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Digital Visitor Evaluations at the NHA

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Digital Visitor Evaluation at the NHA

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Abstract

The goal of this project was to create technology-assisted surveys for the Nantucket Historical Association (NHA). After researching industry best practices and consulting with NHA staff, the student team used web-based software to create a 2014 NHA Programs Survey and Museum Survey. The team conducted public testing to gauge impressions of the digital technology, and analyzed response data from the implemented surveys. With the instruments developed, the NHA will be able to collect more in-depth visitor feedback that will help the NHA improve its administrative decision-making and adjust its practices to better meet its patrons' needs. It is our hope that the NHA continues to use and create digital surveys to further enhance visitor experiences.

Acknowledgments

Overall, it has been a great pleasure being able to work and interact with the community on the island of Nantucket. Through this project experience, we have expanded our knowledge of and appreciation for the role of the Whaling Museum in local culture. We would like to commend all the work done by the Nantucket Historical Association on preserving the island's rich history.

We would like to thank our sponsor liaisons Marjan Shirzad and Katie Schoorl for all the help they have given us. They were supportive and constructive throughout the survey development process and continuously provided us with quality feedback. We are grateful to Marjan and Katie for always making sure our project needs were being met.

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Executive Summary

In recent decades, the museum industry has taken an increasingly constructivist approach to its educational practices, focusing more on mediating visitor interpretation rather than providing structured knowledge in a didactic fashion. The importance placed on the visitors' personal interpretation of exhibits has led to an increased need for comprehensive visitor evaluations. The feedback collected through evaluation contributes significantly to all areas of museum operation, such as marketing, collections management, exhibit design, and visitor services. The implementation of these types of systematic evaluation, however, often requires substantial human resources. Progressively, museums are integrating technology into visitor evaluation practices to increase efficiency and to facilitate the process of gathering visitor feedback, significantly reducing the need for human supervision.

While the museum industry as a whole is incorporating technology into its culture, the focus of this project is on the operations of the Nantucket Historical Association—specifically the Nantucket Whaling Museum. Like other small museums, the Whaling Museum has limited staff, time, and resources—making the usage of pen and paper surveys mostly infeasible. Technology has the potential to alleviate staff members of many of the responsibilities regarding the facilitation of visitor surveys. The student team used digital technologies to make the Nantucket Whaling Museum's surveying methods as streamlined and comprehensive as possible.

Statement of Project Goals and Objectives

The overall goal of this project was to explore how digital visitor evaluations could be implemented at the Nantucket Historical Association. In order to achieve this goal, the team established four project objectives as described below, each with a set of associated tasks.

- **Objective 1:** Determined state-of-the art surveying practices in the museum industry;
- **Objective 2:** Examined the current and preferred visitor evaluation methods at the Nantucket Whaling Museum;
- **Objective 3:** Developed a suite of technology-assisted survey instruments; and,
- **Objective 4:** Provided recommendations for the use and maintenance of the instruments developed.

Methods

  To accomplish the project goal, the team began by interviewing NHA staff members to gather the opinions of different departments, their respective goals, and more details on the data they currently collected. This determined what surveys—and what distribution methods— best suited each of the museum's needs. The team categorized the responses and developed questions to be included in each survey. Ultimately, the team narrowed their focus to two surveys: the 2014 NHA Programs Survey and the Museum Survey.

  As the team developed survey questions, they simultaneously created digital versions using an online survey provider. In an iterative process, the team engaged the museum staff to refine the content and digital format of each survey until both the student team and the staff were satisfied. After multiple rounds of in-house testing, the 2014 NHA Programs Survey was sent out to the NHA contact list and the Museum Survey had undergone three rounds of public testing in the museum. After analyzing the results of the two surveys, the team provided recommendations for the maintenance of the instruments as well as ways the NHA can further enhance their visitor evaluation practices.

Findings

Objective 1: Industry Practices

  To determine which online survey provider was the best fit for the NHA, the team utilized free trials, phone consultations, and online demonstrations. Conversations with survey providers centered on particular needs of the NHA, such as: the annual expected number of responses, the anticipated modes of survey delivery, and desired design elements. After receiving pricing quotes and trial accounts, the team recommended that the NHA use SurveyGizmo's Basic package to create future surveys. The NHA purchased a full annual subscription to SurveyGizmo, and the student team created surveys using this online account.

Objective 2: Current and Preferred Practices

  Through conducting interviews with NHA staff members, the major goals and areas of interest the team identified were advertising, branding, pricing, expansion of online ticketing, and email database expansion. The primary interests of our sponsor determined what surveys— and what distribution methods—best suited each of the museum's needs. Ultimately, the team

narrowed their focus to two surveys: the 2014 NHA Programs Survey and the Museum Survey. The 2014 NHA Programs Survey was an instrument to collect program attendees' opinions on the previous year's public programs, as well as generate feedback to guide the next year's programming. The Museum Survey was intended to serve as an in-house exit survey for visitors to the Whaling Museum. This would collect useful information about the visiting body, as well as feedback regarding the museum's exhibitions, galleries, and programs.

Objective 3: Develop Surveys

The team explored all the features offered within the Basic package of SurveyGizmo, and began developing the surveys in their digitized forms. The team utilized important features such as question routing and theme customization to create engaging and visually attractive surveys. Throughout the process, the team found ways to address the different interests of the NHA outlined above.

Then, alongside NHA staff, the team altered the wording, order, and flow of the survey questions many times to make the survey instrument more inviting to the visitor. The sponsors' perspectives and experience contributed numerous useful modifications to the surveys, and in many ways created a more humanistic experience in line with their brand as a modern and friendly historical association.

After many iterations of both surveys, the team was able to produce thoroughly tested deliverables. The 2014 NHA Programs Survey was sent to the entirety of the NHA's contact database—approximately 5,000 people—via email. The Museum Survey was administered to visitors on iPad minis throughout the Whaling Museum over three days of testing.

The 2014 NHA Programs Survey received a total of 59 completed responses from December 2nd to December 8th. This is not a large enough sample size to extrapolate results to the entire population of the NHA's mailing list, and was a lower-than-expected response rate. However, the team still performed analysis of these results via Excel and SurveyGizmo's Summary Report feature.

During public testing of the Museum Survey, the student team asked each survey taker a series of follow-up questions regarding usability of the instrument. This feedback added helpful third-party perspectives, and contributed to important modifications of the survey. Overall, the

team encountered less resistance from visitors than expected. Visitors generally responded positively to the digital prototype, and appeared interested and engaged while using it.

Conclusions and Recommendations

In-house Museum Survey

Conclusion 1: The qualitative results of our public testing of the Museum Survey indicate that visitors to the Nantucket Whaling Museum are not opposed to the idea of completing a survey on a small touchscreen device. Furthermore, we found that many of Nantucket's visitors and residents are pleased to provide their feedback on the NHA and its programs and exhibits.

Recommendations: To ease burdens on staff, we recommend the NHA keeps two iPad minis on stands. We also suggest that the Whaling Museum utilize SurveyGizmo's "Kiosk Mode" feature which automatically refreshes the survey if it is left unattended for a certain amount of time.

Conclusion 2: During our testing, team members were able to stand near the survey taker as they used the devices. It is reasonable to conclude that in a different environment—where the survey taker would not feel as closely watched—there is a greater chance that users will try to exit out of the survey and open other applications.

Recommendation: As a precaution, we recommend the use of Guided Access on all iPad minis used for the Museum Survey which will provide limitations to the visitors so that they stay within the survey, and do not power off the device.

Large Scale Survey Distribution

Conclusion: As shown by the distribution of the 2014 NHA Programs Survey, email is an effective tool to disseminate a survey to members of the community. Therefore, there is the potential to collect large amounts of data via survey campaigns.

Recommendations: Given the low percentage of completed responses against the number of emails opened in the distribution of the 2014 NHA Programs Survey, we recommend the NHA send follow-up emails, social media blasts and offer incentives to encourage further responses.

Modifying and Creating New Surveys

Conclusion: In the future, the NHA will want to create different surveys for other purposes or because museum programs or activities have changed. Because all of the surveys are available online, all preliminary projects are preserved in the account, so that the NHA can use them as a starting point if so desired. These developed surveys consist of: Initial Membership Survey, Membership Renewal Survey, and Individual Program Survey.

Recommendation: Based on the performances of the 2014 NHA Programs Survey and the Museum Survey, it is our recommendation that the NHA implements the other preliminary surveys as well, and distributes them via the appropriate avenues of communication.

Using Survey Data

Conclusions: From our analysis of responses to the 2014 NHA Programs Survey, we have found that surveys provide useful feedback that should not be ignored. These comments effectively enable the museum to have an honest "conversation" with its patrons through the digital medium.

Recommendations: For the organization of this response data, we recommend the use of Summary Reports built in to SurveyGizmo. Summary reports provide high-level analysis—including charts and graphs—that are sufficient enough for most of the NHA's needs. For more in-depth analysis, the team recommends importing data from the 2014 NHA Programs Survey into the Excel workbook developed by the team. The workbook created collapses data and makes sorting and filtering possible.

Afterword

This project successfully provided the NHA with a foundation for further use of digital technology in its surveying practices. The instruments delivered will be useful tools for guiding future executive decisions regarding different aspects of museum and program management. Most importantly, these surveys enhance the organization's ability to have more open and honest conversations with its patrons through the digital medium—thereby allowing more members of the community to express their concerns with, and regards for, the significant efforts of the Nantucket Historical Association.

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1 Introduction

In recent decades, the museum industry has taken an increasingly constructivist approach to education, focusing more on mediating visitor interpretation rather than providing structured knowledge in a didactic fashion. The importance placed on the visitors' personal interpretation of exhibits has led to an increased need for comprehensive visitor evaluations. The feedback collected through evaluation contributes significantly to all areas of museum operation, such as marketing, collections management, exhibit design, and visitor services. The implementation of these types of systematic evaluation, however, often requires substantial resources, especially human resources, that may be beyond the abilities of many small museums. Increasingly, museums are integrating technology into visitor evaluation practices, to increase efficiency and to facilitate the process of gathering visitor feedback, significantly reducing the need for human supervision.

At the Nantucket Whaling Museum, which welcomes approximately 60,000 visitors per year, human resources are extremely limited. With fewer than 40 staff members on the roster at a given time, conducting pen-and-paper surveys is often not feasible. Thus, in order to reduce the amount of staff required to gather visitor feedback, it is necessary for the Nantucket Whaling Museum to join the era of digital visitor evaluation.

This project identified state-of-the-art museum industry practices and assessed the current surveying methods at the Nantucket Whaling Museum in order to develop digital evaluation tools that are tailored to museum needs.

By developing digital visitor evaluation tools and providing recommendations for their use and maintenance, the project helped promote the integration of innovative digital practices into the Whaling Museum's operations. The museum is now able to more efficiently collect and analyze visitor data, which they can use to improve upon exhibits, programs and everything else that influences visitor learning and enjoyment. With its transition into the digital realm of evaluation practices, the Nantucket Whaling Museum is better equipped to provide the best overall experience to all who choose to delve into Nantucket's history.

2 Literature Review

This chapter explores the fundamental purposes of museums along with their need for visitor evaluations. Looking at historical evidence, it is shown how visitor evaluations have evolved into their current form. In modern visitor studies, museums are focusing more on the use of technology for engaging and dynamic visitor evaluations. The goal of this project was to help the Nantucket Historical Association enter the age of digital visitor evaluations.

2.1 Purpose of a Museum

How can museums maintain an enduring role in society? According to Alan Friedman (2007), there are three factors that contribute to a sustainable cultural institution: financial stability, intellectual offerings, and social standing (Friedman, 2007).

Since their inceptions, museums in the United States have largely succeeded in meeting all three factors listed above. According to the American Alliance of Museums (AAM), there are 850 million visits to American museums annually; that is more than the attendance to all major-league sporting events combined ("Museum Facts", 2013). Ford W. Bell, President of the AAM, stated that the most successful museums are "part of the social fabric of the community" and that these museums create "bonds that make their communities no more likely to entertain the museum going away as they would doing away with their schools" ("Are Museums Still Relevant?", 2013).

A recent study conducted for the Museums Association reports that there is a "strong, positive emotional attachment to museums by both visitors and non-visitors" (BritainThinks, 2013). The Museums Association study found that the public's attitudes toward museums are widely varied, though largely positive. These attitudes are reflected in Figure 1, which shows a word-cloud of survey respondents' spontaneous associations with the word 'museums.'

The fact that museums have such a well-established place in society is indicative that they, as a whole, meet their intended purpose. That purpose, however, is difficult to define. John Falk and Lynn Dierking (2013) theorize that the role of a museum changes depending on what 'lens' the museum is viewed through. The personal motivations of each visitor not only influence their expectations of what the museum *should* provide to them, but what the museum *can* provide to them (Falk & Dierking, p.66, 2013). This results in a variety of responses when museum-goers are asked to describe the museums they have visited; often, visitors will acknowledge only the aspects of the museum they intended to utilize, and any other offerings simply do not exist in the realms of their experience.

2.1.1 Museums as Service Providers

As such, it is necessary for museums not to limit themselves to a single purpose, but to maintain a flexible understanding of what they afford to the general public. Mario Moutinho (2008) claims that museums should think of themselves first and foremost as providers of a service - that service being a 'visitor experience.' Moutinho shares the belief with Falk and Dierking that visitor experiences are unique to each individual, and that the optimal museum is one that changes day by day, visitor by visitor. (Moutinho refers to this quality as "heterogeneity" (Moutinho, p.5, 2008).)

Moutinho also maintains that the service provided by a museum is essentially time-bound. That is, the visitor experience exists only from arrival to departure, and the museum has

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to prove the worth of its product within that time span. It is reasonable to conclude that this time constraint contributes to the narrow descriptions of museums that visitors supply—as discussed above. Simply put, visitors do not have the time (or the motivation) to utilize each of the museum's offerings, so the visitor's experience is defined by what has been perceived in a single continuous span of time.

However, this theory contradicts the well-established findings of other researchers whose focus is on the long-term effects of museum visitations. Longitudinal studies have found that the impacts of a single museum experience are not limited by time; museum experiences contribute to learning, conversation, and changes in attitude (Anderson, Storksdieck, & Spock, 2007).

It is possible to reconcile these two seemingly-conflicting areas of thought by concluding that the visitor experience is the most specific, personal service a museum can provide, while the long-term effects of the experience are part of a larger service to society. In other words, the museum's purpose is to serve both visitors and society.

2.1.2 Essential Purposes

On the larger scale, a survey of museum-goers conducted for the British Museums Association sought to identify three "Essential Purposes" for a museum (BritainThinks, 2013). These essential purposes contribute most to the role of a museum in modern society, and are less applicable to the personal context of the visitor experience. The essential purposes are as follows:

Preserving Heritage. Survey respondents considered the preservation of heritage to be both a matter of historical significance and of national pride. This essential purpose is part of the public's core beliefs and transcends cultural divides. A notable case is the National Museum of the American Indian. Since its opening in 2004, the museum has come under criticism—by Native Americans and non-Native Americans alike—for downplaying, or even omitting, the negative consequences of European colonization (Lonetree & Cobb, 2008). The National Museum of the American Indian is clearly an important institution for the Native American population. The continued political debate surrounding it is a mark of the public's strong emotional attachment to museums - particularly when those museums are seen as instruments for the preservation and celebration of a fading culture.

Maintaining and Displaying Collections. Though some museum leaders resent being considered "mere collectors" of objects, those who participated in the study regarded the collections as the main draw to a museum ("Are museums still relevant?", 2013). Collections provide a tangible link to heritage that the culture of a community cannot always provide. As such, this is part of the larger role of museums in society.

However, in the matter of displaying collections, the survey respondents emphasized a desire for interactive exhibits as well (BritainThinks, p. 4, 2013). This interactivity contributes to the creation of unique visitor experiences. Therefore, the maintenance and display of collections is a service both to visitors and to society.

Providing Knowledge. The Britain Thinks study illustrates two facets to this essential purpose: educating and entertaining children, and providing trustworthy, non-biased information to adults. The former is part of the larger evolution towards community engagement. Museums must have at least some focus on the education of children, in order to have an impact on the community. As one respondent stated,

> *Children are more likely to learn from museums than reading about things in school. You probably take in more information from one visit to a museum.*

(BritainThinks, p. 13, 2013)

The second facet of this essential purpose is somewhat less intuitive. Although there is a general movement away from a didactic approach to education in the museum industry, museums still exist as authorities in their areas of expertise and are among the most trusted institutions in both the US and UK. As such, adults look to them to nurture their own learning via both research and exhibitions. In exhibition visits, there is a general dislike of being 'taught'; visitors prefer the freedom to interpret information in their own way - a process Falk refers to as "personal meaning-making" (Falk & Dierking, p. 14, 2013). This conflict has driven change in the way museums define 'education' and 'learning' for their visitors.

2.2 The Educational Role of a Museum

As shown in Figure 1, the most common words associated with museums are those relating to the educational aspects of museum-going ("educational," "learning," "information," "school trips," etc). Understandably, science institutions—which tend to place education as their

central goal—have proliferated. According to Falk (2013), "most of the growth in museums has been in … institutions like science centers and children's museums" (p. 14). For these museums, their cultural sustainability is largely dependent on their intellectual offerings, and their importance to unstructured education has been the driving force of industry change.

Eilean Hooper-Greenhill (1994) aptly summarizes early interpretations of what the visitor experience should be, what outcomes it should demonstrate, and how learning could best be nurtured:

> *Increasingly this experience is expected by visitors to be of immediate personal relevance with an interaction which is sustainable for several minutes and which results in a clearly identified knowledge gain. When this rapid and explicit benefit is not available, museums are not popular; where displays, discovery centres, responsive exhibits, dramatic performances and interactive videos enable this experience, museums are overwhelmed with appreciative vistors* [sic].
>
> (Hooper-Greenhill, p.8, 1994)

It is clear that the innovative methods of information delivery listed in this passage are an effort to appeal to visitors with different modalities of intelligence. However, this passage places misguided emphasis on a "knowledge gain" as the main drive of museum popularity. Instead, the strengths of museums with the features listed usually lie in the "personal relevance" and "interaction" noted, which are important aspects to the creation of unique visitor experiences, and which more closely align with current interpretations of learning.

Hooper-Greenhill (2004) suggests there has been a general shift from regarding learning as "mono-dimensional" to "multi-dimensional" (Hooper-Greenhill, p. 155, 2004). Instead of defining learning as the result of the acquisition of knowledge, learning is more defined by its process. To quantify this seemingly unquantifiable new definition of learning, Hooper-Greenhill has developed a set of five General Learning Outcomes (GLOs) for use by museums in the United Kingdom:

- *increase in knowledge and understanding;*
- *increase in skills;*
- *change in attitudes or values;*
- *enjoyment, inspiration, creativity;*
- *action, behaviour, progression.*

(Hooper-Greenhill, p. 163, 2004)

It is clear that the first two GLOs derive from the traditional mono-dimensional theory of learning. The last three GLOs—as well as the inclusion of 'understanding' in the first GLO— are more closely aligned to the multi-dimensional theory, and allow room for interpretation and

personal meaning-making as part of learning. Of course, the boundaries are blurred, however. Museums know that knowledge and skills are multi-dimensional and design multi-faceted exhibits and programs to cater to diverse types of knowledge, skills, and interests. This is the major change in the educational role of museums.

In the United States, the National Science Foundation has created standards for measuring the effectiveness of an informal science education project (such as a program at a science museum). Parallel to the GLOs described above, these standards focus on the impacts on a participant's: knowledge, interests, attitudes, behaviors, and skills (Friedman, 2008).

Educational methods have become more personalized and widely varied, resulting in a more flexible understanding of the educational purposes of a museum. The efforts of the National Science Foundation are an example of the ways organizations attempt to gauge how well they are fulfilling these educational purposes. However, museums need instruments for measuring their performance within all of their roles.

2.3 Visitor Evaluations

Such instruments are presented in the form of visitor evaluations—which are integral tools for assessing whether or not a museum is meeting the expectations of its visitors. Survey responses indicate visitor reactions and preferences for both the museum's collection and facilities. The survey results affect decision-making regarding exhibitions, programs, building maintenance, and marketing strategies. Third parties may have interest in survey results as well. For example, a local government may have interest in visitation numbers, because the museum would likely be considered a source of tourism revenue. Additionally, exhibition sponsors are interested in the performance of their investments in cultural institutions.

Given its importance, the topic of visitor evaluations has been studied extensively. As a result, visitor surveys have changed parallel to the museum industry itself.

2.3.1 Evaluation Through Time

As the museum industry has evolved over the years, so has the overall experience of the museum visitor. Prior to the twentieth century, museum visitor experience was dictated largely by curators and directors, who created the exhibits and interpretive plaques that displayed what they desired the visitor to take away. As a result, museum approaches to education were quite limited (Hein, 2006). Entering the twentieth, and even the twenty-first, century, museums have increasingly adopted a more constructivist view of the visitor experience, especially museums

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that aim to promote family learning, such as science and natural history museums in particular. Museums have become more focused on mediating visitor interpretation instead of thrusting upon them structured knowledge. In order to better assess the museum's effectiveness in encouraging visitor meaning-making, museums need visitor feedback.

Before the twentieth century, visitor studies were almost non-existent. In fact, according to esteemed museum studies expert George Hein, only one published visitor study was performed in the nineteenth century (Hein, 1998). In 1884, Higgins performed a study that classified museum visitors as being a student, observer, or lounger; his study cultivated a better understanding of the educational value of museums. After Higgins's entrance into the field of visitor studies, further studies were scarce. It was not until 1916 that a visitor study was conducted by Benjamin Ives Gilman on how exhibit design physically affects the visitor, during which he coined the term "Museum Fatigue" (Hein, 1998) .

The next set of evaluation studies were conducted in the 1920's by psychologists Edward Robinson and Arthur Melton (Bitgood, 1996; Hein (1998) Yalowitz & Bronnenkant, 2009). These pioneers systematically observed the movement of visitors throughout museum galleries, and examined the numerous 'environmental' or 'contextual' variables influencing the path taken by the visitors and the design factors that drew attention to exhibits. One of their most prominent observations was that visitors displayed a tendency to turn right upon entry into the gallery.

Through his studies in 1928, Robinson produced the terms *attracting power* and *holding power*. *Attracting power* is defined as the extent to which visitors stop to view a specific exhibit, whereas *holding power* is the amount of time visitors spend viewing that exhibit (Hein, 1998). Melton's work focused on the tracking of visitors and timing them as they stopped to view objects and the overall duration of their stay in the gallery; he concluded that the time a visitor spent in the gallery and at particular objects indicated the level of visitor enjoyment and engagement. The findings from many of these early studies can be found in current museum evaluation literature. Dwell times at exhibits remain a primary indicator of engagement in recent evaluation studies and are assumed to correlate with learning. For example, the Exploratorium's Active Prolonged Engagement (APE) project, which concluded in 2005, was geared towards the creation of engaging exhibits that would increase a visitor's dwell time as they interacted with

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said exhibits (Brainard, J., Dimond, E., Gutwill, J., Hido, N., Humphrey, T., Sarno, K., Sowers, C., Strick, J., Thogerson, Erik., Thompkins, Tom., Whitmore, D., 2005).

The new age of visitor studies was rejuvenated in the 1960's and 70's by the work done by Harris Shettel and Chan Screven (Bitgood, 1996). In 1968, Harris Shettel carried out a study on the US Office of Education exhibit, "The Vision of Man," in which he focused more closely on opinions of the museum audience rather than on the museum experts. Shettel's study helped push forward inquisitive methodologies in exhibitions and opened up the field of exhibit evaluations to a wider audience (McManus, 1996).

In recent visitor studies, one key finding is that while visitor demographics are still important, the notion of visitor segmentation based on psychographics has become increasingly prevalent. For example, John Falk's identity-related visitor motivation model divides museum-goers into five categories, based on their reasons for visiting: Explorers, Facilitators, Professionals/Hobbyists, Experience Seekers, and Rechargers (Falk, 2011). To determine the psychographics of their visiting body, visitor evaluations have evolved to include certain behavioral questions such as, "What are your reasons for visiting the museum today?". In turn, this impacts decisions regarding marketing, collections management, the design and development of programs, exhibits, and facilities. Museums will attempt to tailor their offerings to as many psychographics as are present in their visiting body, with particular emphasis on those that are most over-represented.

