in 2011. Since 2010, the Youth Internship Program has recruited youth from local schools to fill summer internship positions. For three years youth from local schools have been recruited and offered incentives to participate in the Digital Mountain fall film festival.

At Cuyahoga Valley National Park, the target audience was defined and redefined throughout the project. Findings indicated that there were at least two audiences using the Towpath Trail. The "focused visitors" (those at the park to bike, run, and walk for exercise) have distinctly different needs for content and delivery methods compared to the "unfocused" visitors (those that were at the park to sightsee, learn about the history, and spend time with friends or family). As additional prototypes are tested, these target audiences' needs will be better defined.

At Kennesaw Mountain National Battlefield Park, the target audience was African Americans. While they were visiting the park for recreational purposes, few African Americans attended programs or entered the museum. The study showed that a higher percentage of African Americans were coming into the visitor center than park staff originally estimated, but the percentages were still low in comparison to recreational visitors and local demographics. Study participants provided information regarding where and how they choose to find out about events and the types of events they choose to attend. Findings indicated that African American audiences want programs of cultural relevance to them and want to be informed of these programs through specialized publications, e-mail, and websites. Park staff began to address these needs by hosting two special events that offered insight into Civil War-era African American experiences. The

study indicated that ineffective advertising methods may have limited the number of African American participants.

The findings from these three studies can be applied to all NPS units when staff members are determining the best ways to identify, reach out to, and respond to target audiences. The front end evaluations conducted at Hawai'i Volcanoes National Park and Kennesaw Mountain National Battlefield Park provide examples of how to enlist the help of park neighbors, who may feel disenfranchised, to create programs that meet their needs and promote park stewardship. All three park studies serve as models for conducting formative evaluation for interpretive programs and media. The KEMO and HAVO summative evaluations provide evidence of this success as well as the challenges parks may encounter when trying to reach out to target audiences.

In addition to providing the foundation for higher quality interpretive programs and media and increased target audience involvement, evaluation provides parks with a credible demonstration of their intention to create the best possible product for a select audience. This alone carries significant weight with agencies and individuals with the power to provide financial and staff resources.

References

The Three Park Studies

Data collection instruments, field notes, and reports were created during each phase of the three park studies. All of the documents listed below have been included in a project zip file that is available for download on the Evaluation of Interpretation and Education Services webpage (http://www.nps.gov/hfc/products/FearlessEvaluations.htm).

<u>Hawaii Volcanoes National Park</u>
'Ohana Puna District Focus Group Notes
'Ohana Ka'ū District Focus Group Notes
'Ohana Puna District Focus Group Report
'Ohana Ka'ū District Focus Group Report
'Ohana Puna District Unobtrusive Observation Sheets
'Ohana Puna District Formative Questionnaire
'Ohana Ka'ū District Unobtrusive Observation Instrument
'Ohana Ka'ū District Formative Questionnaire
'Ohana Puna District Formative Report
'Ohana Ka'ū District Formative Report
'Ohana Ka'ū and Puna Summative Questionnaire
'Ohana Puna District Unobtrusive Observation Instrument
'Ohana Ka'ū District Unobtrusive Observation Instrument
'Ohana Summative Data
'Ohana Summative Report
Youth Internship Program Focus Group Notes
Youth Internship Program Focus Group Report- Kūpono McDaniel
Youth Internship Program Formative Report
Youth Internship Program Parent Survey Instrument
Youth Internship Program Participant Survey Instrument
Youth Internship Program Leaders Survey Instrument
Youth Internship Program Rough and Final Data Compilation
Youth Internship Program Summative Report
Digital Mountain Focus Group Report-Laura Williams
Digital Mountain Formative Report
Digital Mountain Summative Evaluation Questionnaires
Digital Mountain Summative Data

<u>Cuyahoga Valley National Park</u>
CUVA Phase 1 UO instrument
CUVA Phase 1 Questionnaires
CUVA Formative Phase 1 Report
CUVA Phase 2 UO instrument
CUVA Phase 2 Questionnaires
CUVA Formative Phase 2 Report
CUVA Phase 2 S Basin Rough and Final Compilation

CUVA Phase 2 CVC Rough Compilation
CUVA Phase 2 CVC Final Compilation

<u>Kennesaw Mountain National Battlefield Park</u>
KEMO Focus Group Reception Questionnaires
Kennesaw National Battlefield Park Focus Group Reception Report
KEMO Formative Questionnaires
KEMO Formative Evaluation of Programs of Interest to African Americans Report
KEMO Summative Questionnaires
KEMO Summative Evaluation of Programs of Interest to African Americans Report
Kennesaw Summative art show data
Kennesaw Summative storyteller data

Additional References

Glass-Avery, H. (2011). *Assessing African American Attitudes Toward the Civil War.* Focus Group Final Report prepared for Kennesaw Mountain National Battlefield Park, National Park Service. Kennesaw, Georgia: Kennesaw State University.

Pease, J.L. (2011). *Parks and Under-served Audiences: An Annotated Literature Review.* Report prepared for the National Park Service. Ames, Iowa: Iowa State University.

Serrell, B. (1998). *Paying Attention: Visitors and Museum Exhibitions.* Washington, DC: American Association of Museums.