Psychographic segmentation has been criticized for not acknowledging the role demographics plays in a visitor's psychographics. Emily Dawson (2011) argues that Falk's de-emphasis of demographics is misguided, and that it is important to not disregard the notion that one's gender, age, race, etc. impact one's lifestyle, opinions, and motivations. She also maintains that since visitor psychographics are flexible (i.e. one's psychological makeup changes over time), it is foolish to use psychographics in certain decisions, such as the distribution of marketing materials (Dawson, 2011). These arguments raise considerable doubts as to whether pure psychographics is the optimal method for visitor segmentation. Thus, it is advisable to maintain a level of demographic segmentation as well.

Since the renewal of interest in the behavior of museum visitors, the methods of evaluation have remained quite consistent with minor tweaking here and there. Museums perform three types of visitor evaluations: front-end, formative, and summative; each type of

evaluation may use qualitative and/or quantitative techniques. A summary of these evaluation types is presented in Table 1.

SUMMARY OF EVALUATION CLASSIFICATIONS

	Front-End	**Formative/Remedial**	**Summative**
Definition	Research done at the beginning of a project	Research done during the development of a project	Research done at the end of a project
Data Types	Qualitative and Quantitative	Largely Qualitative	Qualitative and Quantitative
Uses	Collecting information relevant to visitor demographics, motivations, etc.	Collecting opinions regarding prototypes and designs for upcoming exhibitions	Collecting reactions of attendees to exhibitions and programs
Method Examples	Point-of-Sale surveys Focus groups	Presenting storyboards Observing visitor behavior Focus groups	Exit surveys Follow-up interviews Focus groups
Strengths	Useful for understanding community needs and customer expectations	Prevents wasted efforts/resources on plans of action that prove unpopular	Most useful for assessing what needs to be changed in future, and how the event impacts the visitor

Table 1: Comparisons between three types of evaluations in the museum context. Adapted from Dierking & Pollock,1998

2.3.2 Front-End Evaluations

As detailed in Table 1 above, front-end evaluations are commonly used to assess visitor knowledge, interests and preferences, and may be combined with demographic information about visitors. These types of data provide museum staff with important information that can be used to aid in the initial planning and development of an exhibit. In front-end evaluations, focus groups are typically used to gather qualitative information from potential visitor groups, while point-of-sale surveys are typically more quantitative in nature and may be used to collect information on visitor demographics – such as age, gender, ethnicity and hometown. Point-of-sale surveys help museums gain an understanding of who their audiences are and can be used in

decision making about marketing and outreach efforts, whereas focus groups can be used in decision making about exhibit design.

2.3.3 Formative Evaluations

Formative evaluations are performed during the design stages of an exhibit and, as seen in Table 1, are largely qualitative. Results from formative evaluations provide the exhibit designers with key information about public understanding, or misunderstanding, of concepts and about how to create more appealing and effective exhibit content and design. Formative evaluation often entails rapid prototyping in which small numbers of visitors are recruited to interact with mock-ups of all or part of an exhibit. Observers then gauge the level of visitor enjoyment and engagement based on these interactions. For example, the observer may assess the amount of time spent interacting with the exhibit through observation, including audio and video recording ("Visitor Studies 101: Understanding Audiences Notes, Resources and References", 2006).

Follow up questions are then posed to the visitors to gather quick feedback on the exhibit in progress. These questions can also be asked in a focus group setting where a small number of visitors are supplied with open ended questions and asked to share their opinions and ideas. The museum staff may even show them storyboards of proposed exhibits to gather opinions and ideas before the exhibit is built. The advantage of focus groups is that the members are able to build on each other's ideas. On the other hand, the members may be hesitant to share their thoughts and opinions, especially about sensitive or controversial topics. The mock-up is revised based on visitor feedback and put out on the museum floor for further evaluation. The process may be repeated numerous times. The results from formative evaluations are used in this fashion to develop a finalized product (exhibit or program) that can then be enjoyed by visitors.

2.3.4 Summative Evaluations

Summative evaluations are designed to assess the impact of an exhibit, exhibition, gallery, program, and/or the museum as a whole, on the visitor. As post-hoc methods, they are conducted after the installation of a new exhibit or exhibition or following the delivery of a new program. The data gathered lets museum staff know if modifications need to be made to increase the effectiveness of a particular exhibit.

Numerous methods are used to gather summative evaluation information, including systematic visitor tracking and interviews. Visitor tracking is an evaluation practice that dates back to the 1920's studies done by Robinson and Melton, in which the authors made general observations of visitor movement patterns throughout the exhibit. In the 1980's, the concept of tracing the circulation of visitors increased in popularity with the work of Stephen Bitgood (Yalowitz & Bronnenkant, 2009). Today, this strategy is used to measure the success of individual exhibits, collections of exhibits in exhibitions, and overall galleries. The process involves observing the physical path that visitors travel, what they do in the exhibitions, the amount of time spent at each exhibition, and how they react to them. After many samples, a resultant map is created to the path most taken and the pieces most viewed. One of the limitations to tracking is that the observer's presence may influence the visitor's path. A specific case study which used visitor tracking in their analysis of visitor evaluation was done by an IQP team in the Citi Money Gallery at the British Museum in 2013 (Osborn, Moore, Liu, & Corini, 2013). After tracking numerous visitors, they created a map (Figure 2) depicting the most common path taken and a heat map (Figure 3) showing the holding power of cases viewed. The tracking of visitors helps the exhibition designers and planners determine if the exhibition or gallery has a good flow and whether it is as engaging as it was intended to be.
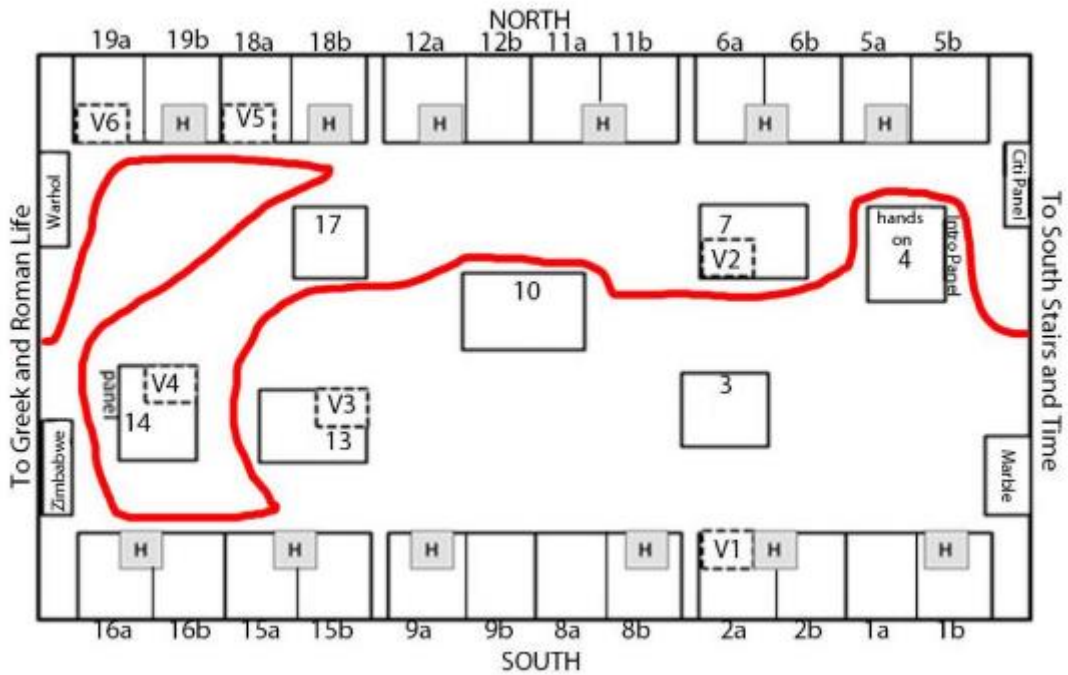
Figure 2: Most common path taken by visitors in the Citi Money Gallery at the British Museum(Osborn, Moore, Liu, & Corini, 2013)
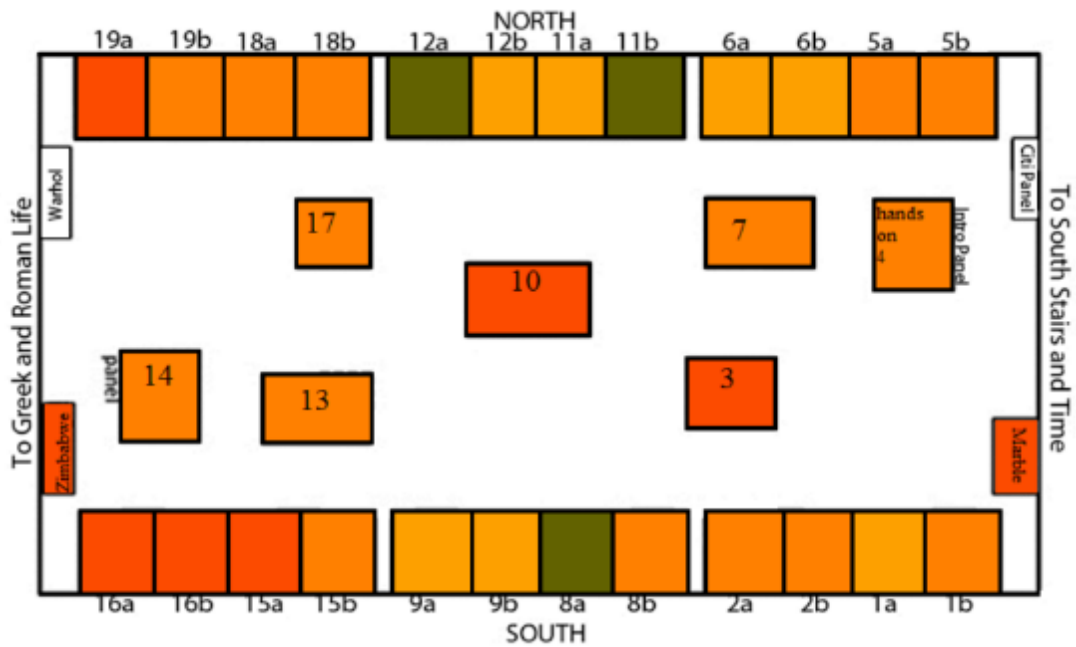

Figure 3: Heat map for holding power of exhibits in the Citi Money Gallery at the British Museum (Osborn, Moore, Liu, & Corini, 2013)

Additionally, museums often perform exit surveys to gather more in-depth insight into how the visitors liked the exhibit or program and what they would like to see improved upon.

The results of summative evaluations help museums make informed decisions regarding future necessary improvements to provide for a better overall visitor experience. Summative evaluation may also include outcomes-based evaluation—which can have an effect on the museum's funding. In many instances, museums must demonstrate that they have a measurable impact on their visitors in order to obtain grants for future programs and exhibits. Instruments such as Hooper-Greenhill's GLOs are sometimes used in summative evaluation to achieve this purpose.

Front-end, formative, and summative evaluations have provided the tools best fit for evaluating visitor experience.

2.4 Technology and Evaluations

In such a modern digital world, it is not uncommon for technology to continue advancing and improving its capabilities exponentially. These advancements continuously produce new opportunities, extending to the museum industry in a variety of ways (Bean, 2012). Museums are increasingly publishing podcasts, eBooks, and other downloadable content for visitors (Proctor, 2011). However, museums are also implementing digital technologies to improve exhibits and enhance the visitor experience in any way possible (Bean, 2012). These options may include exhibit navigation, interactive games, data visualization techniques, and digital visitor surveys (Bean, 2012).

As the museum industry has evolved, evaluation methods have evolved as well. Many modern museums are implementing creative and cutting edge technology into their visitor evaluations. For example, the Worcester Art Museum now has tablets dedicated to displaying a visitor comment feed about its *Guns Without Borders* exhibition. Whether applied to a specific exhibit or to the entire museum experience, this strategy connects the visitor with the museum on a personal level; it lets the visitor know about others' thoughts on the exhibits, and allows them to provide their own input, anonymously or otherwise, to the public audience. While fixed technology seems to be working for museums, it has been proven that for better feedback and evaluation, mobile evaluations ensure a greater number of responses (Baber et al. 2001).

Mobile applications, or apps, have been extraordinarily popular among consumers, with the use of smartphones and tablets. Realizing this, museum leaders feel inclined to develop and distribute mobile apps (Proctor, 2011). However, when using this approach, the museum needs to decide whether the app should be a full, "device-native" app, or a light, "web-based" one. In

short, a device-native app needs to be installed on the user's device while a web-based app does not. Regardless of the choice made, museums will be able to survey visitors right from their phones. As long as users do not find it intrusive, conducting museum experience evaluations through mobile devices owned by the visitors is more personal and will lead to more authentic feedback (Proctor, 2011).

With the growing popularity of social media, technology enables trending phrases, images, places, etc. to catch on more rapidly than ever. Although it may not be perceived as such initially, museums are implementing a form of social media (Proctor et al., 2011). By digitally collecting feedback from an exhibit, or simply by providing further information on particular items, the museum is connecting with the user in the digital medium. Furthermore, interactive exhibits and games are becoming more popular in the museum setting (Baber et al., 2001). These types of technology can be accessed either on a visitor's personal smartphone/tablet or a device provided by the museum.

A major issue that museums consider when expanding to visitors' handheld devices is whether or not users will become so involved with the mobile application that they pay less attention to the artifacts on display. This "Heads up or down" argument (Proctor, p. 35, 2011) debates whether technology usage will result in a more immersive experience or one that begins to distract the user from the actual pieces of history.

Campos determined that in order to comprehensively judge a visitor's museum experience, it must be divided into four different components. From this scale, he determined the positive effects of the use of multimedia in a museum.

The Museum Experience Scale (MES) produced four components: Engagement, Meaningful Experience, Knowledge/Learning and Emotional Connection.
...It is interesting that only the Engagement component produced a
significant difference between multimedia guide users and non-users. Thus use of a
multimedia guide appears to enhance engagement and does not detract from a
meaningful experience of emotional connection with the exhibition.

(Campos, p.98, 2011)

There are many ways for museums to capitalize on digital technology to provide visitors with a more engaging and entertaining experience. With visitor evaluations, museums are able to collect enough data to meet the needs of their visitors. Through the digital medium, there is

potential to collect valuable feedback and connect with visitors without using excessive human resources.

2.5 Purpose of the Project

While the museum industry as a whole is incorporating technology into its culture, our focus was on the operations of the Nantucket Historical Association—specifically the Nantucket Whaling Museum. (For a description of the Nantucket Historical Association, see Appendix A.) As an important fixture of the island, the Whaling Museum must be able to collect enough feedback to improve their programs and exhibits while continuing to attract new visitors. However, like other small museums, it has limited staff, time, and resources.

During the busy summer period, the museum maintains approximately a forty-person staff, while employing about 26 people in the winter. As a small institution, the Whaling Museum needs to utilize its staff members as efficiently as possible. Technology has the potential to alleviate staff members of most—if not, all—responsibilities regarding the facilitation of visitor surveys. This project will use digital technologies to make the Nantucket Whaling Museum's surveying methods as streamlined and comprehensive as possible.

3 Methods

The overall goal of this project was to explore how digital technologies can be used to enhance the visitor evaluation capabilities of the Nantucket Historical Association. In order to achieve this goal, the team established four project objectives as described below, each with a set of associated tasks.

- **Objective 1:** Determined state-of-the art surveying practices in the museum industry;
- **Objective 2:** Examined the current and preferred visitor evaluation methods at the Nantucket Whaling Museum;
- **Objective 3:** Developed a suite of technology-assisted survey instruments; and,
- **Objective 4:** Provided recommendations for the use and maintenance of the instruments developed.

3.1 Objective 1: Examine Industry Practices

To ascertain which practices best support the goals and expectations of the NHA, the team began by reviewing current museum industry practices for collecting visitor feedback─as detailed in the literature review. The team decided to use a third-party, web-based surveying tool as opposed to manually programming a tool due to timing and skill level constraints. The team considered different web-based surveying tools, such as Qualtrics, Survey Monkey, Google Forms, Snap Surveys, and Survey Gizmo. These tools were assessed according to their limitations, useful features and costs. The team then consulted NHA staff to determine their preferred options for survey providers, as detailed in the next section.

3.2 Objective 2: Examine Evaluation Practices at the Whaling Museum

3.2.1 Current and Preferred Practices

Prior to the team's arrival at the Nantucket Whaling Museum, the team explored the surveying practices in place at the museum. In a conference call with the NHA's Director of Visitor Experience, Marjan Shirzad, the team learned about the museum's current processes and gathered preliminary information on the data being collected, as well as the methods of collection. This call also helped establish the overall goals and visions of the final product.

At the Whaling Museum, the team conducted a series of interviews with various staff members to gather the opinions of different departments, their respective goals, and more details on the data they currently collected (See Appendix C for interview summaries.) Through

these interviews, the team identified what the museum staff thought the scope and purposes of the evaluation tools we intended to develop were. This ultimately determined what surveys— and what distribution methods— best suited each of the museum's needs.

Before beginning each interview, the team obtained verbal consent from the interviewee— after a brief preamble explaining the purpose of the interview and the nature of the questions (see Appendix C). Each interview included some of the standard questions listed below:

- In the past, what information collected was most useful to you, as a member of the [department name] department?
- What information would you like to see collected in future? How would you plan to use it?
- Who do you see as being the primary audience for survey findings?

In addition to these standard questions, the interviews also included questions more specific to the staff member's role. These questions provided us with a better idea of the goals and responsibilities of these staff members, which was key in the formation of possible survey questions.

3.3 Objective 3: Develop Surveying Tools

3.3.1 Determine Survey Content

The first step in creating the various surveying tools was to determine the purpose of each evaluation by using the responses gathered from staff interviews. The team categorized the responses and developed questions to be included in each survey. Ultimately, the team narrowed their focus to two surveys: the 2014 NHA Programs Survey and the Museum Survey.

In an iterative process, the team engaged the museum staff to refine the content and format of each survey until both the student team and the staff were satisfied. In developing the Museum Survey in particular, the team used a questionnaire created by a 2011 IQP group─ who had also worked with the NHA─as a reference (see Appendix B). As a result of the staff interviews and research, this questionnaire changed drastically; only remnants of the wording from two questions in the 2011 survey remain.

3.3.2 Prototype

Prototyping involved the team converting developed questions into presentable digital forms. The team's overall goal was to create an immersive experience for the user while still collecting valuable feedback on the museum. Because the survey tools were largely web-based, the team was able to devise different ways the NHA can get users to complete evaluations. In order to maximize the potential of the digital evaluation, the team enabled the museum to collect feedback from the visitors' mobile devices, computers, tablets, etc.

The digital application's visual design and aesthetic appeal were as important as its functional design and flow. In order to attract visitors, the team created an interface that would stand out, and, simply from its appearance, invite the visitor to explore it, as well as encourage them to answer the questions asked of them. Current popular design elements include, but are not limited to:

- "Real-feel" animations and smooth transitions;
- Vibrant colors and matching tones; and,
- Simplicity in information delivery.

In forming recommendations, the team chiefly considered the level of customizability afforded by different survey providers — so as to achieve these visual standards. Furthermore, the team consulted staff members to ensure the stylistic components of the surveys matched other NHA marketing material. Finally, when designing the surveys, the team ensured that they were as staff-friendly as possible, so that changes could be made easily and the resulting data could be represented by graphs and figures accordingly. Throughout each step of the iterative development process of developing each instrument, the team looked to peers as well as museum staff and visitors for feedback.

3.3.2.1 Museum Survey

The Museum Survey was created to serve as an exit survey for visitors to the Whaling Museum. The NHA already owned, and planned to use, iPad minis as the primary tool for this survey. The NHA wanted to house these iPad minis at stationary survey kiosks, so as to not require any staff member's administration of the survey.

By going on walkthroughs of the museum with and without members of staff, the team assessed possible locations for survey kiosks. The team also spoke informally with museum

interpreters, to better understand the daily happenings of the museum, including the general flow of museum visitors throughout the building.

Testing the prototype of the Museum Survey with visitors was the most effective way to see if the digital surveys were appealing and worthwhile. The team did not participate in large data gathering due to the low count of museum visitors in the island's off-season. (The Whaling Museum will implement the evaluation tools during the peak summer season.)

Public testing was conducted by dividing the team members such that two team members were conducting surveys, via the iPad minis, in two different locations in the museum. Meanwhile, one other team member acted as a 'floater' and observed visitor traffic to make conclusions regarding possible kiosk locations. All team members wore NHA vests to identify themselves, and carried clipboards to record information on. The three team members rotated positions throughout the day—each shift lasting 1.5 to 2 hours.

The team members conducting surveys approached visitors at their location, and explained the purpose of the tool as follows:

> *Hi, my name is _____. I am part of a project team from Worcester Polytechnic Institute working with the NHA. Our goal is to create digital visitor evaluations here at the Whaling Museum. This is a prototype of one of the tools we have been working on. Would you be willing to take a few moments to help us test our prototype by completing the survey? Afterwards, I will ask you a few brief questions about your impressions of the prototype.*

If the visitor verbally and voluntarily agreed to participate, the team member handed the iPad mini — which was protected by a rubber case — to the visitor, and gave them space as they completed the survey to eliminate unnecessary pressure. Meanwhile, the team member also observed the participant, looking for signs of frustration or confusion as he or she used the prototype. Afterwards, the team member verbally asked follow-up questions to collect useful feedback on the prototype itself. Questions included:

- Were any questions confusing or unclear?
- Did you have any difficulty using the touchscreen interface?
- How do you feel about the length of the survey?
- Do you own a smartphone or tablet?
- What do you think we can do to improve this prototype?

By examining visitors' responses to these follow-up questions, the team was able to identify and correct issues with technical components and survey content. This testing was conducted on four days in December 2014. After each testing day, the team continued to revise the prototype until all parties were satisfied, and carefully-constructed digital visitor evaluation tools were produced.

3.3.2.2 2014 NHA Programs Survey

The goal of the 2014 NHA Programs Survey was to assess the overall community impression of the past year of NHA Programs. In addition, it was meant to provide useful data for marketing and program planning. This survey was to be sent out to all members and non-members in the NHA database via email. Before it was ready to be sent out, it went through several rounds of testing.

The prototyping process for the 2014 NHA Programs Survey was contained to the team members and NHA staff. In the development process, the survey was tested multiple times by the team, on different browsers and devices, and revised to ensure readability for all respondents. After numerous edits regarding survey content with Marjan Shirzad, the 2014 NHA Programs Survey was sent—as a test—to select staff members at the NHA office. After feedback on the usability of the survey was collected from this initial phase, the team further refined the survey. Then, as a second, larger test of data gathering, the survey was sent to more staff members, museum interpreters, and board members. After this round of testing, the 2014 NHA Programs Survey was finalized with Marjan Shirzad, and sent to all contacts within the NHA's email database.

3.3.3 Data Collection and Analysis

The team also determined how the museum might handle their survey data. With the use of an online survey provider, organizations such as the NHA could collect data into one centralized online database for ease of access and reporting. Most survey providers include automatic reporting services that give a surface-level breakdown of survey responses. However, for further analysis, the team developed Excel-based workbooks to easily segment, filter, and organize data. To accomplish this, the team ensured response reporting values were logical and easy to manipulate, for optimal data analysis. For example, once the workbook for the 2014 NHA Programs Survey had been developed, the team was able to compare certain survey

responses to several factors — such as age group, membership, residency, and number of programs attended — to find patterns within the data.

3.3.4 User Guides

To ensure that ownership of the developed tools transferred smoothly to the museum, we wrote technical guides. The first of which contained all documentation for the surveys that were built. That is, all information regarding where content is stored, how information is collected, and where information is sent within the online account, was fully explained. This guide also contained clear instructions on how to perform common tasks, such as: how to change the wording of a question, how to add/delete content, etc.. This guide also contained customer service contacts for the online survey provider. A second technical guide contained documentation for the Excel-based workbooks developed for data analysis. Both guides had information regarding predictable errors, as well as instructions for troubleshooting. Part of this information was presented in a 'Frequently Asked Questions' (FAQ) style, for simplicity. This information is important for the museum staff in charge of maintaining the tool.

3.4 Objective 4: Provide Recommendations

Once the user guides were finalized, they were disseminated first to the Visitor Experiences Department. After review, the team held an exit meeting with a group of staff leaders in order to provide recommendations for the future. One point of discussion was about ways this project can be built upon. Questions asked included:

- How should the data collected be used in marketing materials, annual reports, etc.?
- How many visitors should the museum aim to survey on an annual basis?
- What more can be done in the next year with the tools developed?

The team also discussed the museum's implementation of the evaluation tools after we have left the island. Some questions posed included:

- Who will be in charge of maintaining the technical aspects of the tool?
- Who will be in charge of facilitating the survey (if needed)?

Using first-hand experiences, the team provided recommendations for the answers to these questions, with the understanding that these are ultimately the museum's decisions. This discussion is important to have, since it is the final step in transferring ownership fully to the Nantucket Historical Association.

4 Findings

Throughout the duration of the project, the team worked closely with the NHA staff and Whaling Museum visitors to develop a suite of digital visitor evaluation instruments. The process included developing survey content for two different surveys, transferring them into digital form using an online survey provider, as well as testing the surveys and providing instrument maintenance recommendations. This chapter details the findings of the team in their process of creating the evaluation instruments.

4.1 Current and Preferred Data Collection Practices

Museums desire feedback from visitors so that they can make improvements in programs, exhibits, marketing and outreach that will attract more visitors. Through initial discussions with key staff members, the team learned that the Nantucket Whaling Museum collects the zip codes of all non-member visitors at the primary point of sale (POS) at the ticket counter. Visitors who are members are able to check in at the ticket counter. Additionally, when visitors buy NHA program and museum tickets online—via Altru—the museum is able to collect additional visitor information, such as email addresses and phone numbers, which is immediately added to the NHA's contact database. The NHA also collects email addresses during particular programs.

4.1.1 Needs of the NHA Staff

Prior to creating any surveys, the team conducted brief interviews with key staff members to gain an understanding of the types of visitor feedback the NHA would like to see collected (see Appendix C for interview summaries). With the resulting responses, the team identified major goals of the NHA, and categorized them by topic, such as membership, programs and general visitor information. The team then developed four preliminary surveys: the Museum Survey, a survey template for individual programs, an initial membership survey and a membership renewal survey. In a later meeting, the idea for a programs survey template was replaced by the 2014 NHA Programs Survey. Taking into consideration the limited amount of time the team had to create the survey instruments, and what information would be most valuable to collect, the team had to decide which surveys were most important. Ultimately, the sponsor and the team prioritized the possible survey options, and narrowed their focus to the creation of two surveys: the 2014 NHA Programs Survey (Appendix D) and the Museum Survey (Appendix E).

The purpose of the 2014 NHA Programs Survey was to gather general feedback on the public programs hosted by the NHA in the past year (Appendix F) and to guide the development of programs hosted in future years. The data gathered from this survey can provide the NHA with feedback on: past programs, the price of admissions for the programs, the ease of the ticket buying experience, preferred times and locations to hold future programs, and ideas for new programs. The purpose of the Museum Survey was to gauge the visitor's level of engagement and enjoyment during their visit. Some of the factors that guided our question development for both surveys are discussed below.

4.1.1.1 Effective Advertising

In order for the NHA to assess which forms of advertising are the most successful, they need to find out how visitors hear about the Whaling Museum and NHA programs. The team found that many staff members are interested in knowing which modes of advertising draw in the most people to the museum and to programs so that they can allocate their advertising budget accordingly. To address this concern, the team included a question in both surveys which asked, "How did you hear about X?"—whether referring to the Whaling Museum or to NHA programs. When collecting the results of these questions, staff members can easily compare the different advertising options side-by-side in a bar graph and make informed decisions about the allocation of their financial resources to these different avenues of advertisement.

4.1.1.2 Online Ticketing

Another area of interest within the NHA was whether or not visitors would prefer to use the NHA's online ticket purchasing option for all programs; currently the NHA only offers this option for select programs. It would be useful for the NHA to implement online ticketing for all its programs in the future because it provides significantly more contact information than tickets bought in person and reduces the amount of time spent by staff members processing ticket sales. Online ticket purchases also gives the NHA a rough estimate of how many people are coming to a program or event, which provides advance knowledge on how much food to prepare or how many seats to put out. To determine the potential popularity of this option, visitors' preferences of ticket buying modes were gauged in the 2014 NHA Programs Survey. The respondent was asked how they most often purchased program tickets, along with the question: "If available, would you use online ticketing for all NHA programs?"

4.1.1.3 Admission Pricing

Ideally, the NHA would like to determine optimal pricing for programs, membership, and museum admission. When changes to pricing are suggested, the NHA would like to refer to survey data to help guide and support these decisions, as well as predict visitors' reactions. To collect useful data in a tactful manner, the team included particular questions in its Museum Survey and 2014 NHA Programs Survey. In both surveys, the respondent was asked to compare the value of his or her experience with the prices of admission. If the respondent reported this to be a poor value, this result would indicate that the price of admission was too high (or that the quality of the experience was too low to warrant such a high price of admission). Additionally, in the Museum Survey, the respondent was also asked to rate the statement, "The price of admission was reasonable"—which, after discussions with our sponsor, was included as a more direct approach to the question.

4.1.1.4 Branding

A primary issue the NHA faces is their branding. Namely, many visitors are not clear on the fact that the Whaling Museum is run by the NHA. As a way to address this problem, the team incorporated the NHA logo into both surveys. Also, in the Museum Survey the team included a question that asks the visitor if he or she has visited any of the other NHA historic sites which provides a subtle reminder that the Whaling Museum is also an NHA property.

4.1.1.5 Email Database Expansion

Every month the NHA sends out an e-newsletter to all the email addresses in their database to announce NHA events and programs. For further outreach, the NHA is interested in ways to expand its contact list. Accordingly, the team included an open dialogue box at the end of the Museum Survey where the visitor can enter an email address, if he or she would like to receive newsletters, and other information on events or programs.

4.2 Creating and Implementing the Digital Survey Instruments

A large demand on human resources is required to administer paper surveys and analyze the data. Thus, due to the small size of the staff at the NHA, administering paper surveys is not feasible. An alternative method is to utilize the services provided by an online survey company.

4.2.1 Choosing a Survey Provider

While developing the content for the various surveys, the team was simultaneously researching which online survey provider was the best fit for the NHA. The team contacted SurveyGizmo, Qualtrics and Snap Surveys for quotes and free trials. Phone consultations and online demonstrations were conducted with each potential provider. These conversations centered on particular needs of the NHA, such as: the annual expected number of responses, the anticipated modes of survey delivery, and desired design elements. Afterwards, the team received quotes from all three providers. The team also began trial accounts with Snap Survey and SurveyGizmo to experience the services first-hand.

The trial versions with each of these providers helped the team become more familiar with their user interfaces and each provider's version of similar features; a comparison of these features and their accompanying prices can be seen in Table 2. For example, Qualtrics offers over 100 types of questions whereas SurveyGizmo has only 19 and Snap Surveys only offers 12. Of course, this option comes with a higher price tag.

Through the trial process, the team also decided on which offered features were irrelevant or not valuable to the project. Such features included survey development consultation, advanced reporting and offline capability. Survey development consultation is the advice offered by survey 'experts' who help determine the wording and construction of a customer's surveys. This feature is irrelevant since the team created the surveys. Advanced reporting provides the ability to segment responses by answers, which can be done via filtering in Excel. Furthermore, offline capability would not be useful since the device hosting the Museum Survey could be hardwired to the NHA's internet if necessary, so it will always be connected even if the Wi-Fi failed. The relevance of certain features affected which package the team ultimately chose.

	SURVEY GIZMO				SNAP SURVEYS	QUALTRICS
	Solo	Basic	Professional	Enterprise		
Survey Building						
Number of Question Types	19	19	19	19	12	>100
Unlimited Responses	X	X	X	X		
Logic, Actions & Piping		X	X	X	X	X
Theme Customization		X	X	X	X	X
Reporting						
Automatic Summary Reporting	X	X	X	X	X	X
Export Reports to CSV, XLS, PDF	X	X	X	X	X	X
Export Reports to PPT					X	X
Data Encryption			X	X	X	X
Customer Service						
Email Support	X	X	X	X	X	X
Phone Support	X	X	X	X	X	X
Survey Development Consultation					X	X
Sharing						
Email Campaign		X	X	X	X	X
Custom Branded Links			X	X	X	X
Offline Capability	X	X	X	X	X	X
Kiosk Mode	X	X	X	X	X	X
Price	$15/mth	$35/mth	$75/mth	$199/mth	5,000 reponses: $1,121/yr 10,000 responses: $1,646/yr	5,000 responses: $7,000/yr 10,000 responses: $13,000/yr

Table 2: Feature comparison of SurveyGizmo, Snap Surveys and Qualtrics

4.2.1.1 Pricing

Pricing was one of the most critical factors in deciding which provider to use. As a non-profit organization, the NHA has limited funds available for creating surveys. Thus, Qualtrics was quickly eliminated after the team received a quote of $13,000 per year (for 10,000 responses). Snap Surveys was more affordable than Qualtrics but even $1,700 per year (for 10,000 responses) was outside of the range of the NHA's budget. As shown in Table 2, SurveyGizmo offers much of the same features and flexibility as the higher-level packages of the other providers, for a reasonable rate.

The NHA decided to use SurveyGizmo's Basic package to create future surveys because it held the most value; it offered the most useful, and greatest number of, features for the most affordable price. Additionally, it required no installation of desktop software—like Snap Surveys— and provided a user-friendly method of constructing and editing surveys.

In the future, the NHA staff members will easily be able to edit the surveys created on their online SurveyGizmo account. The Basic package level also enables a wide range of customization for the NHA to implement their branding and color schemes, while maintaining a visually-attractive standard.

4.2.2 Creating Surveys with SurveyGizmo

After the NHA subscribed to an account with SurveyGizmo, the team explored all the features offered within the "Basic" package, the most pertinent of which are discussed in the following sections.

4.2.2.1 Logic, Piping, and Actions

Display logic is a standard feature of many survey providers; it allows certain questions or pages to be hidden or displayed based on the respondents' answers to previous questions. This enables the survey builder to create different routes through the survey. Routing was particularly relevant to the Museum Survey—in which the respondent is taken through different survey paths based on their reported primary motivation for visiting the museum. (This is a reflection of earlier research on visitor psychographics and Falk's identity-related visitor motivation model (see page 9).) Without routing, the Museum Survey would have had too many questions that may not have been relevant to the respondent's interests, and the respondent would become fatigued before completing the survey.

Furthermore, one can modify the title or options of a question based on the respondent's answers to previous questions. For example, one question can ask to select three options from a list, and the next question might populate those answers into its own list along with rating scales for each. This action is called "piping." In the example below, (Figure 4) the option picked by the user in question 1 is "piped" into question 2.
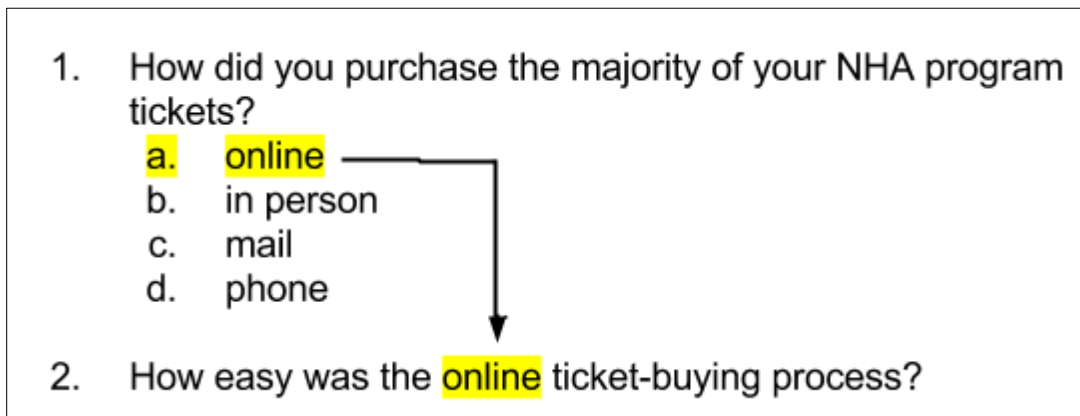

Figure 4: An illustration of question piping.

There are many more actions a survey builder can utilize. Some of these actions include: URL redirecting, storing hidden variables, social media integration, automatic emails, or even payment types. For the museum's purposes, none of these additional actions were utilized in either of the surveys. However, with SurveyGizmo's Basic package, the museum has the option to use these actions in future. One application of this would be to send automatic emails to respondents of the Museum Survey who have provided their email addresses, to thank them for their visit.

4.2.2.2 Theme Customization
When designing the stylistic components of the various surveys, the team consulted Marjan Shirzad about standard NHA color themes and font choices. We learned that the Association is slowly transitioning its color scheme from Gradient 1(Figure 5) to Gradient 2 (Figure 6), and designed the surveys to match. This, along with font choices, helped match the surveys' styles to that of NHA brochures and tickets, so that they feel familiar to those who usually receive other NHA materials. To further bolster the NHA brand the team inserted the NHA logo on the top of each page of both surveys.

Figure 5: Gradient 1

Figure 6: Gradient 2

     Though SurveyGizmo has a robust and easy-to-use Theme Builder (Figure 7) for style customization, design elements that could not be created using the theme builder's features, and had to be achieved using other methods. For example, decreasing the spacing around the header would require custom coding. To do so, the team tested the survey, and used the 'Inspect Element' feature of Google Chrome in order to find out the CSS class name of the object. As seen in Figure 8 below it is the '`.sg-title`' within '`.sg-header`' that controls the padding.
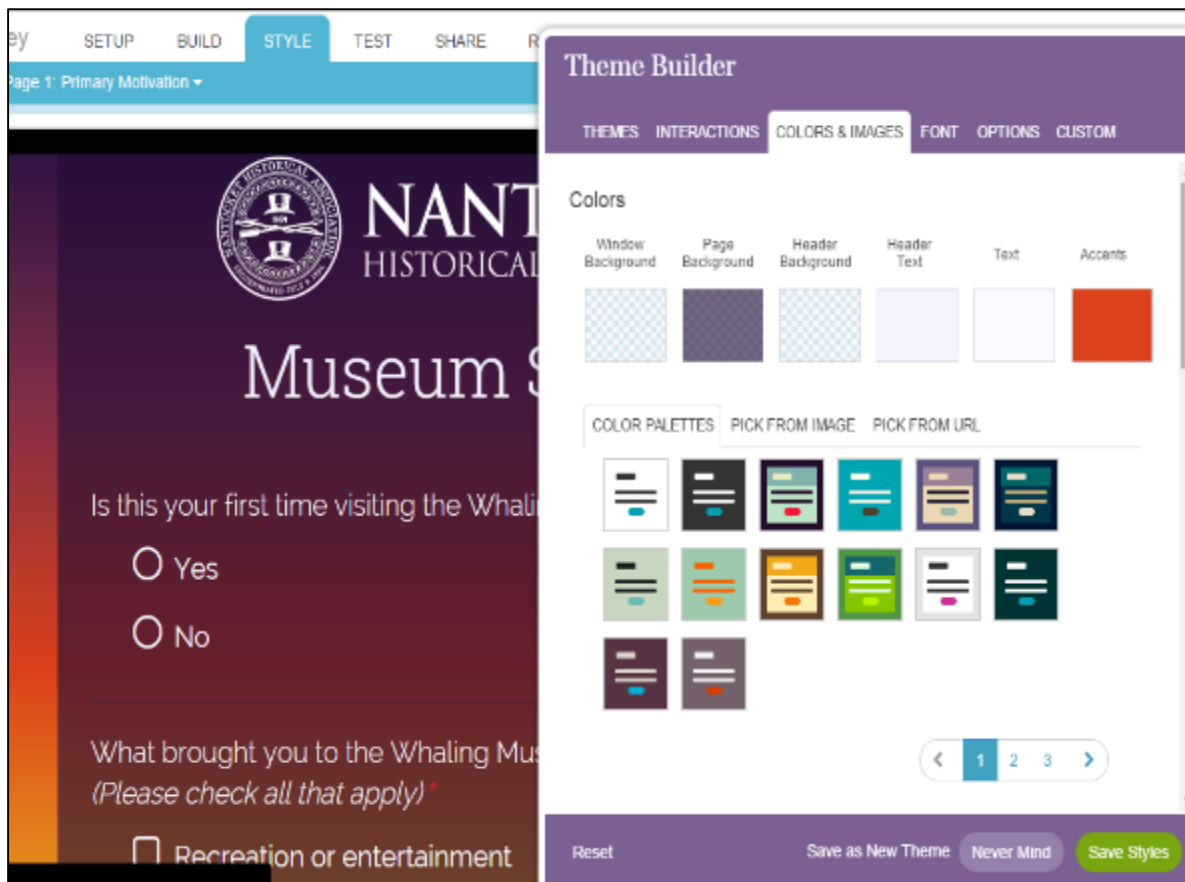
Figure 7: SurveyGizmo Theme Builder
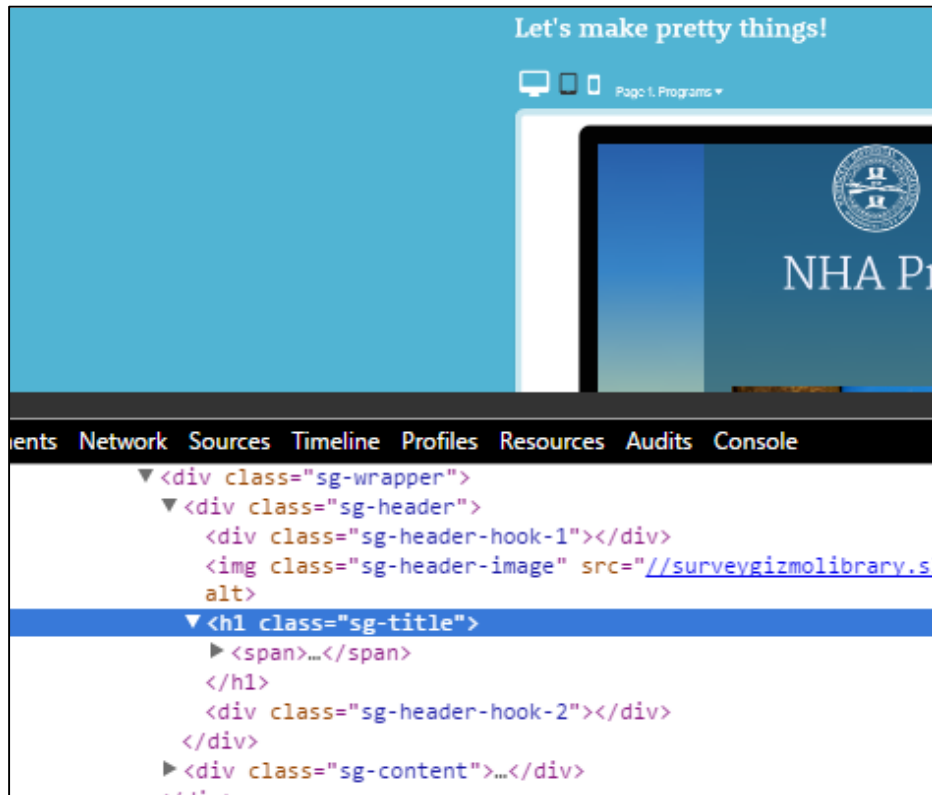
Figure 8: Google Chrome's "inspect element"

Examples of common CSS used can be found in the User Guides in Appendix I. Similar coding styles were used for other aspects of the surveys, such as the color choices of the "Next" and "Back" buttons.

4.2.2.3 Summary Reporting

SurveyGizmo offers a function called Summary Report. With this reporting feature, the user is able to gather collected information into easily readable graphs or figures which can be used to quickly summarize data. Also, whenever there are new responses for a survey, the user can easily refresh the report to include new data. For example, a radio button question may be displayed as a pie chart or bar graph (Figure 9 below). Some statistical information is also provided, though it may not always make sense, as in the example below.
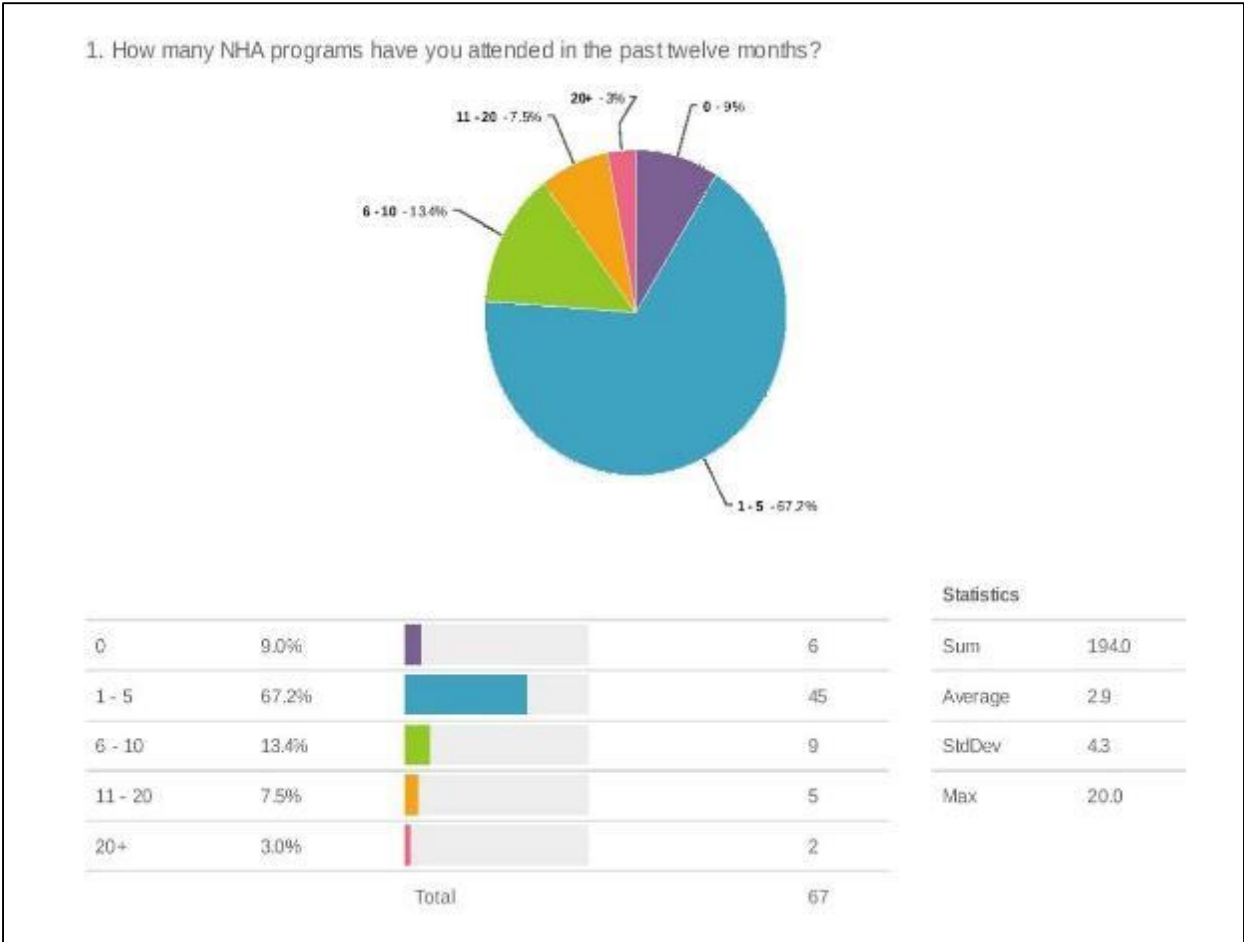
Figure 9: Example of responses to a radio button question, as reported via SurveyGizmo's Summary Report feature.

Also, in the case of a checkbox grid question, options that are chosen most often are color formatted to indicate so, and respondents' other suggestions are recorded as well (Figure 10 below). In the example below, answers that occur with the most frequency per row are shown in darker green. Words below the question, "Any other ideas for programs at NHA historic sites?" are comments attached to this question; note that these comments remain anonymous in the Summary Report.

Figure 10: An example of the results from a checkbox grid question, as reported via SurveyGizmo's Summary Report feature.

4.2.3 Finished Products

After becoming familiar with SurveyGizmo, the team was able to design digital surveys at a more rapid pace. Initially, the team based their survey designs on routing and display logic, in an effort to accompany the many needs expressed during staff interviews. For the Museum Survey, this was accomplished by routing the survey based on the respondent's primary reason for visiting the museum (which was presented as the first question, with three answer options). For example, a person who indicated they were visiting the museum for a family outing would be asked questions about the museum's Discovery Room and the ages of their children; they would also skip questions to shorten the length of the survey. Then, alongside Marjan Shirzad and Katie Schoorl, the team altered the wording, order, and flow of the survey questions many times to make the survey instrument more inviting to the visitor. Additionally, most of the routing based on the respondent's reason for their visit was removed. This question was

considered a valuable source of information by the sponsors; therefore, the answer options were expanded, and the question type was changed to checkbox.