Glossary

Attention - pre-defined behaviors toward or about an experience observed and recorded by a data collector. A glance, look, stop, read, listen to presenter, ask a question, and comment to friend or family member are all forms of attention.

Attraction - the ability of a program or media to draw attention by appealing to a visitor's emotions or senses. A visitor can be attracted at different levels to an exhibit or program. For example, a visitor can be attracted to a wayside exhibit, but not read it. Or a visitor can be attracted to a wayside exhibit and then attracted into reading the exhibit. The same is true for programs. A visitor can be attracted to a program or event, but choose not to participate. Or a visitor can be attracted to a program or event, then attracted into the event, and become an active participant.

Audience Racial Count - a subjective judgment on the racial heritage of an individual based on visual analysis.

Focus Group - a planned meeting of 8 -12 target audience members or representatives of a target audience. Focus groups are scheduled in advance and should not last longer than 1.5 hours. Focus group questions are designed prior to the focus group and led by a moderator who determines if the script must be followed definitively or if deviation from the script is appropriate.

Formative Evaluation - evaluation conducted during the design phase, as the project is being designed, but before the project is too far along to make changes. Formative evaluation is the time to try out as much of the design as possible as well as to make adjustments and improvements before going into final production. Formative evaluation in exhibit design is conducted on cardboard or foam core prototypes and mock ups. In program design, inexpensive props may be used. During this phase, how the audience uses and responds to the proposed design; the take away messages, what parts work, what needs to be changed and what needs to be removed, are determined. Changes and modifications that are identified during formative evaluation are applied to final design. Formative evaluation is usually conducted in more than one stage.

Front End Evaluation - evaluation conducted at the beginning of the design phase of a project. Front end evaluation can help staff define and write a central idea or theme, but a topic must be established before starting a front end study. Front end evaluation is used to find out what the audience knows already, their vocabulary, misconceptions, and how they want to learn.

Holding Power - how long an experience holds a visitor's attention before s/he move on.

Instrument - the tool or data collection sheet used when collecting data. Evaluation instruments include questionnaires, maps, focus group scripts, and unobtrusive observation recording sheets.

Interaction - planned physical behavior between a media component or presenter and a visitor or participant. Examples of behaviors associated with signs and panels include lifting a flap, turning the crank, touching. Behaviors observed during presentations include questions, hand raising, and audience participation.

Interview - a series of open- and closed-ended questions that are read by an interviewer, and answered verbally by the participant. Responses are written or typed by the interviewer.

Questionnaires - a series of questions that are designed and asked to a participant. Questions can be asked verbally (interview) or in text format (survey). Sometimes the word *questionnaire* is used interchangeably with *survey*. It is also used when the delivery method (interview or survey) is undetermined.

Read - a visitor that stops and looks at a sign for more than two seconds is assumed to be reading. A behavior documented during data collection.

Retrospective Post Questionnaire - a questionnaire given at the conclusion or after an experience that asks participants to respond based on their knowledge and attitudes prior to the experience and after the experience. In many ways similar to a pre/post questionnaire except the retrospective post is given only once at the end of the experience.

Sample - the people that are participants in the study. They may be randomly selected, volunteer, or may be unaware of their involvement (unobtrusive observation, tracking, and timing).

Shared Interaction - interaction shared by more than one participant that is documented during data collection. Examples of behaviors associated with signs and panels include a parent pointing out text or photos to a child, a child encouraging a sibling to "smell this." Behaviors observed during presentations may include one participant volunteering themselves and a friend, nudging a neighbor in response to something the presenter said or did.

Stop - a visitor that stops walking, running, or biking for more than two seconds. A behavior documented during data collection.

Summative Evaluation - evaluation conducted after the program has been presented a few times or the interpretive media has been in use for a while. Summative evaluation is not intended for making improvements. It is intended to measure program or exhibit success. Summative evaluation measures take away messages, what visitors feel, what they did, how they behaved, their future intentions. Cognitive gain can be measured in a summative evaluation, but only under specific circumstances.

Survey - series of open- and closed-ended questions that are read and answered in writing or typed by the participant.

Thoroughness of Use - measurement of what program or media components attract attention, how long they hold visitor attention, and what visitors are doing.

Tracking - data collection method that is used to measure visitor use patterns (where visitors or participants are going). The paths visitors use to move through an exhibit or program space.

Tracking and Timing - data collection method that tracks and times visitor use patterns, and how long they spend within a space or at a program.

Unintended Interaction - unplanned physical behavior observed between a media component or presenter and a visitor that is documented during data collection. Examples of behaviors associated with signs and panels include slamming a door, climbing on, or using components to pester companions. During presentations visitors may assist the presenter, heckle the presenter, or throw rotten tomatoes.

Unobtrusive Observation - data collection method used to measure attraction, holding power*, and visitor behavior for a program or media. Data collectors observe and record participant behaviors and demographics.

Visitor Use Pattern - traffic pattern visitors follow (e.g. how they enter an experience, where they go first, and where they go next).

Visual Director - exhibit component that directs a visitor's visual attention toward an object or in a specific direction. A visual director can be binoculars, a telescope, microscope, magnifying glass, glasses, arrow, or circle that visitors look through.