For the 2014 NHA Programs Survey, changes to the survey content were based on discussions about the intended audience of the survey. For example, although the survey was initially designed to only assess the performance of public programs, Marjan Shirzad and Katie Schoorl pointed out that to many members of the NHA community, every event is a 'program.' Therefore, the team decided to include more sophisticated events—such as the Festival of Trees, Festival of Wreaths, and Antiques and Design Show of Nantucket—as well as 1800 House Classes and Film Screenings, in the survey.

The sponsors' perspectives and experience contributed numerous useful modifications to the surveys, and in many ways created a more humanistic experience in line with their brand as a modern and friendly historical association.

After many iterations of both surveys the team was able to produce two finished products ready to be tested and executed. The PDF versions of the 2014 NHA Programs Survey and the Museum Survey can be found in Appendices D and E, respectively. Note that these PDF versions include all routing and piping rules, but do not reflect the stylistic design. The screenshot below (Figure 11) better reflects the final visual design of the 2014 NHA Programs Survey. Compare this to the NHA All-Access Pass (Figure 12) and note the similar color and font choices.
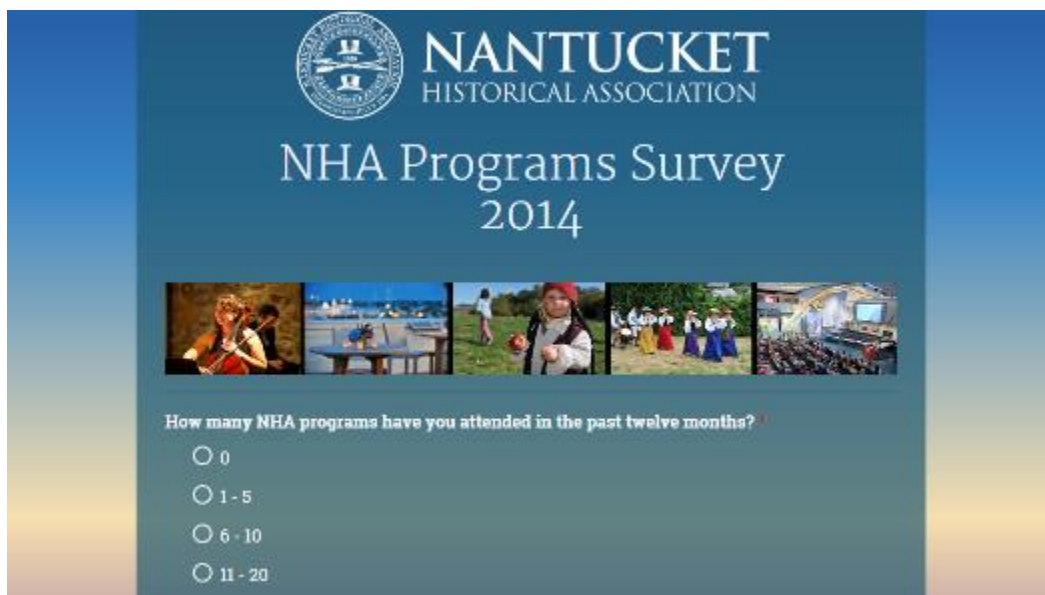

Figure 11: Partial screenshot of 2014 NHA Programs Survey

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Figure 12: NHA All-Access Pass

4.3 2014 NHA Programs Survey Results

The NHA Programs Survey 2014 was first tested by the team on different browsers such as Chrome, Firefox and Mercury, as well as different devices such as a Windows phone, an Android phone and tablet, iPad minis, iPhones, and laptops. Through this testing, the team found that in order to keep the font style consistent, a secure link—"https://…"—to the survey had to be provided. SurveyGizmo also offers "Mobile Optimization" options for style changes on smartphones and tablets. However, this feature hampers the user experience by adding page breaks and other unnecessary style features. For example, often when using mobile optimization the radio buttons in a list would not line up with the answer contents (Figures 13 and 14). Therefore, we decided not to 'mobile optimize' the instrument under this SurveyGizmo feature.

Figure 13: "Mobile Optimized"

Figure 14: Not "Mobile Optimized"

The NHA 2014 Programs Survey was sent via email to staff and board members for further testing. There were no reports of the survey being difficult to use or changing across platforms. Some changes were made to the content of the survey based on this preliminary testing, with the hopes that readable, understandable questions would lead to the collection of useful data for the NHA.

4.3.1 Response Analysis of Selected Questions

The 2014 NHA Programs Survey was sent to approximately 5,000 people on the NHA's electronic mailing list. There were a total of 59 completed responses from December 2nd to December 8th. This is not a large enough sample size to extrapolate results to the entire population of the NHA's mailing list (with confidence level 95% and margin of error 5%). However, these survey responses can still be used as an indicator (margin of error 12.7%). The following is a summary of important findings from these results.

4.3.1.1 Online Ticketing

The data from the 2014 NHA Programs Survey shows that 25% of people purchase the majority of their NHA program tickets online. Of these, 85.7% rated the ease of the online ticket-buying process a 4 or 5 on a five point scale (1 being "Very Difficult," 5 being "Very Easy"). Compare this to the in-person ticket-buying process: 57.1% of respondents purchased the majority of their program tickets in person, of whom 90.3% rated the ease of their

transactions a 4 or 5. (Ratings of 4 and 5 for this question are shown in light and dark green, respectively, in Figure 16 below).
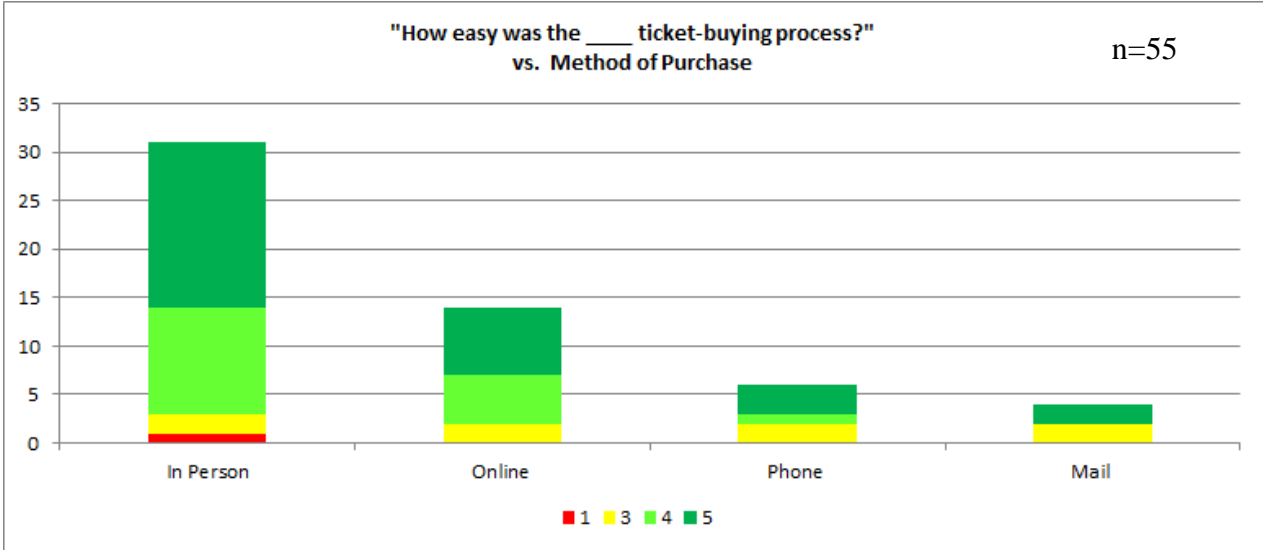

Figure 15: Comparison of responses to "How easy was the ___ ticket-buying process?" vs. reported most frequent method of purchase.

Although the in-person process was more popular, and was reported as being slightly easier than the online process, 50% of people stated that they would use online ticketing for all NHA programs if made available. Surprisingly, there was little correlation between support for online ticketing and reported age group. As seen in Figure 17 (below), there was very little resistance towards online ticketing by respondents aged 50 or more — though there was a significant amount of uncertainty among all ages.
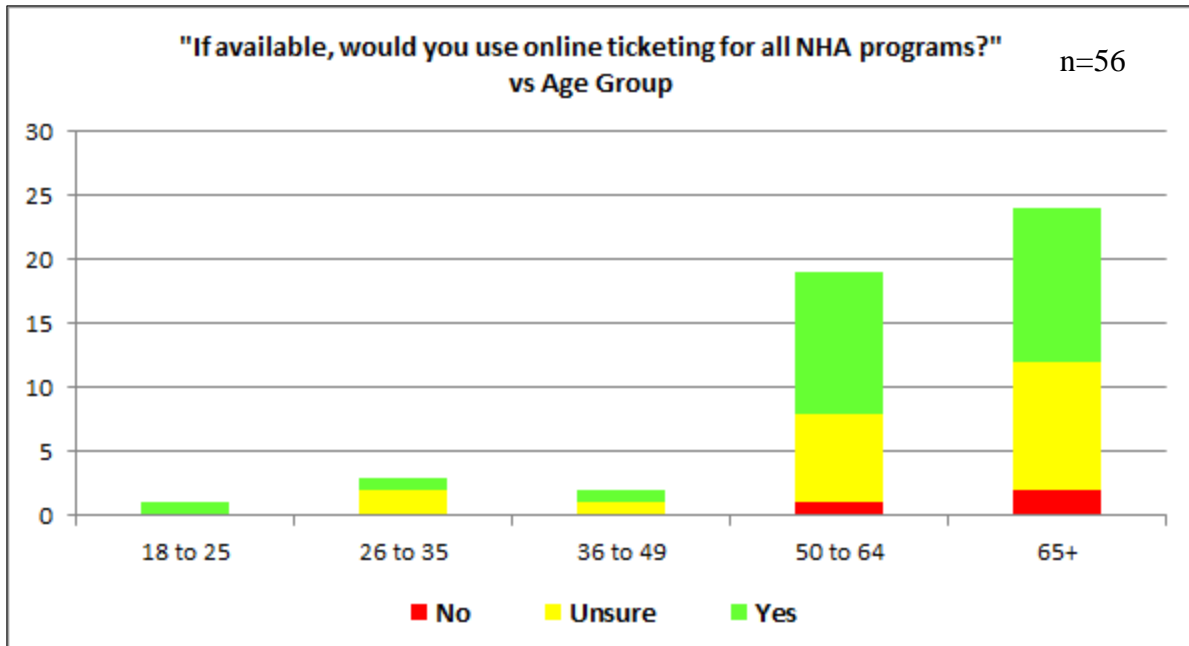
Figure 16: Comparison of responses to "If available, would you use online ticketing for all NHA programs?" vs. reported age group, for 2014 NHA Programs Survey.

This indicates a certain curiosity about online ticketing, and that perhaps an expansion of online ticketing is a worthwhile pursuit for the NHA, in order to expose more people to this ticketing option.

4.3.1.2 Effective Advertising

In order to assess which marketing avenues are most effective for NHA programs, the survey included the question, "How do you usually hear about NHA programs?" Among all respondents, the most popular responses were, in order: the NHA E-newsletter, *The Inquirer and Mirror* newspaper, the NHA website, and NHA flyers. The bias towards NHA-based materials results from a sampling bias; since this survey was sent to the NHA's email database, it is reasonable to conclude that the same people who clicked on, and read, the email are the same people who click on, and read, other NHA materials.

Another trend that emerged is the relationship between more popular marketing avenues and the number of programs the respondent attended. Those who attended more programs in the year were more likely to rely on their own networks of communication to hear about NHA programs. This includes the responses of: Word of Mouth, Whaling Museum Visits, Facebook, and Twitter. This trend may be indicative of the sense of community created by regular attendance at NHA programs. Of course, there may not be enough data to make such a

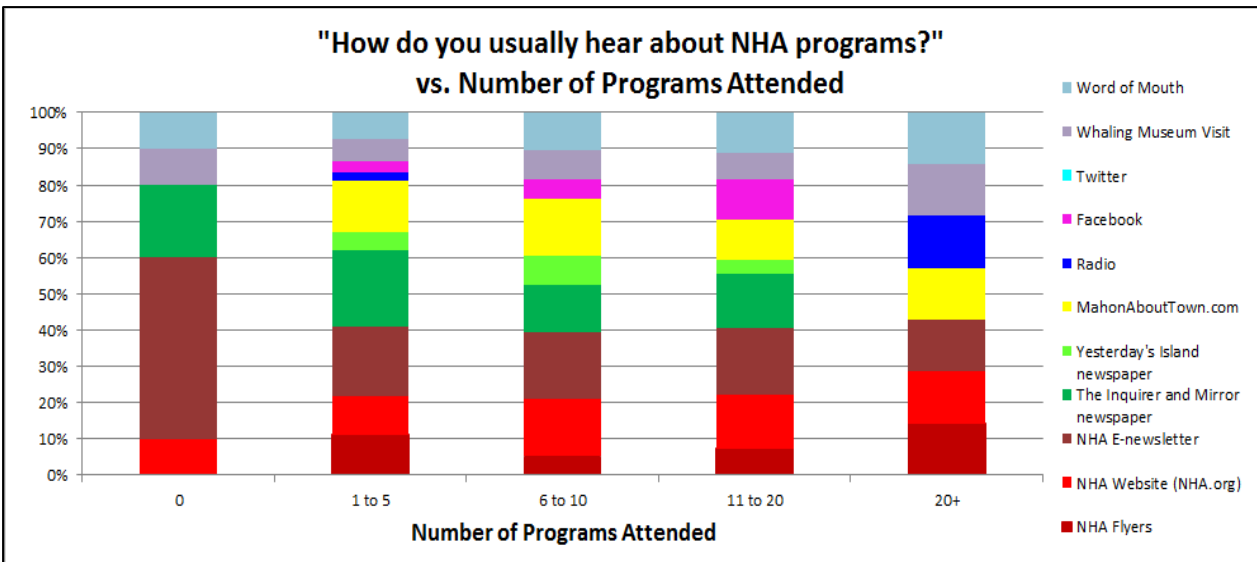conclusion, since only two respondents reported they had attended 20+ programs in the past year (Figure 18).

Figure 17: Comparison of responses to "How do you usually hear about NHA programs?" vs. number of programs attended.

4.3.1.3 Pricing of Program Admission Tickets

The NHA reactively analyzes the price point of a program by observing the attendance rate, as compiled in the yearly Public Programs report. To enhance these analyses, the 2014 NHA Programs Survey included the question "How would you rate the value of the programs you attended in the past twelve months, in relation to their admission prices?" The respondent's rating on a five point scale (1 being "Poor Value," 5 being "Great Value"), along with comments, provide a better understanding of the respondent's feelings regarding the price points of NHA programs as a whole. As expected, NHA members (who receive free admission to select programs) generally grant a higher rating than non-members (Figure 19) Among NHA members, 76% rate the value of the programs they attended as 4 or 5—and among non-members, this number is 50%.
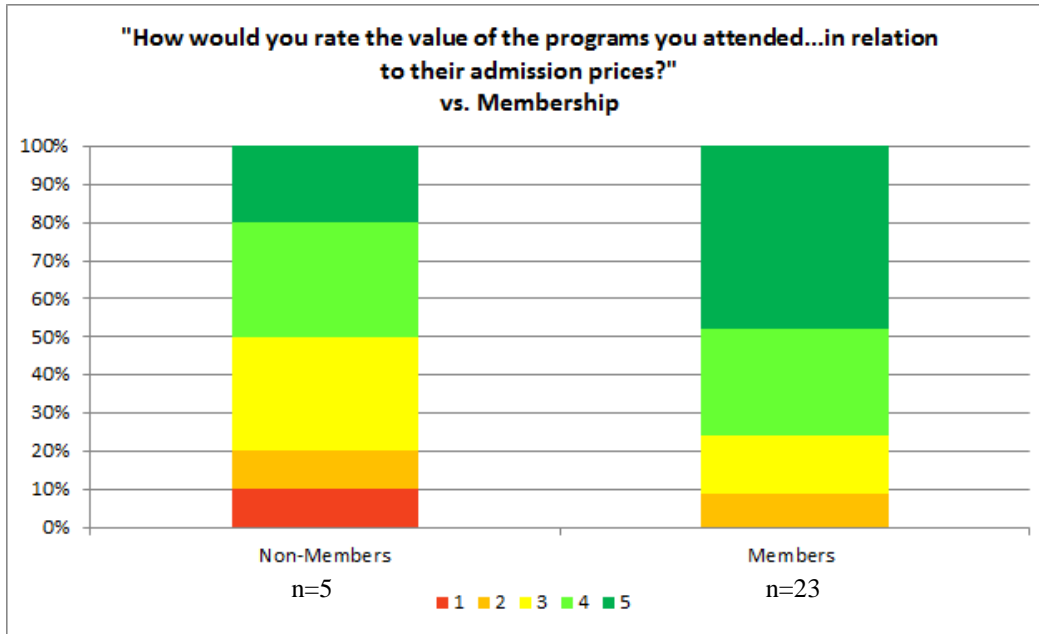
Figure 18: Comparison of satisfaction with NHA program admission prices vs. respondents' membership statuses.

There is also a correlation between the responses for this question and the reported age of the respondent. Respondents in older age groups are more likely to rate the value of the programs they attended a 4 or 5 than respondents in younger age groups. This may be related to a similar observation for the question, "How would you rate your overall experience of NHA programs in the last twelve months?" (1 being "Not Satisfying at All", 5 being "Very Satisfying"); older age groups are more likely to rate their overall experiences a 4 or 5 than younger age groups. (See Figure 20 below for a comparison of the results of these two questions.) These similar responses may be an indication of the different values placed on the programs by different age groups. Older age groups may also have more disposable income.
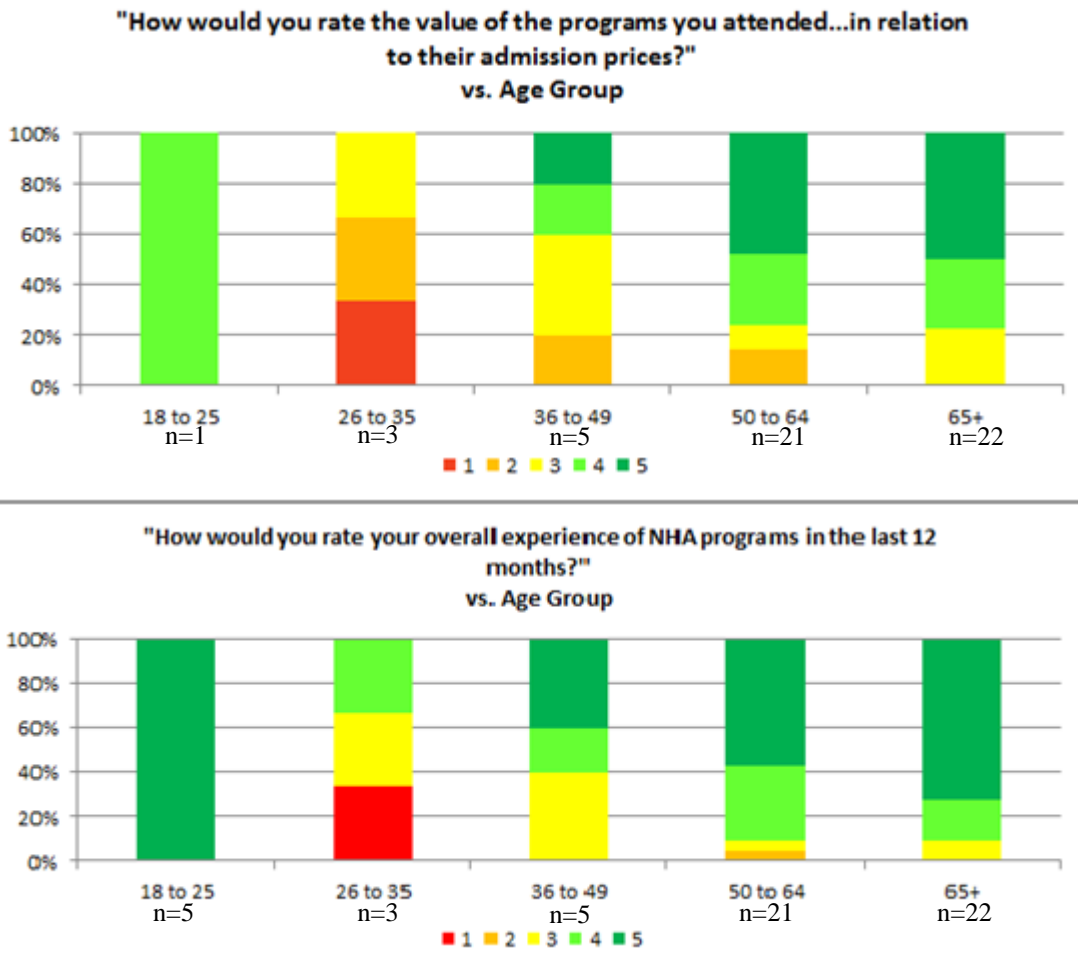
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Figure 19: (Top) Comparison of satisfaction with NHA programs admission prices vs. age group; (Bottom) Comparison of overall satisfaction with NHA programs vs. age group

4.3.1.4 Program Attendance

The 2014 NHA Programs Survey included the question, "Which of the following types of NHA programs have you attended in the past twelve months, and/or do you plan to attend in the next twelve months?" The respondent is provided with a checkbox grid, in which for each program type, they check off if they "Attended in past 12 months" and/or "Plan to attend in next 12 months." The intention of this question is to gather program attendees' general impressions of each program they went to, as well as to gauge what programs people have an interest in attending in future. The responses from this question may influence the composition of public programs in the following year. Additionally, this question was included to serve as a form of advertisement for the variety of programs the NHA offers.
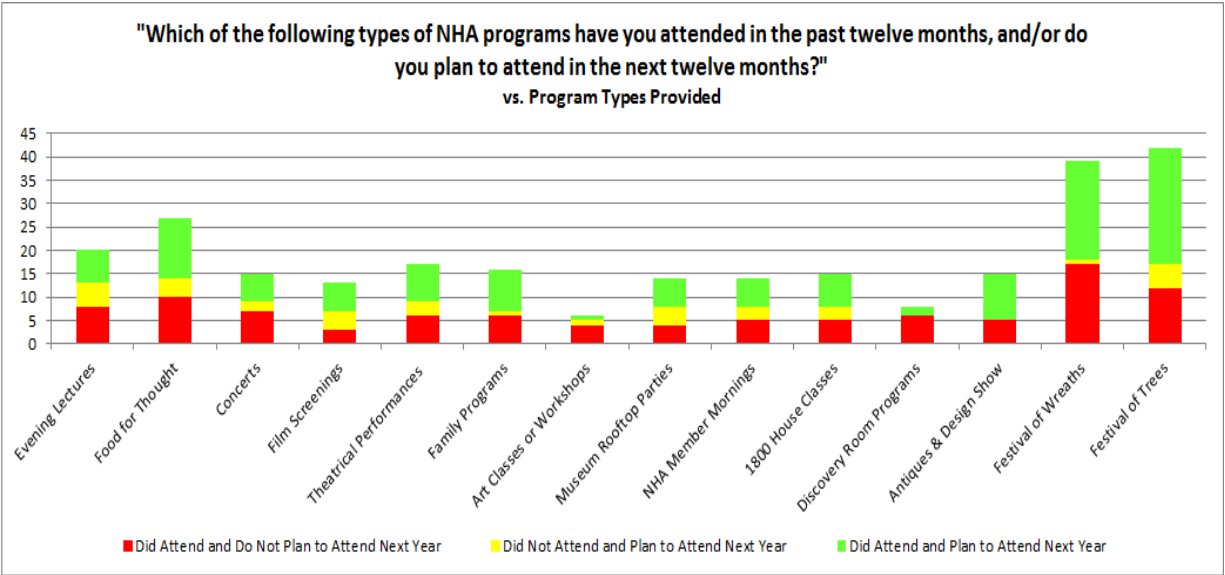
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Figure 20: Responses to "Which of the following types of NHA programs have you attended in the past twelve months, and/or do you plan to attend in the next twelve months?" by program type.

Figure 20, above, presents the results of each program type for this question. (Red indicates that the respondent checked only "Have attended…"; yellow indicates the respondent checked only "Plan to attend…"; green indicates the respondent checked both options.) It is unknown whether it is reasonable to use this question as an indicator of the program's overall performance. That is, we do not know if it is fair to conclude that a respondent checked "Attended…" and not "Plan to attend…" because they were unsatisfied with the quality of the program, or because of the 'committal' nature of the "Plan to attend…" column. Note, however, that when the column header of the "Plan to attend…" column was phrased as "Would attend…"—(a less 'committal' phrasing of the question)—there was an overall lower rate of responses in this column. This supports the idea that it is not the phrasing of the question (in its current form) that causes respondents to check options only in the first column — but that it is indeed a mark of the respondents' overall satisfaction with the program and/or the respondents' changing situations for the next year.

Alternatively, another possibility for these response patterns is that survey takers were confused by the question type. With a checkbox grid, the respondent may check any number of options per row and per column. (See Appendix D for the question's layout.) In an oversight, the team neglected to provide instructions stating "Please check all that apply" for this question. (These instructions were provided for another question of the same type.) Owing to this lack of instruction, it is possible that respondents were confused as to how to operate a checkbox grid,

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and may have believed that they could only check one box per row (one box per program type). This mistake highlights the necessity of proper documentation and instruction for surveys in digital form.

Also, note that there is a slight recall bias in this question, due to the time of year the survey was distributed (December 2, 2014). There is a much higher response count for both the Festival of Wreaths and Festival of Trees—which take place in November and December of each year—than there is for programs which take place during other times of the year. The biases and factors discussed above may make the results of this question less reliable than others, but the responses are still useful.

4.3.1.5 Trends in Open Text Responses

Different patterns emerged from the data collected via open text responses and comment boxes included in the survey. For example, five comments included mention of various uses for the Hadwen house—an NHA property which is currently used for an historic house tour, as well as housing for NHA staff. Additionally, four respondents commented positively about the value of their NHA membership, and expressed interest in continuing their membership in the next year. These two sentiments, along with other trends, are reflected below, in Figure 21. Notice the relative frequency with which the words "member," "Hadwen," "house," and "classes" appear. This is resultant from the two trends discussed above, as well as several comments regarding the pricing and quality of classes held at the NHA's 1800 House.

Figure 21: Word cloud of open text responses and comments from the 2014 NHA Programs Survey. (Created via Tagxedo.com)

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Open text responses were extremely valuable, as those who gave them supplied particularly in-depth or unexpected observations. Additionally, given the low response rate, these open text responses were easy to read through in a short period of time. This is an unanticipated finding, as open text questions are generally advised against in survey building; admittedly, 61.0% of respondents did not leave any comment, nor answer any open text questions.

4.3.1.6 Summary of Findings for 2014 NHA Programs Survey

The implementation of the 2014 NHA Programs Survey was successful at collecting useful data for the NHA, as well as testing what is technically possible with a full subscription to SurveyGizmo. Additionally, the process of creating the survey was helpful for determining best practices for future digital surveys. It is likely that a survey of the same type, administered in 2015, would be equally as useful for the NHA to determine the best courses of action in regards to their programming.

4.4 Results of Museum Survey Trials with Public

In order to determine how user-friendly the Museum Survey is on an iPad mini, the team gauged the public's reaction to the survey via testing within the Whaling Museum. This testing was conducted on December 5th, 12th, and 14th.

During public testing of the Museum Survey, team members would administer the surveys to willing museum visitors by handing them iPad minis, on which the survey was run on Kiosk Mode. Two team members were present in two different locations in the museum at a time and administered surveys, while the third team member acted as a 'floating' observer of visitor traffic to assess possible locations for a survey kiosk. The surveys trials were conducted in a number of locations throughout the museum. The exact locations tested are shown below.

MUSEUM MAP

1st Floor

Gosnell Hall

Hadwen & Barney Oil & Candle Factory

Museum Shop

Timeline

Lobby

Discovery Room

2nd Floor

Main Entrance
(TO STREET)

McCausland (Revolving) Gallery

Scrimshaw & Decorative Arts Gallery
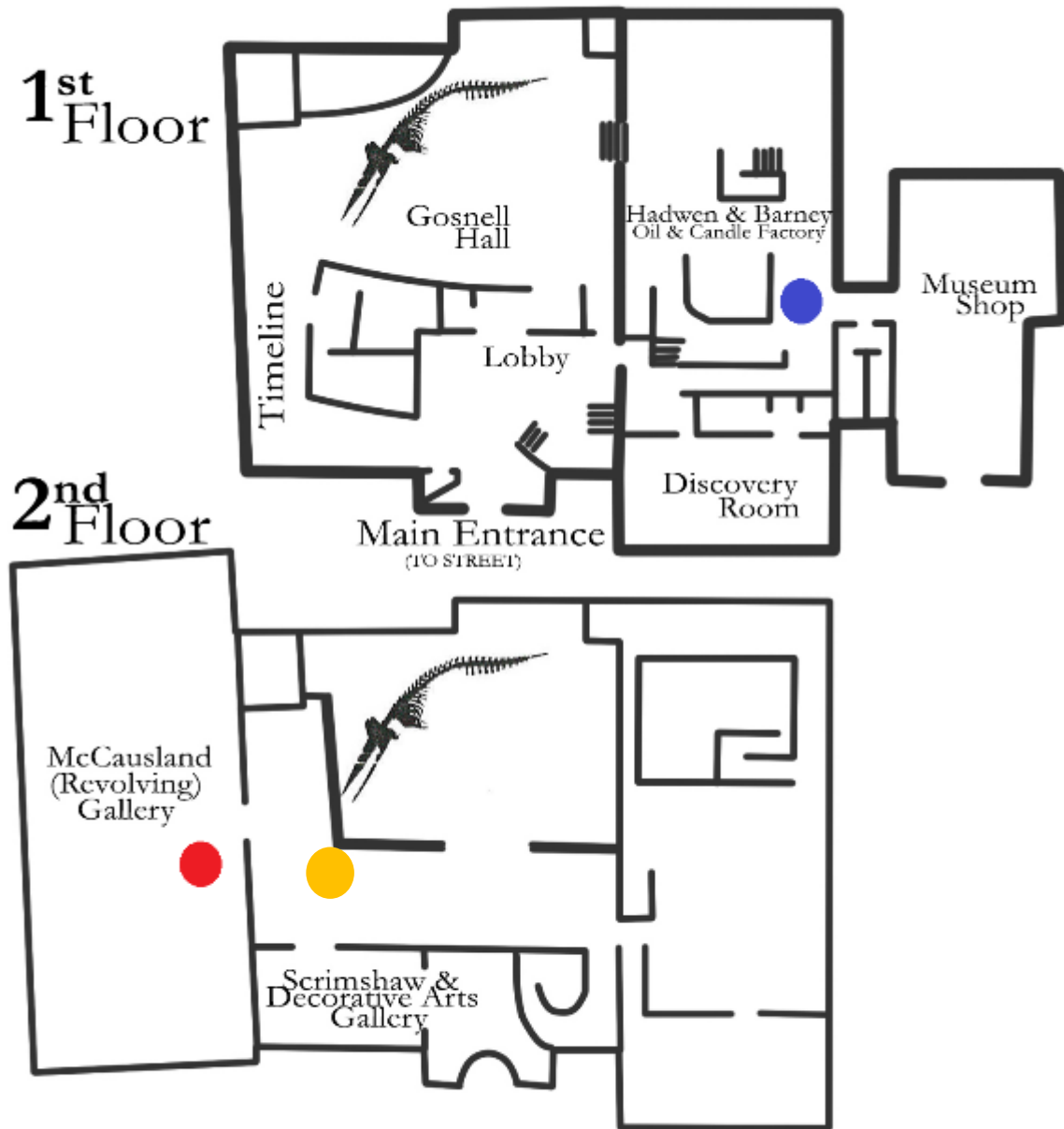
- **Red:** Location A: Inside McCausland Gallery
- **Blue:** Location B: Outside Museum Shop
- **Orange:** Location C: Outside McCausland Gallery

A greater number of visitors to the Whaling Museum were willing to stop and test the survey near the McCausland Gallery, as opposed to outside the Museum Gift Shop. This is

likely due to traffic patterns that made the location near McCausland Gallery less crowded than the area outside the Museum Gift Shop. Additionally, due to encouragement from the front desk, visitors were more likely to end their visit at this location, rather than the second location. See Table 3 below for a summary of survey counts segmented by museum location tested.

Location	Location Description	Number of Surveys Completed	Number of Refusals	Number of Visitors Who Passed By
Location A	Inside McCausland Gallery	51	7	97
Location B	Outside Museum Gift Shop	16	4	86
Location C	Outside McCausland Gallery	4	5	24

Table 3: Summary of location data from public Museum Survey testing.

4.4.1 Follow-Up Questions

Each visitor who completed the survey was asked a series of follow-up questions:

- Question 1: Were any questions confusing or unclear?
- Question 2: Did you have any difficulty using the touchscreen interface?
- Question 3: How do you feel about the length of the survey?
- Question 4: Do you own a smartphone or tablet?
- Question 5: What do you think we can do to improve this survey?

The following is a summary of the visitors' responses to these questions, as well as the team's observations of these visitors during the four days of public testing, and how this impacted the finished product. For a complete table of follow-up question responses, see Appendix G.

4.4.1.1 Question 1: Were any questions confusing or unclear?

During the first round of testing, reactions to the survey content were largely positive, with the exception of questions related to technology and interactivity in the museum. These Likert scale questions confused respondents when they did not notice any technology or interactive features at the museum. As a result, these questions were rephrased to be as clear as possible, and were changed to simple radio button questions.

Other negative responses were related to a question asking the respondent to give ratings to seven spaces of the Whaling Museum. Results indicated that this question was awkwardly

formatted, and that visitors were unsure how to respond if they had not visited these parts of the museum. Due to technical constraints, this question could not be revised to include an option for the latter situation; after discussion with our sponsor, this question was eliminated from the Museum Survey.

As a result of these changes, visitors found the questions to be less confusing. Responses to this question progressed from 22.2% of visitors finding questions to be confusing or unclear on December 5th, to 14.3% of visitors finding questions to be confusing or unclear on December 14th. See Figure 22, below, for a progression of responses to this question.
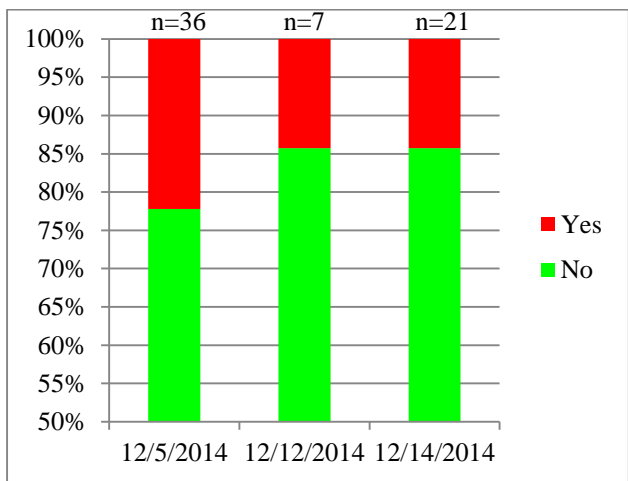
Figure 22: Responses to "Did you find any questions confusing or unclear?" Green: "No" Red: "Yes"; (Left to Right): December 5th, December 12th, December 14th.

4.4.1.2 Question 2: Did you have any difficulties using the touchscreen interface?

When we tested the survey with the public on December 5th, there were technical issues that caused the survey to be less responsive to the user's touch. That is, there was a delay between the time the visitor pressed a button, and the time the touchscreen visually indicated as such. Additionally, page loading times were slow in some cases, which also caused delays and unnecessary frustration for the visitor. This negatively impacted the responses to follow-up question 2. Because of these technical difficulties, 38.9% of visitors responded that they *did* have difficulties using the touchscreen interface (Figure 24).

To determine the root cause of this problem, the team tested several technical factors. We began by testing whether the iPad minis were connected to the correct Wi-Fi network. (We ensured that they were connected to the NHA's guest network rather than automatically connecting to the unsecured public network.) Additionally, by testing the survey on all four iPad minis available, the team attempted to see whether there was a problem with the devices

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themselves. The team determined that the survey's delays was due to a weak Wi-Fi connection, especially outside the museum shop entrance. By doing Wi-Fi speed tests the team determined that the outside area of McCausland Gallery had the strongest connection. Thus, by only testing outside McCausland Gallery on the 12th and 14th, responses to the question of "Did you have any difficulties using the touchscreen interface?" improved dramatically (Figure 23).
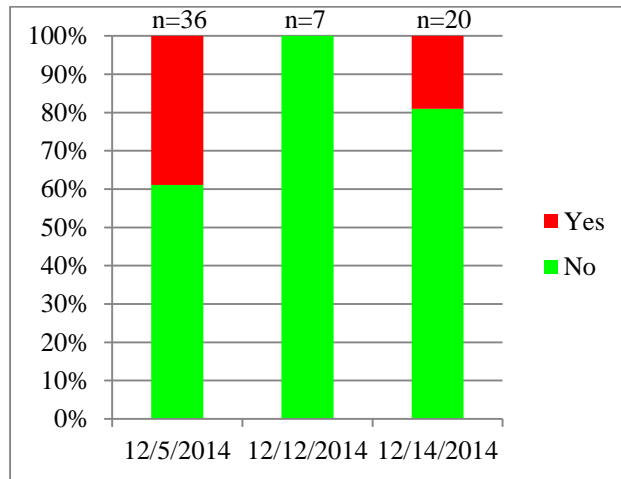

Figure 23: Responses to "Did you have any difficulties using the touchscreen interface?" Green: "No" Red: "Yes"; (Left to Right): December 5th, December 12th, December 14th.

4.4.1.3 Question 3: How do you feel about the length of the survey?

The average length of time visitors used to take the survey was 4 minutes and 22 seconds. This excludes partial responses, and outlier responses (which took longer than [(third quartile)+ 1.5×(interquartile range)]). This follows SurveyGizmo's guidelines, which state that surveys should take five minutes or less for optimal response rates. This is supported by the positive responses to the question, "How do you feel about the length of the survey?" for which 93.5% of visitors reported the length of the survey was just right.

4.4.1.4 Question 4: Do you own a smartphone or tablet?

Museum visitors were not resistant to using the technology itself. As we noted in the literature review, smartphones are becoming increasingly common. We found 87.5% of visitors surveyed owned a smartphone or tablet, which may explain the visitors' familiarity with the use of the touchscreen interface on the iPad minis.

4.4.1.5 Question 5: What do you think we can do to improve this survey?

This question was reserved for further comments regarding issues with the survey. Among visitors surveyed on December 5th, 11.1% reported they were not at the end of their

visit when they took the survey. To rectify this, the team decided to change their approach of visitors on later testing dates by asking if they were towards the end of their visit before handing them the survey. This would help determine if the visitor is qualified to take the Museum Survey, as well as enhance decisions and recommendations regarding possible survey kiosk locations. On later dates, visitors had little to say in response to this question.

4.4.2 Limitations

Unfortunately, the Whaling Museum was only open to the public on weekends during the off-season when the team was there. This limited public testing to only three days: December 5th, 12th, and 14th.

Also, during Stroll Weekend, the busiest weekend on Nantucket in the winter, regular daily programs were not held at the Whaling Museum. This made testing difficult because the Museum Survey contains questions about the daily programs. Because of this, and because of the anticipated large amount of visitors to the museum on this weekend, we followed our sponsor's suggestion to not test the Museum Survey on the Saturday or Sunday of Stroll Weekend (December 6th and 7th).

Additionally, during the Festival of Trees, (which took place on all four testing dates), Christmas trees were placed where there would have been valuable testing space—making it more difficult to determine the best locations for a standing survey. Also, the attracting and holding power of the Christmas trees may have biased our observations of visitor flow throughout the museum. Particularly, Christmas trees were placed in the lower level of the Hadwen & Barney Oil and Candle Factory, which in our earlier observations of visitors to the museum was a less popular space. However, during the Festival of Trees, this was one of the most frequented areas. Therefore, visitor traffic was likely increased in the area outside the Museum Gift Shop, which was a location tested on December 5th.

4.4.3 Summary of Findings for Museum Survey Testing

Visitor feedback from public testing added helpful third-party perspectives, and contributed to important modifications of the survey. Overall, the team encountered less resistance than expected in their public testing of the Museum Survey. Visitors responded positively to the digital prototype, and appeared interested and engaged while using it.

5 Conclusions and Recommendations

By working with the NHA to develop a suite of digital visitor evaluation instruments, we have gained an understanding of the potential benefits and limitations of this use of technology. In addition, we have witnessed a positive reaction from the users of our survey instruments. Although we developed only two surveys in full, the findings from this project can be applied to future surveys, and help the NHA gather further useful data. The following chapter outlines the team's conclusions and recommendations.

5.1 In-House Museum Survey

Conclusion 1:

The qualitative results of our public testing of the Museum Survey indicate that visitors to the Nantucket Whaling Museum are not opposed to the idea of completing a survey on a small touchscreen device. Furthermore, we found that many of Nantucket's visitors and residents are pleased to provide their feedback on the NHA and its programs and exhibits.

Recommendations:

- We recommend that the NHA keeps two iPad minis on stands to ease the burden on museum staff. Passers-by can take the Museum Survey on these devices, without having to hold them.
- We recommend that the iPad stands should be located on the balcony outside of McCausland Gallery. This area is wide open and where a kiosk would be easily seen and would not cause any bottle necking of visitor flow. Observations of visitor traffic throughout the museum indicate that areas such as the main lobby or Gosnell Hall simply become too busy for one visitor to stop and take a survey. Also, the Wi-Fi speed test results revealed that the best signal in the museum was outside McCausland. Furthermore, in order for the content of the Museum Survey to be relevant to the taker, it needs to be situated at a common end-of-visit location. Due in part to suggestions from the front desk, the team observed that visitors tended to end their stay near the McCausland Gallery.
- We recommend that the survey be displayed in SurveyGizmo's "Kiosk Mode" which gives the survey a more complete look and feel. This feature also automatically refreshes

the survey if it is left for a certain time without activity. We recommend that the Museum Survey be set to restart after 5 minutes with no interaction, and to stay on the final page (which contains a "Thank You" message and icons for the NHA's various social networking accounts) of the survey for 20 seconds.

- Due to the ability to enter full-screen mode, we recommend that the survey be completed using Mercury for an internet browser.
- To draw attention to the survey kiosk, we recommend that the NHA place a sign nearby that will identify the survey for the visitors.

Conclusion 2:

During our testing, team members were able to stand near the survey taker as they used the devices. It is reasonable to conclude that in a different environment—where the survey taker would not feel as closely watched—there is a greater chance that users will try to exit out of the survey and open other applications.

Recommendation:

- As a precaution, we recommend the use of Guided Access on all iPad minis used for the Museum Survey. This integrated setting can provide limitations to the visitors so that they stay within the survey, and do not power off the device. Guided Access, along with SurveyGizmo's Kiosk Mode, provides the best, most fool-proof experience while taking the survey.

5.2 Large Scale Survey Distribution
Conclusion:

As shown by the distribution of the 2014 NHA Programs Survey, email is an effective tool to disseminate a survey to members of the NHA community. Those who receive a shared link to a survey via email have the opportunity to forward the link to their own network— thereby expanding the reach of the survey to other audience members without any effort on

behalf of the survey distributor. Note that when distributing surveys via email, it is likely that those who respond will be the most 'committed' or 'interested' members of the community. Therefore, there is the potential to collect large amounts of data via survey campaigns.

Recommendations:
- We recommend the NHA send follow-up emails and perhaps include a link in the regular NHA e-newsletter.
- We also recommend the NHA post links to the survey on social media networks to provide further exposure.
- We recommend that the NHA offer respondents an incentive to encourage further responses. For example, if they take the survey, they could be entered into a raffle for tickets to the NHA's Festival of Trees preview party. Similar efforts could be applied to future digital surveys as well.

5.3 Modifying and Creating New Surveys
Conclusion 1:

In the future, the NHA will want to create different surveys for other purposes or because museum programs or activities have changed. Because all of the surveys are available online, all preliminary projects are preserved in the account, so that the NHA can use them as a starting point if so desired. These developed surveys consist of: Initial Membership Survey, Membership Renewal Survey, and Individual Program Survey.

Recommendation:

- Based on the performances of the 2014 NHA Programs Survey and the Museum Survey, we recommendation that the NHA implements the other preliminary surveys as well, and distributes them via the appropriate avenues of communication.

Conclusion 2:

The NHA will likely need to modify the current surveys in the future. For example, in the 2014 NHA Programs Survey they may need to make changes if any of the programs are changed, removed or added.

Recommendation:

- We recommend that the NHA use the User Guides we have provided to assist with survey development and modification as well as SurveyGizmo's user-friendly interface and Help pages.
- We recommend that the responsibility for creating and distributing these surveys should be as follows:
    1. The staff member most closely aligned with the survey's purpose designs the survey's content.
    2. The survey's content is reviewed by member(s) of the Visitor Experiences department.
    3. The survey's style is applied either by the initial staff member, or by the Communications Coordinator.
    4. The survey is distributed by the Communications Coordinator via email, or the survey is administered on iPad kiosks.
        - For surveys administered on iPad kiosks in the Whaling Museum, museum interpreters should be in charge of supervising these surveying stations. These staff members should occasionally walk by the kiosk, in order to confirm that the iPad is still intact and functioning.
    5. Data is reviewed by the initial staff member.
        - For the Museum Survey, data should be reviewed by the Visitor Experiences department, primarily.

5.4 Using Survey Data

Conclusions:

From our analysis of responses to the 2014 NHA Programs Survey, we have found that surveys provide useful feedback that should not be ignored. Answers to radio button or checkbox questions can be used to provide quantitative data to support decision-making. (For examples, see Findings.) Additionally, qualitative responses to open-text questions or comments are an important source for in-depth visitor opinions, as well as new ideas. These comments effectively enable the museum to have an honest "conversation" with its patrons through the digital medium.

Recommendations:

- We recommend the use of Summary Reports built in to Survey Gizmo for the organization of this response data. Summary reports provide high-level analysis—including charts and graphs—that are sufficient enough for most of the NHA's needs. (For information on the creation of Summary Reports, see the SurveyGizmo User Guide.)

- The

- team recommends importing data from the 2014 NHA Programs Survey into the Excel workbook developed by the team for more in-depth analysis. This is because data downloaded directly from SurveyGizmo into a CSV is in such an inconvenient form that proper analysis is nearly impossible. The workbook created collapses data and makes sorting and filtering possible.

- For future analysis of the 2014 NHA Programs Survey, we recommend the NHA continue segmenting responses by age group, residency, membership, and number of programs attended.

- For future analysis of the Museum Survey, we recommend the NHA segment responses by members vs. non-members, and whether or not it is the visitor's first time coming to the museum.

5.5 Afterword

This project successfully provided the NHA with a foundation for further use of digital technology in its surveying practices. The instruments delivered will be useful tools for guiding future executive decisions regarding different aspects of museum and program management. Most importantly, these surveys enhance the organization's ability to have more open and honest conversations with its patrons through the digital medium—thereby allowing more members of the community to express their concerns with, and regards for, the significant efforts of the Nantucket Historical Association

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7 Appendix A: Sponsor Description

The Nantucket Historical Association was founded as a natural result of the evolution of the island of Nantucket. When Nantucket fell into disrepair and isolation following the failure of the whaling industry, many historical buildings were preserved because the economically-depressed islanders did not have the resources to build over them. As a result, tourists flocked to the island in order to see these historical sites. To keep these sites intact for their new tourist economy, the Nantucket Historical Association (NHA) was established in 1894.

The NHA is the keeper of Nantucket's heritage. The association provides programs and entertainment for members and non-member, residents and non-residents, alike. In 2013, the NHA welcomed 74,000 visitors to its historic sites, walking tours, and museum ("NHA Annual Report," 2014). The NHA identifies four goals for the organization:

- **Objective I:** Achieving Financial Stability
- **Objective II:** Caring for Our Collections, Including Properties
- **Objective III:** Providing Transformative Experiences
- **Objective IV:** Providing and Promoting a Consistent Identity and Clear Brand

("Mission Statement of the Nantucket Historical Association," 2014)

The NHA cares for 4 historical sites and 14 properties, one of which is the Nantucket Whaling Museum - which works to preserve and promote knowledge of the most important period in the island's history. The Nantucket Whaling Museum experiences approximately 60,000 visitors per year, peaking in the summer tourist season. Because the Whaling Museum is such a popular and important site to the island of Nantucket, it is essential that the museum is able to collect feedback from visitors, in order to improve.

8 Appendix B: Visitor Satisfaction Survey (Foti & Rapp, 2011)

1. Are you a member? (Yes / No)

2. With 1 being "not satisfying at all" and 5 being "very satisfying" how would you rate your

   overall experience with the Whaling Museum?

      Not Satisfying at all 1   2   3   4   5 Very Satisfying

4. How much time did you spend at the Whaling Museum during your visit?

1 hr   2 hrs   3 hrs   4+ hours

5. What would have made your experience better? _____

6. Will you return to the whaling museum? (Yes / No)

      If yes,   Members   Interesting/Educational   New Exhibit

      If Back on the Island   Other: _____

      If no, can you give us a reason why? _____

7. What is the zip code of your primary residence? _____

Thank you for your participation in this survey. If you leave your email

address, we will add you to our e-newsletter, which provides an up to date

calendar of events and special programs at the Whaling Museum.

Email Address: _____

9 Appendix C: NHA Staff Interview Notes

9.1 Interview Preamble

We are a team of Worcester Polytechnic Institute students working in collaboration with the Nantucket Historical Association to improve the visitor surveying methods of the Nantucket Whaling Museum. You are not obligated to answer any question asked. If any of your answers appear in our final report or presentation, we will notify you, and you will be able to review or strike out this content.

9.2 Staff Interview Summaries

Conducted 10/30/14 by Catherine Bonner, Adam Karcs, and Emily Perry

Michael Harrison: Robyn & John Davis Chief Curator

We asked Mr. Harrison to tell us what information would be most useful for him to gather from museum visitors. As chief curator, Mr. Harrison was most interested in assessing the difference between visitors' expectations and experiences. This includes gallery content, daily programs, and even other NHA properties.

The Whaling Museum's brand— particularly the museum's scope—was also a point of interest for him. Whether the Whaling Museum evolves into a museum for all of Nantucket's history is a question that must be answered in future. Mr. Harrison would like to know what visitors expect to see in this regard. Particularly, he is interested in how visitors receive the revolving exhibits in McCausland Gallery - which may sometimes lie outside the scope of 'whaling history.'

Another area for concern is the museum's efforts towards diversifying their audience. For the sake of accurate historical documentation, Mr. Harrison would ideally like to have every demographic of Nantucket's residents connect to some part of the museum's collection. To assess this, Mr. Harrison suggested we ask a question alike to: 'Was the content of the museum relevant to you?' We are uncertain as to how this question would be received if it were on an exit survey.

He is also interested in determining why non-visitors choose not to go to the museum. He is interested in our recommendations for the surveying of non-visitors in future.

Karyn Lindsay: Foundations Relations & Prospect Research Coordinator

The purpose of this interview was to ascertain what information would be useful to gather from visitors. She expressed a need for outcomes-based evaluation for program feedback. She wishes to have quantitative data that measures the impact of programs - the change in behaviors, attitudes, and skills of program participants. This feedback is useful for measuring the success of a program, which is helpful for obtaining future grants. We also discussed the general process of obtaining grants, and what data is currently used - including the Cultural Data Project.

We plan to incorporate Likert items for use in program feedback surveys to address her concerns.

Corey Fabian Borenstein: Public Programs Coordinator

The purpose of this interview was to review what was discussed at the meeting on October 27, 2014. Ms. Fabian Borenstein confirmed that she was interested in how programs are received (overall satisfaction, including perceived value), as well as how participants heard about the programs. Ideally, she would also like attendees to provide suggestions for future programs.

Claire White: Manager of Education

The purpose of this interview was to review what was discussed at the meeting on October 27, 2014. We confirmed that an iPad survey would not be well-received in the Discovery Room, since parents are generally averse to the use of technology in this space. Since Ms. White is not in need of a separate survey, we discussed questions that could be included on an exit survey. She is already aware of the number of families that enter the museum; this is gathered from ticket sales reports. However, ticket prices are segmented by age. One of the age ranges is 6-17 years, which is quite large, so she would like to know the specific ages of people in this range. She is also interested in the number of people who visit - or are aware of - the museum's Discovery Room.

We also briefly discussed the possibility of providing a template for a post-field trip Teacher Survey - to assess their overall satisfaction. The educational value of a field trip is generally assessed in classrooms by the teachers themselves.

Molly McIlvaine: Membership Coordinator

The purpose of this interview was to expand on what was discussed at the meeting on October 27, 2014. After discussing what information she already received from Sales by Membership reports, Ms. McIlvaine expressed an interest in how visitors heard about membership and why they joined. Additionally, she would like to know which programs members attend that are not already recorded via online sales, and which programs generate new memberships.

We discussed the possibility of having two short surveys for members of the NHA. The first would be delivered upon joining the NHA, and delivered via Thank You note or email. This survey would allow the member to choose their preferred mode of communication - email or mail - which could enable further online surveys, and reduce postage costs and paper consumption.

The second survey would be delivered after the first year of membership, via the member's preferred mode of communication. This survey would include a question regarding the value and benefits of their membership. We are attempting to determine ways to tactfully ask this question, since members have the motivation to under-report their willingness-to-pay.

Lindsay Scouras: Communications Coordinator

The purpose of this interview was to review what was discussed at the meeting on October 27, 2014. Ms. Scouras confirmed her interest in knowing how visitors heard about the Whaling Museum and the NHA - for the purpose of allocating time and money into certain marketing outlets. She is particularly interested in how people off-island learned about the Whaling Museum. She also reiterated her concerns regarding the branding of the museum, citing that many people do not know that the museum is operated by the NHA. We also discussed the relative popularity of social media for the NHA.

She is also interested in adding to the email database, which is used to send out e-newsletters, among other things.

To address her concerns, we plan to incorporate the NHA logo and social media into all surveys, as well as incentivize email collection.

10 Appendix D: 2014 NHA Programs Survey

NHA Programs Survey
2014

Programs

1. How many NHA programs have you attended in the past twelve months? *

   ○ 0

   ○ 1 - 5

   ○ 6 - 10

   ○ 11 - 20

   ○ 20+

2. Which of the following types of NHA programs have you attended in the **past** twelve months, and/or do you plan to attend in the **next** twelve months?

	Attended in past 12 months	Plan to attend in next 12 months
Evening Lectures at the Whaling Museum	☐	☐
Food for Thought Lecture Series	☐	☐
Concerts	☐	☐
Film Screenings	☐	☐
Theatrical Performances (i.e. *Moby Dick Rehearsed, A Night or Two of Poetry*, etc.)	☐	☐
Family Programs (i.e. *Harvest Fair, Night of Holiday Magic*, etc.)	☐	☐
Art Classes or Workshops (i.e. *Painting at the Greater Light Garden, Sketching in the Museum*, etc.)	☐	☐
Museum Rooftop Parties (*Summer Sunset Series*)	☐	☐
NHA Member Mornings	☐	☐
1800 House Classes	☐	☐
Discovery Room Programs	☐	☐
Antiques & Design Show of Nantucket Events	☐	☐
Festival of Wreaths	☐	☐
Festival of Trees	☐	☐
Other - Write in here!	☐	☐

3. During the summer season, when are you most likely to attend the following types of NHA programs?
(Please check all that apply)

	Weekdays	Saturdays	Sundays	No Preference
Evening Lectures	☐	☐	☐	☐
Concerts	☐	☐	☐	☐
Film Screenings	☐	☐	☐	☐
Theatrical Performances	☐	☐	☐	☐
Family Programs	☐	☐	☐	☐
Art Classes/Workshops	☐	☐	☐	☐
Summer Sunset Series	☐	☐	☐	☐
NHA Member Mornings	☐	☐	☐	☐
1800 House Classes	☐	☐	☐	☐
Discovery Room Programs	☐	☐	☐	☐
Other - Write in here!	☐	☐	☐	☐

LOGIC Hidden unless: Question "How many NHA programs have you attended in the past twelve months?" #1 is one of the following answers ("1 - 5","6 - 10","11 - 20","20+")
4. I attend NHA programs:
(Please check all that apply) *

☐ With Family

☐ With Friends

☐ Alone

☐ Other: _____

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5. What types of NHA programs would you like to see at our historic sites in 2015?

	Greater Light	Old Mill	Oldest House
Concerts	☐	☐	☐
Art Classes/Workshops	☐	☐	☐
Theatrical Performances	☐	☐	☐
Family Programs	☐	☐	☐

Any other ideas for programs at NHA historic sites?

Tickets

Page entry logic:
This page will show when: Question "How many NHA programs have you attended in the past twelve months?" #1 is one of the following answers ("1 - 5","6 - 10","11 - 20","20+")

Hidden unless: Question "How many NHA programs have you attended in the past twelve months?" #1 is not one of the following answers ("0")

6. How do you feel about the **value** of the NHA programs you have attended in the past twelve months, in relation to their admission prices? *

	1	2	3	4	5	
Poor Value	○	○	○	○	○	**Great Value**

Comments

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Hidden unless: Question "How many NHA programs have you attended in the past twelve months?" #1 is one of the following answers ("1 - 5","6 - 10","11 - 20","20+")

7. How did you purchase the majority of your NHA program tickets? *

○ Online

○ In Person

○ Phone

○ Mail

Rating, Media, Membership, Residency

Piped From Question 7. (How did you purchase the majority of your NHA program tickets?)

How easy was the [question("piped value")] ticket buying process? *

	1	2	3	4	5	
Very Difficult	○	○	○	○	○	**Very Easy**

8. If available, would you use online ticketing for **all** NHA programs? *

○ Yes

○ No

○ Not Sure

Hidden unless: Question "How many NHA programs have you attended in the past twelve months?" #1 is one of the following answers ("1 - 5","6 - 10","11 - 20","20+")

9. How would you rate your overall experience of NHA programs in the past twelve months? *

	1	2	3	4	5	
Not Satisfied at All	○	○	○	○	○	**Very Satisfied**

Hidden unless: Question "How would you rate your overall experience of NHA programs in the past twelve months?" #9 is one of the following answers ("1","2","3")

10. Tell us how we can make your NHA experience better in the future!

11. How do you usually hear about NHA programs?
(Please check all that apply) *

- ☐ NHA Flyers
- ☐ NHA Website (nha.org)
- ☐ NHA E-newsletter
- ☐ *The Inquirer and Mirror* newspaper
- ☐ *Yesterday's Island* newspaper
- ☐ MahonAboutTown.com
- ☐ Radio
- ☐ Facebook
- ☐ Twitter
- ☐ Whaling Museum Visit
- ☐ Word of Mouth
- ☐ Other: [_____]

12. Are you a member of the NHA? *

- ○ Yes
- ○ No

Hidden unless: Question "Are you a member of the NHA?" #12 is one of the following answers ("No")

13. I am **not** an NHA member because:
(Please check all that apply) *

☐ I didn't know about membership.

☐ Membership is too expensive.

☐ Membership benefits do not reflect my needs at this time.

☐ Other [   ]

14. How would you identify your residency on Nantucket? *

○ Resident (at least 6 months/year)

○ Seasonal Resident (less than 6 months/year)

○ Visitor

15. Is there anything else that we can do better?

[   ]

Optional

16. Feel free to share the following information so we can serve you better!
   Full Name (optional):

   [   ]

   Age (optional):   Gender (optional):
   ○ 18 - 25   ○ Male

   ○ 26 - 35   ○ Female

   ○ 36 - 49   ○ Other

   ○ 50 - 64

   ○ 65+

Thank You!

11 Appendix E: Museum Survey

Museum Survey

Primary Motivation

1. Is this your first time visiting the Whaling Museum? *

   ○ Yes

   ○ No

2. What brought you to the Whaling Museum today?
(Please check all that apply) *

   ☐ Recreation or entertainment

   ☐ Interest in Nantucket history and whaling

   ☐ Family outing

   ☐ Viewing a specific exhibit or program

   ☐ It was recommended to me

   ☐ Research

   ☐ No special reason

How'd you hear?

Page entry logic:
This page will show when: Question "Is this your first time visiting the Whaling Museum?" #1 is one of the following answers ("Yes")

3. How did you hear about the Whaling Museum?
(Please check all that apply.) *

- ☐ TripAdvisor
- ☐ NHA Flyers/Brochures
- ☐ NHA Website
- ☐ *The Inquirer and Mirror* newspaper
- ☐ *Yesterday's Island* newspaper
- ☐ Radio
- ☐ Facebook
- ☐ Twitter
- ☐ Word of Mouth
- ☐ Other: [   ]

Daily Programs

4. Did you attend any of the scheduled daily museum programs or films offered? *

- ○ Yes
- ○ No

5. Which of the following programs did you attend? *

Nantucket Film

Whale Hunt Multimedia Show

Essex Gam

Guided Gallery Tour

Please rate each of the following programs you attended.

6. *Nantucket* Film *

	1	2	3	4	5	
Not at all enjoyable	○	○	○	○	○	Very enjoyable

7. *Whale Hunt* Multimedia Show *

	1	2	3	4	5	
Not at all enjoyable	○	○	○	○	○	Very enjoyable

8. *Essex* Gam *

	1	2	3	4	5	
Not at all enjoyable	○	○	○	○	○	Very enjoyable

9. Guided Gallery Tour *

	1	2	3	4	5	
Not at all enjoyable	○	○	○	○	○	Very enjoyable

Disc. Rm. / Museum Scope

Hidden unless: Question "What brought you to the Whaling Museum today? *(Please check all that apply)*" #2 is one of the following answers ("Family outing")

10. Did you visit our family Discovery Room? *

 ○ Yes

 ○ No

 ○ Not Sure

Hidden unless: Question "What brought you to the Whaling Museum today? *(Please check all that apply)*" #2 is one of the following answers ("Interest in Nantucket history and whaling","Viewing a specific exhibit or program","Research")

11. In regards to **whaling history**, the museum's galleries and exhibits contain: *

	1	2	3	4	5	
Too few artifacts	○	○	○	○	○	**Too many artifacts**

Hidden unless: Question "What brought you to the Whaling Museum today? *(Please check all that apply)*" #2 is one of the following answers ("Interest in Nantucket history and whaling","Viewing a specific exhibit or program","Research")

12. In regards to **non-whaling history**, the museum's galleries and exhibits contain: *

	1	2	3	4	5	
Too few artifacts	○	○	○	○	○	**Too many artifacts**

Museum Qualities

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13. How much time did you spend at the Whaling Museum during your visit?

- ☐ Less than 1 hour
- ☐ About 1 to 2 hours
- ☐ About 3 to 4 hours
- ☐ More than 4 hours

14. Please rate the following features you experienced today at the Whaling Museum.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Exhibit labels were clear and understandable	☐	☐	☐	☐	☐
The staff was knowledgeable and informative	☐	☐	☐	☐	☐
The museum was easy to navigate	☐	☐	☐	☐	☐
The facilities were kept clean	☐	☐	☐	☐	☐

Is there anything else you would like us to know?

15. Would you like to see more technology in use at the Whaling Museum?

- ☐ Yes
- ☐ No

16. Would you like to see more hands-on, interactive exhibits at the Whaling Museum?

○ Yes

○ No

Non-members only

17. Are you a member of the Nantucket Historical Association? (Whaling Museum) *

○ Yes

○ No

LOGIC Hidden unless: Question "Are you a member of the Nantucket Historical Association? (Whaling Museum)" #17 is one of the following answers ("No")

18. Please rate the following statement:

The price of admission was reasonable.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
○	○	○	○	○

(untitled)

19. Please rate your **overall** experience at the museum today.

	1	2	3	4	5	
Not Satisfying at All	○	○	○	○	○	Very Satisfying

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LOGIC Hidden unless: Question "Please rate your **overall** experience at the museum today." #19 is one of the following answers ("1","2")
20. What would have made your experience better?

VALIDATION %s format expected
21. If you would like to stay up-to-date on Nantucket Historical Association events and receive our free e-newsletter, please provide your email address below:

Thank You!

12 Appendix F: 2014 Public Programs Report

Public Programs Report
January – December 2014
Prepared by C. Fabian Borenstein, updated 06/16/14

January
Saturday, February 1 – Sunday, February 2 | <u>Moby-Dick</u> Marathon Reading

February
Food for Thought Brown Bag Lecture Series

2/13/2014	Fran Karttunen & Barbara White, "Annie Nahar: Untold Courage"
2/20/2014	Alfie Sanford, "Adventures on the High Seas: Sailing Across the Atlantic"
2/27/2014	Jim Lentowski, "Nantucket Wildfire Awareness"

March
Saturday, March 8, 6 – 8 p.m. | 5ᵗʰ Annual NHA History Quiz Bowl

Sundays, March 9, 16, 23, 30, 1 – 3 p.m. | AAN Sketching Classes at the Whaling Museum

Sunday, March 16, 5 – 7 p.m. | One Book One Island Closing Event

Food for Thought Brown Bag Lecture Series

3/6/2014	Mary Emery, "An Artist's Residency at the Vermont Studio Center"
3/13/2014	David Dunn, "Adventures Motorcycling Around the United States"
3/20/2014	Jay Craven, "Behind the Scenes"
3/27/2014	Lee Saperstein, "Tracking the Nantucket Railroad"

April
Sunday, April 6, 1 – 3 p.m. | AAN Sketching Classes at the Whaling Museum

Food for Thought Brown Bag Lecture Series

4/3/2014	Rob Cocuzzo, "A Writer's Journey into the Deep"
4/10/2014	Jason Bridges, "Building Your Brand"
4/17/2014	Mary Malavase, "How to Show an Award-Winning Daffodil"
4/24/2014	Bobby Frazier, "Inside the Nantucket Cottage Style Exhibition"

May
Food for Thought Brown Bag Lecture Series

5/1/2014	Mark Avery, "Restoring the Old Gaol"

Friday, May 2 and Saturday, May 3, 7-8:30pm | A Night (or Two) of Poetry

Monday, May 19, 6 – 8 p.m. | Special Lecture & Book Signing with Philip Hoare

June

Thursday, June 12, 6 – 7 p.m. | "Quaker Nantucket" lecture and book signing with Peter Gow

Wednesday, June 18, 6 – 8 p.m. | NHA and NCMC Special Concert at the Whaling Museum

July

Tuesday, July 1 and Wednesday, July 2, 1:30 – 2:30 pm | Family Workshop: Drawn to Whales with Don Sineti

Tuesday, July 1, 6 – 7 p.m. | Don Sineti Concert on Tucker's Roofwalk

Monday, July 7, 6 – 8 p.m. | #ACKPARTYHOSTS presents Sunsets + Roof-Decks

Wednesday, July 9, 16, 23, 30, 9 a.m. – 12 p.m. | Family Drop-in Workshop: Painting in the Greater Light Garden

Thursdays, July 10, 17 & 24, 10 a.m. – 3 p.m. | *Plein Air* Art Classes in the Greater Light Garden
Sunday, July 13, 10 a.m. – 12 p.m. | Family Adventure Day at the Oldest House

Monday, July 14, Tuesday, July 15, and Wednesday, July 16, 7 – 8:45 p.m. |Theatrical Performance: *Moby-Dick Rehearsed*

Thursday, July 17, 7 – 10 p.m. | Theatrical Performance and Reception: *Moby-Dick Rehearsed*

Saturday, July 19, 6 – 7:30 p.m. | Lecture & Film Screening: Kelly Gleason presents *Lightning Strikes Twice*

Sundays, July 20 & 27, 5 -7 p.m. | Late Night at the Whaling Museum

Monday, July 21, 6 – 9 p.m. | Live in Concert: Coq Au Vin

Tuesday, July 22, 6 – 8 p.m. | Friends of the NHA Lecture with George Shackelford

Friday, July 25, 6 – 8 p.m. | Special Lecture & Film Screening: *The Charles W. Morgan* with Steve White

Monday, July 28, 6 – 8 p.m. | Special Lecture & Book Signing: *Hinckley Yachts: An American Icon* with Nick Voulgaris III

August

Sundays, August, 3, 10, 17, 24 & 31, 5 -7 p.m. | Late Night at the Whaling Museum

Monday, August 4, 6 – 9 p.m. | Live in Concert: Coq Au Vin

Wednesdays, August 6, 13, 20, 27, 9 a.m. – 12 p.m. | Family Drop-in Workshop: Painting in the Greater Light Garden

Friday, August 8, 4 – 6 p.m. | 1800 House Community Open House

Monday, August 11, Tuesday, August 12, and Wednesday, August 13, 7 - 8:45 p.m. |Theatrical Performance: *Moby-Dick Rehearsed*

Thursday, August 14, 7 – 10 p.m. | Theatrical Performance and Reception: *Moby-Dick Rehearsed*

Saturday, August 16, 6 – 7 p.m. | Bill Schustik: Live at the Whaling Museum

Monday, August 18, 6 – 9 p.m. | Summer Sunset Series: Coq Au Vin's Final Summer Concert of 2014

September
Monday, September 8, 6 – 7:30 p.m. | Lecture & Book Signing with Kurkpatrick Dorsey

Thursday, September 11, 6 – 7:30 p.m. | John Mitchell Lecture: Time, Place, and the Preservation of Landscape

Friday, September 12 and Saturday, September 13, 7 – 8:30 p.m. | Twelve Angry Men

Saturday, September 13, 10 a.m. – 1 p.m. | The Craft of Writing: A Discussion with John Mitchell

Tuesday, September 16, 4 – 6 p.m. | Community Celebration at the Old Gaol

Friday, September 26, 7 – 9 p.m. | Concert: Walden Chamber Players

Sunday, September 28, 12 – 1 p.m. | Concert: Walden Chamber Players

October
Thursdays, October 2, 9, 16, 23 & 30, 12 – 1 p.m. | Food for Thought Lecture Series

10/2/2014	Waterfall Pollack Family, "Creating the Mendocino Music Festival"
10/9/2014	Joe Hale, "Illuminating the World"
10/16/2014	Bob Hellman, "Whaling in Madeira"
10/23/2014	Ben Shattuck, "Creative Writing and History"
10/30/2014	Amy Jenness, "Four Centuries of Nantucket Seasons"

Thursday, October 2, 6 – 7:30 p.m. | Waterfall Pollack Family Concert

Thursday, October 9, 6 – 7:30 p.m. | Lecture: The Battle of Nantucket and the War of 1812 with Donald Peacock

Saturday, October 18, 12 – 3 p.m. | Harvest Fair at the Old Mill

Saturday, October 25, 10 a.m. – 1 p.m. | Creative Writing Workshop with Writer & NHA Verney Fellow Ben Shattuck

Wednesday, October 29, 6 – 7 p.m. | Scary Stories at the Old Gaol

November
Thursdays, November 6, 13 & 20, 12 – 1 p.m. | Food for Thought Lecture Series

11/6/2014	Barbara White, "Cyrus Peirce: Radical Thinker"
11/13/2014	Caitlin Marcoux, "Keeping ACKtive"
11/20/2014	Mike Harrison, "The Invention of Safety at Sea"

Sunday, November 16, 11 a.m. – 4 p.m. | Diversity Festival

December
Saturday, December 13, 5 – 8 p.m. | Night of Holiday Magic

Thursday, December 18, Friday, December 19, & Saturday, December 20, 6 – 8 p.m. | Santaland Diaries

13 Appendix G: Museum Survey Follow-Up Question Responses

Location A: Inside McCausland Gallery
Location B: Outside Museum Gift Shop
Location C: Outside McCausland Gallery

Date	Student	Location	Time	Were any questions confusing or unclear?	Did you have any difficulty using the touchscreen interface?	How do you feel about the length of the survey?	Do you own a smartphone or tablet?	What do you think we can do to improve this survey?
12/5/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/5/2014	Emily	A	11:00-1:00	no	yes	long	yes	nothing
12/5/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/5/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/5/2014	Emily	A	11:00-1:00	yes	yes	ok	yes	technical
12/5/2014	Emily	A	11:00-1:00	no	yes	ok	yes	nothing
12/5/2014	Emily	A	11:00-1:00	no	yes	ok	yes	nothing
12/5/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/5/2014	Emily	A	11:00-1:00	yes	no	ok	yes	content
12/5/2014	Emily	A	11:00-1:00	yes	no	long	yes	nothing
12/5/2014	Adam	A	1:30-3:00	no	no	long	yes	nothing
12/5/2014	Adam	A	1:30-3:00	yes	yes	ok	yes	nothing
12/5/2014	Adam	A	1:30-3:00	no	no	ok	yes	nothing
12/5/2014	Adam	A	1:30-3:00	no	no	ok	no	nothing
12/5/2014	Adam	A	1:30-3:00	no	yes	ok	yes	nothing
12/5/2014	Catherine	A	3:00-4:30	no	no	ok	yes	technical
12/5/2014	Catherine	A	3:00-4:30	no	no	ok	yes	location/timing
12/5/2014	Catherine	A	3:00-4:30	yes	no	ok	yes	technical
12/5/2014	Catherine	A	3:00-4:30	no	no	ok	yes	content
12/5/2014	Catherine	A	3:00-4:30	no	yes	ok	yes	nothing
12/5/2014	Adam	B	11:00-1:00	no	no	ok	no	nothing
12/5/2014	Adam	B	11:00-1:00	no	yes	ok	no	nothing
12/5/2014	Adam	B	11:00-1:00	no	no	long	yes	nothing
12/5/2014	Adam	B	11:00-1:00	no	no	N/A	yes	nothing
12/5/2014	Adam	B	11:00-1:00	no	no	ok	yes	nothing

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Date	Name		Time					
12/5/2014	Adam	B	11:00-1:00	no	no	ok	yes	nothing
12/5/2014	Adam	B	11:00-1:00	no	no	ok	yes	nothing
12/5/2014	Adam	B	11:00-1:00	no	yes	ok	yes	nothing
12/5/2014	Catherine	B	1:30-3:00	yes	no	ok	yes	nothing
12/5/2014	Catherine	B	1:30-3:00	yes	no	ok	no	nothing
12/5/2014	Catherine	B	1:30-3:00	no	yes	ok	yes	technical
12/5/2014	Emily	B	3:00-4:30	no	no	ok	yes	nothing
12/5/2014	Emily	B	3:00-4:30	no	yes	ok	yes	technical
12/5/2014	Emily	B	3:00-4:30	no	yes	ok	yes	nothing
12/5/2014	Emily	B	3:00-4:30	yes	yes	ok	no	technical
12/5/2014	Emily	B	3:00-4:30	no	yes	ok	yes	nothing
12/12/2014	Adam	A	11:00-1:00	no	no	ok	yes	nothing
12/12/2014	Adam	A	11:00-1:00	no	no	ok	yes	nothing
12/12/2014	Adam	C	11:00-1:00	no	no	ok	no	nothing
12/12/2014	Emily	A	11:00-1:00	yes	no	ok	yes	nothing
12/12/2014	Emily	A	11:00-1:00	no	no	ok	yes	content
12/12/2014	Emily	C	11:00-1:00	no	no	ok	yes	nothing
12/12/2014	Emily	A	3:00-4:30	no	no	ok	yes	nothing
12/14/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/14/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/14/2014	Emily	A	11:00-1:00	yes	yes	ok	no	nothing
12/14/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/14/2014	Emily	A	11:00-1:00	no	yes	ok	yes	nothing
12/14/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/14/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/14/2014	Emily	A	11:00-1:00	no	yes	ok	yes	nothing
12/14/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/14/2014	Emily	A	11:00-1:00	no	no	ok	yes	nothing
12/14/2014	Adam	A	11:00-1:00	no	no	ok	yes	nothing
12/14/2014	Adam	A	11:00-1:00	yes	no	ok	yes	nothing
12/14/2014	Adam	A	11:00-1:00	no	no	ok	yes	nothing
12/14/2014	Adam	A	11:00-1:00	no	no	ok	yes	nothing
12/14/2014	Adam	A	11:00-	no	yes	N/A	no	nothing

Date	Name		Time					
14			1:00					
12/14/20 14	Adam	A	11:00-1:00	yes	no	ok	yes	content
12/14/20 14	Emily	A	2:30-4:00	no	no	ok	yes	nothing
12/14/20 14	Emily	A	2:30-4:00	no	no	ok	yes	nothing
12/14/20 14	Emily	A	2:30-4:00	no	no	ok	yes	nothing
12/14/20 14	Adam	A	2:30-4:00	no	no	ok	yes	nothing
12/14/20 14	Adam	A	2:30-4:00	no	no	ok	yes	nothing

14 Appendix H: User Guides

USER GUIDE AND DOCUMENTATION

SurveyGizmo Online Account

Getting Started - Logging In

Navigate to https://app.surveygizmo.com/

1. Please contact the Visitor Experience department for access to the account's email address and password.
2. Enter the account's email address and password in the given fields, and press 'Login.'

How to Use Your SurveyGizmo Account

Home Page

The first page displayed after logging in to your account is the home page (see below). This page contains an overview of every 'project' (a.k.a. survey) you have created. To access a particular survey, click on the project name in the 'Your Projects' section (red, below).
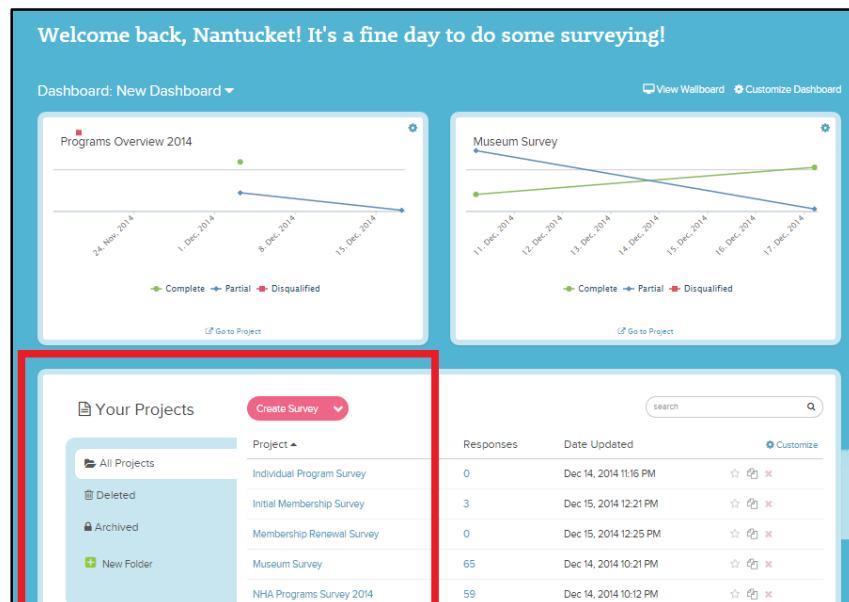
Project Tabs

Within each project, SurveyGizmo has different tabs to help you out in the development process (illustration below). These tabs are (as of 2014): **Setup, Build, Style, Test, Share, Responses,** and **Report.**
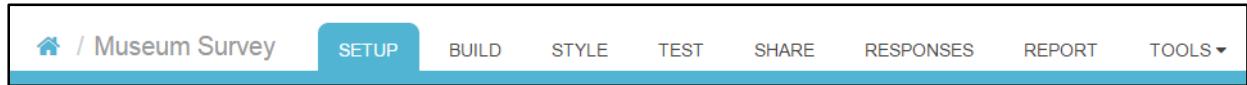
Setup: This tab is where the user controls the general settings of the survey, including but not limited to:

- **Defining the Public Survey Title:**
    1. In the 'General' tab, this is the 'Survey Title'
    2. This title will be displayed to survey takers if you choose to show the survey title. (This is done in the 'Style' tab.)
    3. The 'Internal Title' is not shown to survey takers, but acts as the project name.
- **Allowing Respondents to Save and Return**
    1. In the 'Response Settings' tab, select, "Allow respondents to save their progress and return to the survey later."

Build: This tab is where the user controls the survey's content, including questions, media, and actions.

- **Editing or Creating a Question:**
    - To edit a question, press the pencil on the upper right of the question in the build.
    - To add a question, either:
        - Hover over the space between two questions. The 'Insert' box should appear (red, below). Select 'Question.'
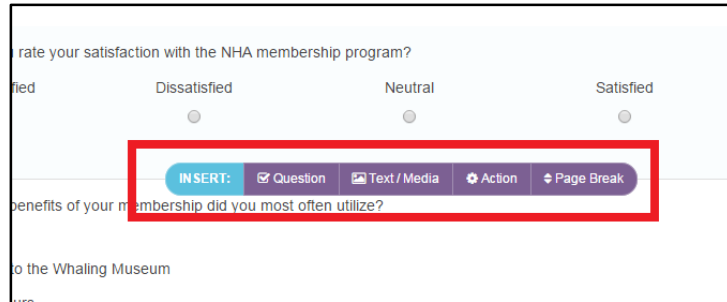
- **Question Type Cheatsheet:** When editing a question, (pencil icon), there is a help link next to the Question Type selection tool which describes each type of question in detail (red, below).
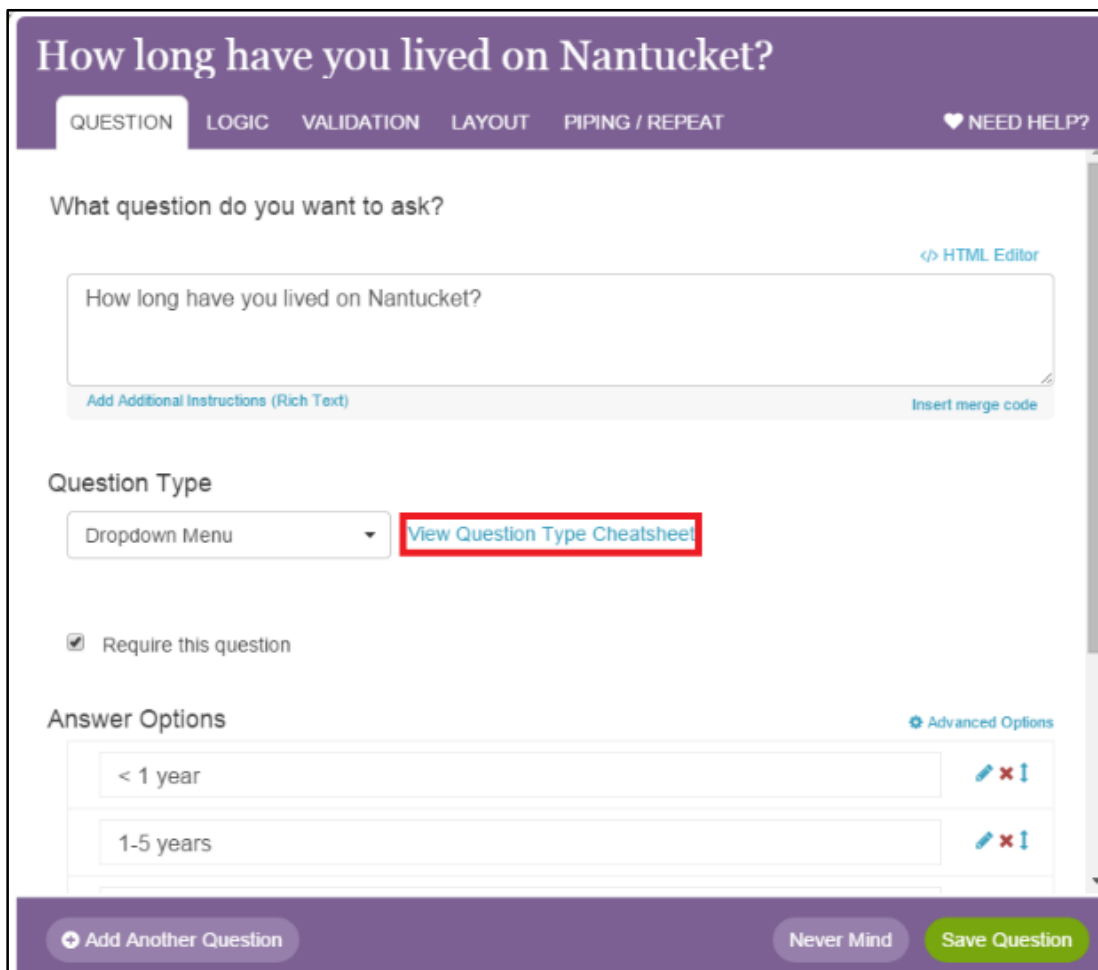
- **Changing Default Messages:** Certain text is editable using SurveyGizmo's Tools tab > Text & Translations. Select 'English,' and explore:
  - In 'Other' option text boxes in checkbox grids (below, orange), the text displayed within these text boxes can be changed by:

1. Navigate to the 'Messages' tab
2. Scroll down to 'Messages'
3. Select 'Placeholder text for table other rows'
4. Select 'Edit'; change the given text, and press 'Save'

- **The 'Messages' tab** contains options for changing the text of a variety of automatic messages displayed throughout the survey. They can be edited in the same manner as above.
- **'General' tab:** most useful for editing the text displayed above comment boxes.
  1. Scroll to the question whose comment box label you would like to change.
  2. Select the 'Question: #' link.
  3. In the 'Translate' tab that appears, scroll down to the last field, and edit the text labeled: 'Question # Comment Title'
  4. Press 'Save'
- **Media** (for more in-depth customization, please see 'HTML editor')
  - When adding new media (pictures, videos, etc.) to your survey, it is important to note that the settings in the question change according to the type of media. Be sure to save after selecting the type, then going back in to change settings.
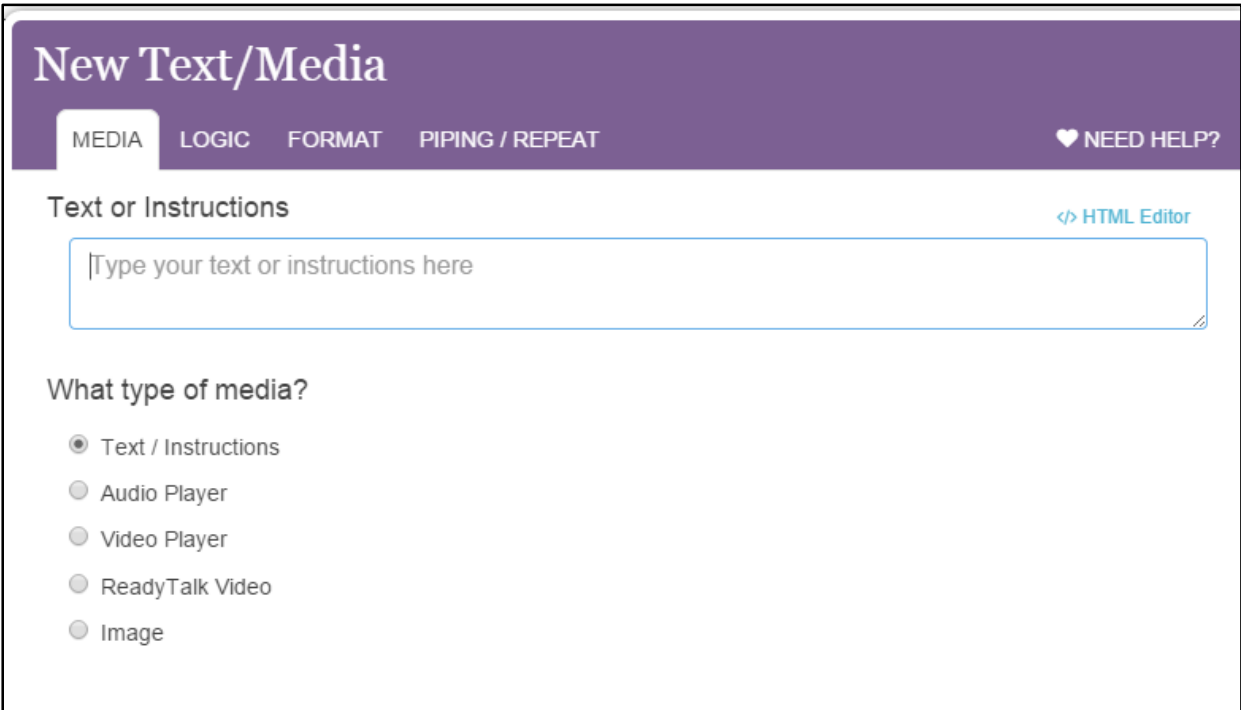
- **Routing/Logic:** Routing is a general term used to express the clever implementation of display logic.
- **Page skip logic:** Allows you to have a respondent skip an entire page of questions.
  1. At the top of a page, click the Pencil icon to edit properties (red, below).

  2. Then, in the 'Logic' tab, you have the ability to select what the conditions are for the survey taker to see this entire page in their survey.
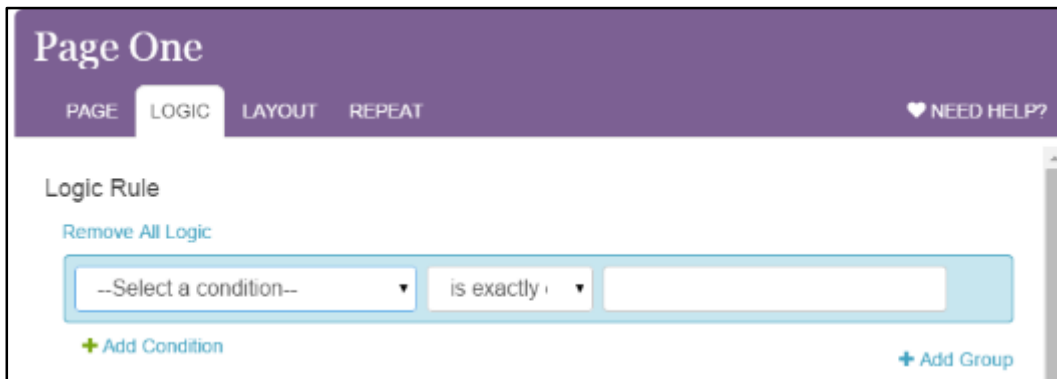
- **Question display logic:** Logic can also be used to display or hide certain questions. To adjust the display logic of a question, edit the question, and change the parameters in the 'Logic' tab. Note: in the illustration below, the user can view the conditions they have applied for their display logic by selecting the dropdown menu 'View Conditions' on the right-hand side of the purple section.
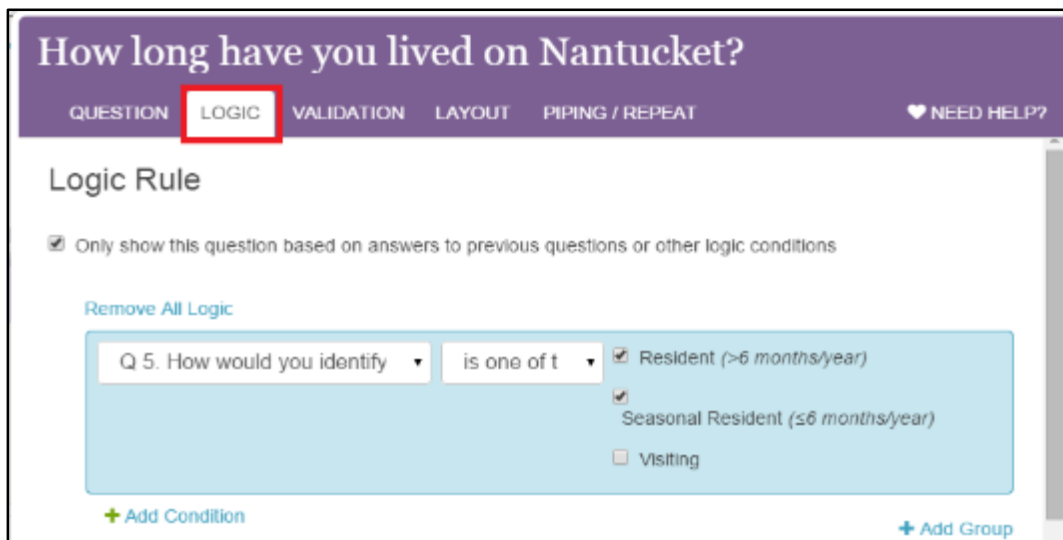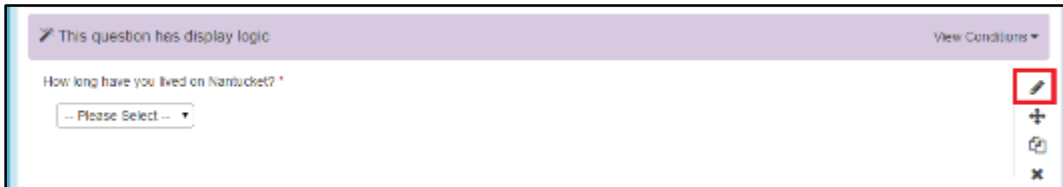
- **Piping:** Piping is used to pull data from one question and use it in another, whether in the question title or in the answer options.
  - Press the pencil icon to edit the question
  - Go to the 'Piping/Repeat' tab (below) to select the question you would like to pull information from.

The bottom of this page also shows you Merge Codes which you can insert anywhere in your question to display the piped data.

- **Validation:** In the 'Validation' tab shown below, you'll be able to set the requirements the user needs to meet in order to pass this question. For example, if you are only expecting an email format, you can make sure through Validation; you can also set limits as to the amount of answer options the user can select for checkbox questions.

- **HTML Editor:** When adding media to your survey, you may need to use the HTML editor. In areas where you want to use both text and images, this can be done more efficiently by inserting images into a Text/Instructions section, instead of having separate image sections. From here, the editor acts like Word, and formats the code accordingly when you're finished.
    - Resizing alignment, vertical and horizontal space
        - If you right-click an image in the HTML editor and select 'Image Properties', this will allow you to adjust the spacing around the image.
    - Linking (image from library into hyperlink)
        - You can also use an image as a hyperlink to another website. To do this, go into 'Image Properties' (above), and paste the URL under the 'Link' tab.

Style Tab: This tab is used to customize the look and feel of the survey.

In the 'Style' tab of Survey Gizmo, click on 'Customize Theme' to enter the Theme Builder.

- **Theme Builder:** In Survey Gizmo's Theme Builder, you will find preset themes which you can use for your survey (red, below). 'BluetoBone' is the theme used for the 2014 NHA Programs Survey, and 'Sunset' is the theme used for the Museum Survey.
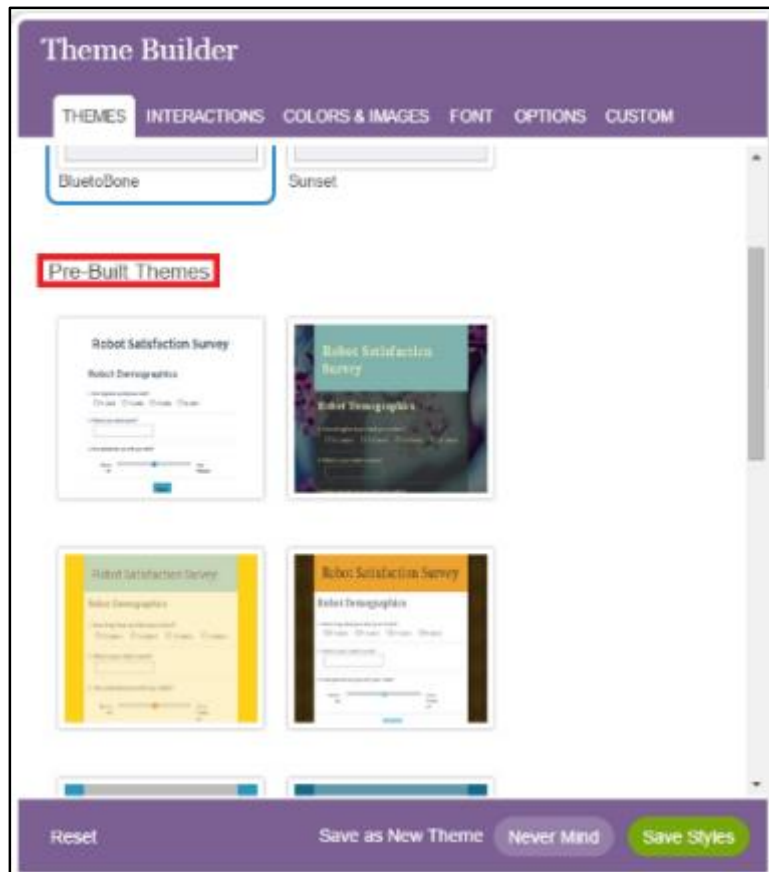
- **Interactions:** The 'Interactions' tab lets you pick how you want your survey to behave on different platforms. The Mobile Layout tends to insert unnecessary page breaks, and proceeds through pages by swiping left or right.
- **Color & Images:** This tab (illustrated below) is where you get to select all of the colors for your survey, as well as the header image and background.
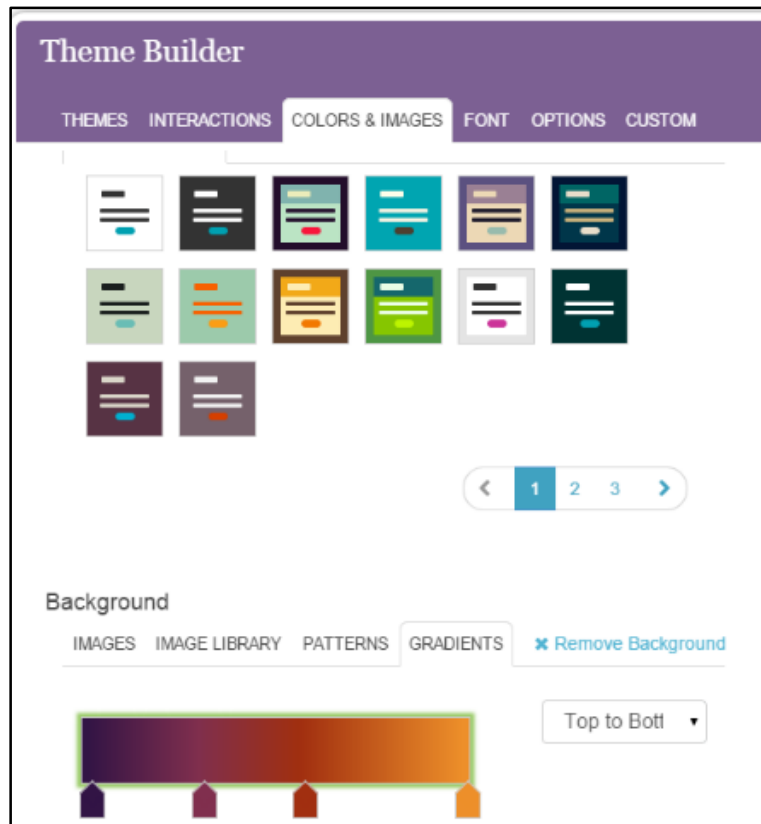
- **Fonts:** The 'Fonts' tab lets you select different fonts offered by SurveyGizmo.
  - Note: When you change certain characteristics of the 'Body' font, it applies only to the questions, and not the answer options. This is true for bolding text, and untrue for font style.
  - Use Secure HTTP (https): In order for fonts to display correctly, you need to make the link secure! (Please see **Sharing** section on how to do this.) Even Survey Gizmo tech support could not figure out the reason for this bug, but we are certain that using a secure link fixes the font styles.
- **Custom CSS/HTML**

  Here is the CSS code we used for the Museum Survey

```
/*-----Adjusts buttons on bottom of pages-----*/
.sg-button-bar input {
outline:0px;
border:0;
border-top:0px;
background: #db441a;
color: #FFFFFF;
padding:.5em 1em;
margin:.5em;
cursor:pointer;
```

```
font-weight:normal;
font-size:22px;
font-family: "Raleway";
}
/*-----Overwrite next button color-----*/
.sg-next-button{
 background: #669CE3;
}
/*-----Adjust colors when clicked or hovered on-----*/
.sg-next-button:hover {
background: #ed8f2a;
}
.sg-back-button:hover {
background: #a12f10;
}
/*-----Adjust padding around header-----*/
.sg-header .sg-title{
 padding-top: 20px;
 padding-bottom: 0px;
 padding-left: 0px;
 padding-right: 0px;
}
/*-----Adjusts fit of table contents-----*/
.sg-table {
 margin: auto;
}
```

Here is the code we used for the NHA Programs 2014 Survey

```
/*-----This resizes images to fit the width of different screens. -----*/
img {
   max-width: 100%;
   height: auto;
   width: auto;
}
/*-----Adjusts amount of padding space around header-----*/
.sg-header .sg-title{
 padding-top: 20px;
 padding-bottom: 0px;
 padding-left: 0px;
 padding-right: 0px;
}
.sg-question-title{
 font-style: 'bold';
}
/*-----Individual adjustments of button colors-----*/
.sg-next-button{
 color: #ffffff;
 background: #669CE3;
}
.sg-next-button:hover {
color: #ffffff;
background: #7CAAE6;
}
.sg-back-button {
color: #ffffff;
background: #6797D6;
```

```
}
.sg-back-button:hover{
 color:#ffffff;
 background: #6797D6;
}
.sg-submit-button {
color: #ffffff;
background: #669CE3;
}
.sg-submit-button:hover {
color: #ffffff;
background: #7CAAE6;
}
```

Test Tab: To test how your survey works, use this tab.

- **Generate Test Data:** Survey Gizmo allows you to generate test data automatically in the 'Test' tab. This test data generates responses, without using question logic. To do this, select the 'Generate Test Responses' button (red, below).
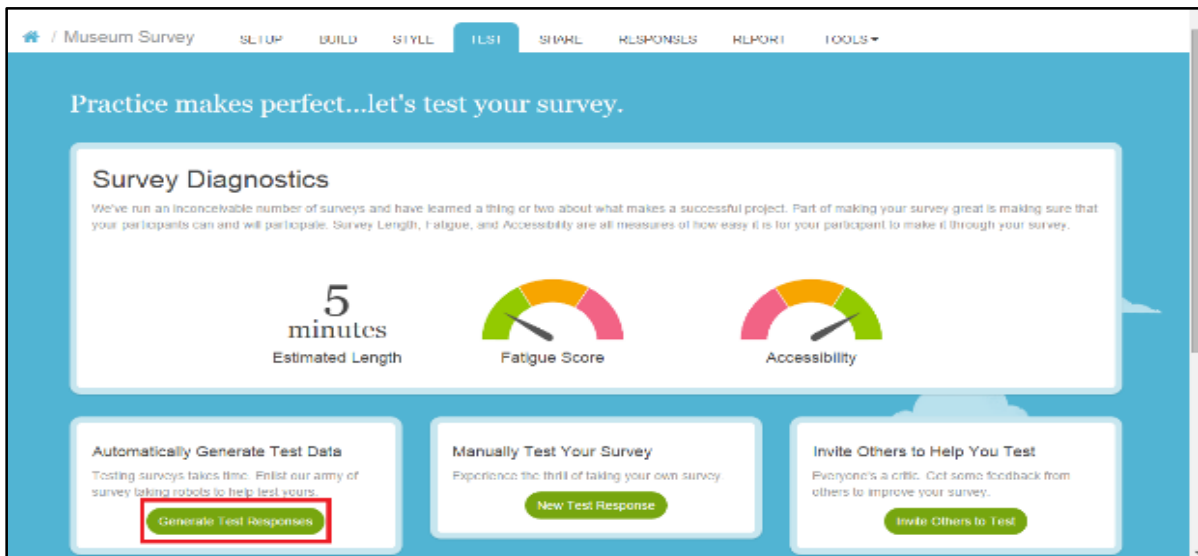
- To the right of this option, you also have the ability to **manually test** a new response yourself, meaning you will go through your whole survey and the response would be recorded, yet it will have a "Test" tag attached to it.
- Under "Survey Diagnostics", there will be an estimated time that it takes to complete your survey, along with a "Fatigue Score" and "Accessibility" rating. Note: the number of minutes is always an overestimation.

Share Tab: The 'Share' tab is where you'll be able to customize the different ways your survey can be distributed or be accessed.

- As shown earlier in the Style section, using secure ("https") links are vital to having your survey look the same as it did during your development, when going live.
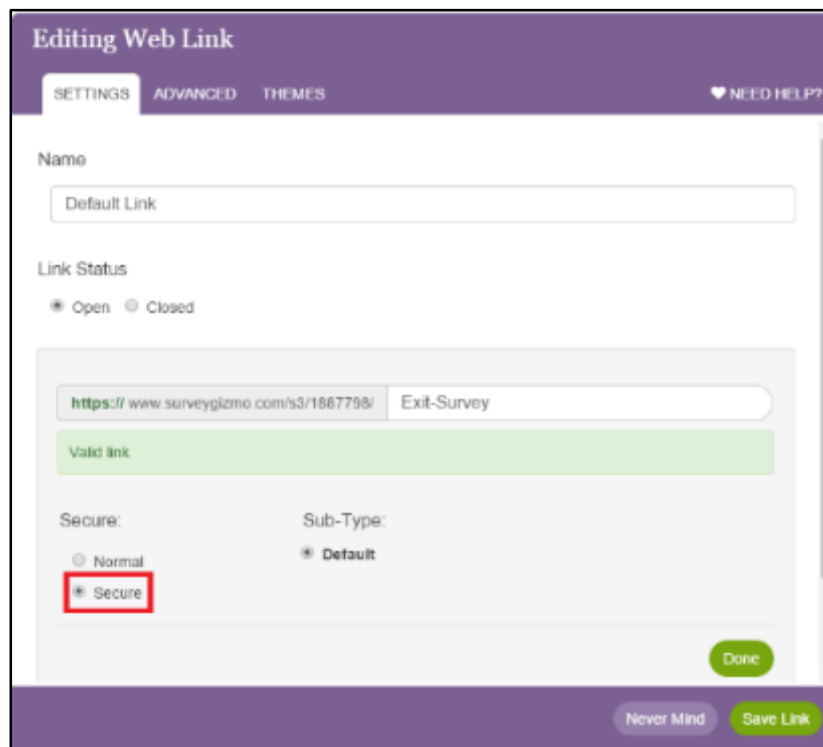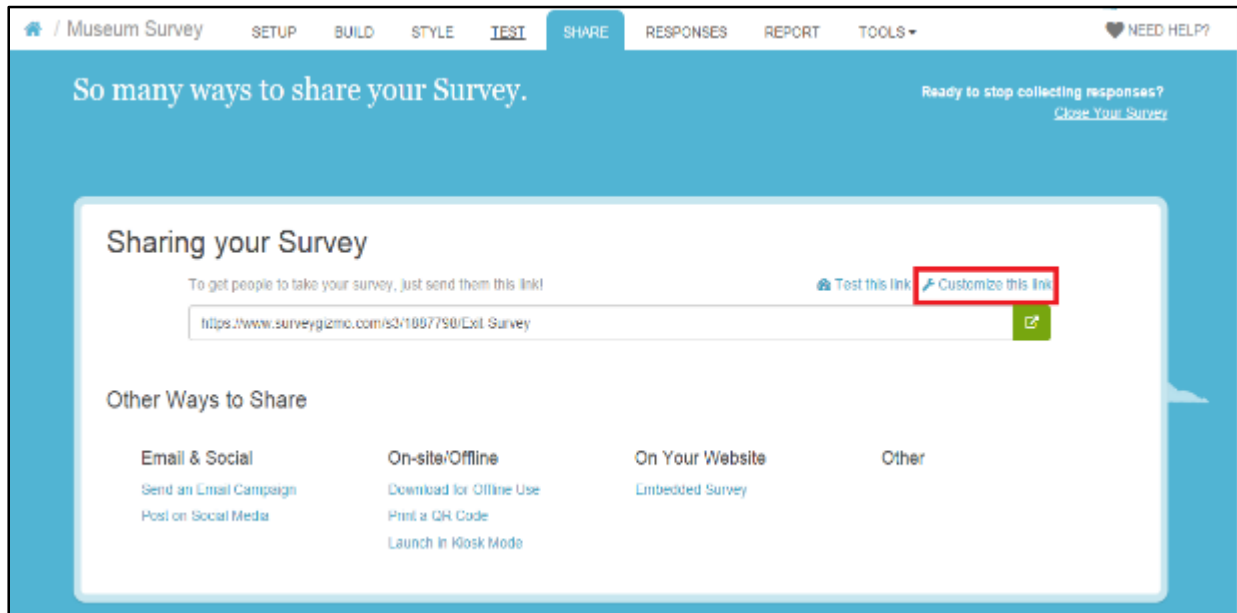
Also in this window, under the 'Advanced' tab, you'll find Link Open and Close Dates, which specify the specific time range you want your survey link to be active. You do not need to fill out both fields. For example, if you wanted the survey link to start being active now and close on a specific date, you would **not** need to fill out the Link Open Date, but would still fill out the Link Close Date.

- Under "Other Ways to Share" on the 'Share' tab, you'll find a link to **"Launch in Kiosk Mode"**. This mode is recommended for public survey devices. In this mode, the survey will be restarted after a set time, and once this mode is started, the user is logged out of the Survey Gizmo account to prevent unwanted entry.

- **Email Campaign:** SurveyGizmo offers an email campaign feature that allows the distribution of surveys via an emailed link. To access this feature, navigate to the 'Share' tab, then 'Send an Email Campaign' To email this survey to a specific list of email addresses, do the following:

  1. In the 'Share by Email' tab, (below), select 'Add Contacts and Schedule' (red, below).

2. In the 'Messages' tab, personalize the email as you see fit.

3. In the 'Contacts' tab, select the 'Add Contacts' button.

4. In 'Upload Contacts,' select 'Choose a File.'

5. Browse for, and Open, the .CSV file containing the list of email addresses you'd like to send the campaign to. This file can contain other data as well.

6. Select 'Upload'

7. In the 'Map Fields' dialogue, select the column in your file from the list (blue, below) that represents the fields given.

    a. The field 'email' is necessary, but if there are other fields that do not apply, simply skip them.
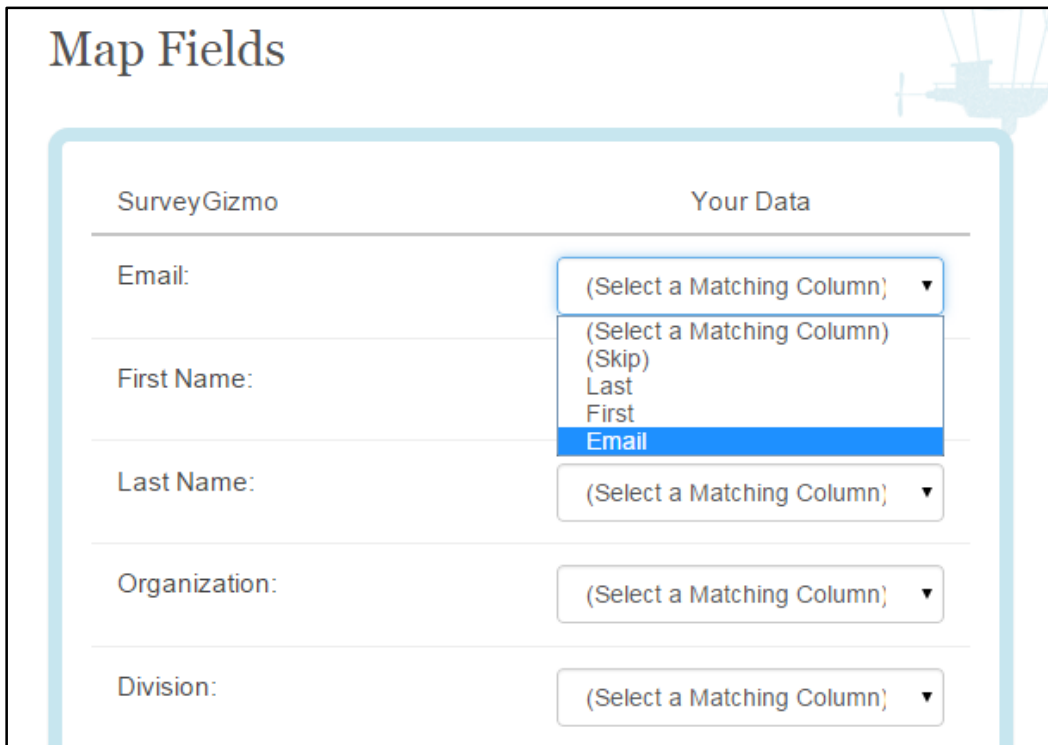
8. When finished, select 'Save Fields' at the bottom of the Map Fields window.

    a. If the message, "You have not added any contacts yet" is still displayed, refresh the page.

9. If you'd like to customize the email further by adding in the contact's name or other information, return to the 'Messages' tab and press the pencil button.

    a. In the 'Edit Message' tab, use the 'Select a Merge Code' to insert these contact fields into the message.

10. In the 'Send/Schedule' tab, select the 'Send/Schedule' button for your survey campaign.

    a. Choose to send the email now, or at a specified date and time.

11. The 'Delivery Report' tab contains statistics related to the email campaign.


- **Offline Mode**

    - When using the Offline Mode for surveys, many style features are lost:

    1. Fonts tend to become defaulted to Times New Roman

    2. Radio buttons are displayed in gray 'default' style of the browser

    3. Some instructions or additional text are misplaced

- There are no known fixes for these issues.
- Offline Mode is best for very simple surveys for this reason.
- **QR Code:** The ability to generate a QR code for your survey is included in the 'Style' tab.

Report Tab:

- **Generating a Report**: to generate a report without any test data or dummy responses, do the following in the 'Report' tab:
  1. Select 'New Report'-> 'Summary Report' -> 'Create Report'
  2. **Customize Report:**
     a. **Options:** Be sure to select 'Hide elements with no data' and 'Hide options with no data' to ensure that 'dummy' responses are not included. See 2014 Programs Survey for an example.
     b. **Filtering:** filter by date, and by response type (Complete, Partial, Test, Disqualified) in this tab.
  3. Refresh report for the most recent data

Responses Tab: This tab displays all responses to your current survey (below).
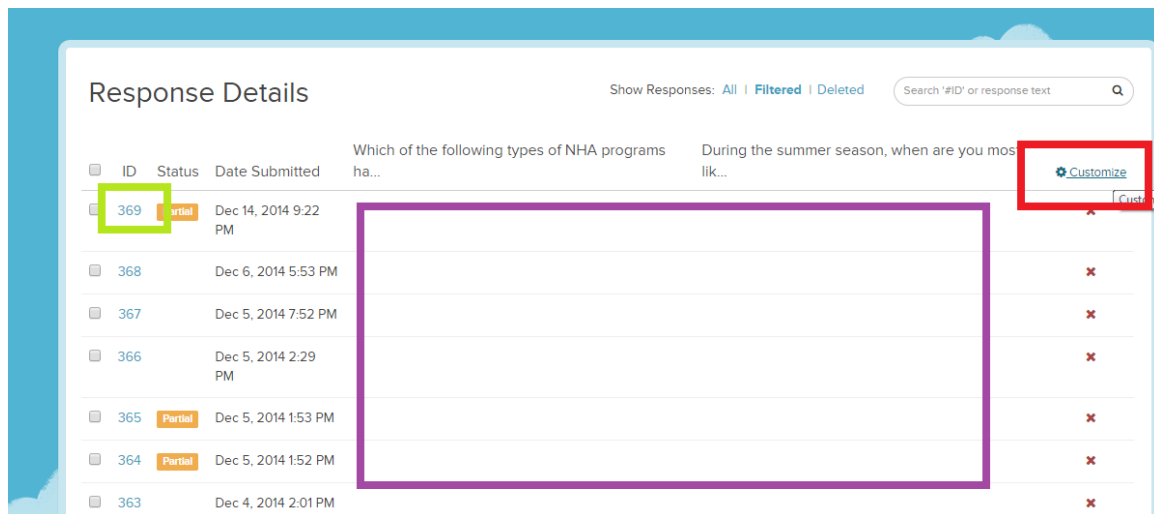
- **Customize:** The 'Customize' option (red, above), allows you to choose to include responses to a particular question on your main 'Response' page (in purple section, above).

- **View an Individual Response:** To view the details of an individual response, click on the Response ID (green, above).

- **Bulk Actions:** There are a variety of actions that can be applied to all, or selected, responses in the 'Response' tab. Scroll down to the 'Bulk Actions' button (green), to convert, delete, or export responses.

Contact Info: SurveyGizmo offers excellent customer support via both phone and email.

- Phone: 1-800-609-6480

- Email: hello@surveygizmo.com

- Help on the Web: http://surveygizmov4.helpgizmo.com/help

USER GUIDE and DOCUMENTATION

2014 NHA Programs Survey Excel Workbook

Contents:

- Purpose of the Workbook
- Overview of Workbook Components
- User Guide for Adding New Responses
- Overview of VBA Macros
- Hidden Tabs

Purpose

When survey responses to the 2014 NHA Programs Survey are downloaded directly into a .CSV file from SurveyGizmo, it is in an expanded form. The purpose of this Excel Workbook is to collapse this data into a more convenient form. Also, Survey Gizmo's Summary Reporting feature offers analysis of survey responses at a surface level. This Excel Workbook enables users to perform filtering, sorting and other operations in order to achieve more detailed analysis.

Workbook Components

This workbook contains several sheets of information regarding the 2014 NHA Programs Survey. The following is an outline of the contents and purposes of each sheet that is visible to the user:

Responses-Collapsed(2): This sheet contains all survey responses, in a collapsed form. Users should perform filtering and other functions on this sheet to parse data.

'Charts and Tables' Sheets: There are 4 tabs in this workbook dedicated to displaying further analysis of survey responses. Data in these tabs is pulled from the 'Responses-Collapsed(2)' sheet.

The charts and tables in these tabs were identified by the WPI team as being possibly useful in future. Of course, users can create charts in these tabs as they please. If you feel the data is not accurate, try refreshing the pivot tables, and checking the formula ranges in tables. The list of these tabs, and the questions they currently address, are presented below.

- **Marketing:**
  - "How do you usually hear about NHA programs?"
- **Ticketing:**
  - "How easy was the __ ticket-buying process?"
  - "How do you purchase the majority of your NHA program tickets?"
  - "If available, would you use online ticketing for all NHA programs?"
- **Overall Satisfaction or Value:**
  - "How would you rate the value...in relation to admission prices?"

o "How would you rate your overall experience at NHA programs?"
- **Program Attendance:**
  o "Which of the following...have you attended, and/or do you plan to attend?"
  o "How many NHA programs have you attended in the past year?"

In each 'Charts and Tables' sheet, there are two buttons (to right; red below): **'Change to Stacked'** and **'Change to 100% Stacked.'**

- Change to Stacked: Changes all chart types (that were present as of 12/15/2014) to the chart type 'Column Stacked' (see charts (purple) below)
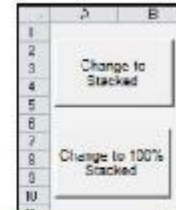
- Change to 100% Stacked: Changes all chart types (present as of 12/15/2014) to the chart type 'Column Stacked 100%' (see charts (purple) below). This chart type does not reflect response count, but makes it easier to see trends in the data.

Adding New Responses

This file can run code that adds new responses downloaded from SurveyGizmo to the workbook in a more convenient form. If the order of questions or the order of answer options has changed since 12/15/2014, *do not press the 'Add New' button.*

**Begin by downloading survey responses from SurveyGizmo.**
1. Navigate to https://app.surveygizmo.com/ and log in to your account.
   a. Enter user email and password
   b. Press 'Log In' button.
2. Navigate to the 'Responses' tab.
   a. Scroll down, and press the 'Select a Bulk Action' button (green, below).
   b. Select 'Export All to CSV' (red, below).

   c. Once the export has completed, press the 'Click to download your export' button.
      i. You do not need to open the downloaded .CSV file at this point.
   d. Close SurveyGizmo.

**Open the Excel workbook, and add newly downloaded responses.**

1. Open **2014_ProgramsSurvey.xlsm**.
2. The file should open on the 'Responses-Collapsed(2)' tab (below). This tab is a values-only copy of the collapsed response data already downloaded into the workbook. If the workbook does not open on this tab, navigate to it (orange, below).
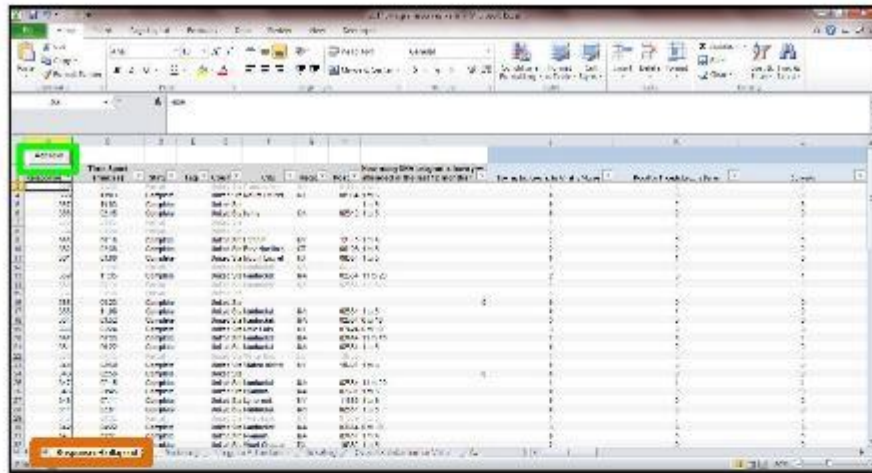
3. Make sure the file is **Saved** before moving on to the next step.
4. Press the '**Add New**' button on the upper left (green above; green below). If the question order, or order of answer options, has changed since 12/15/2014, **do not** attempt this.
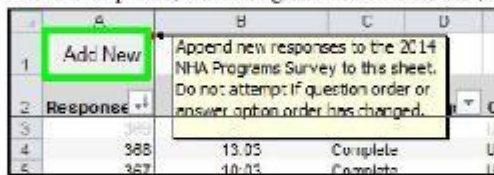
5. Pressing this button will prompt you to open the .CSV file you have just downloaded from SurveyGizmo. When prompted, press '**OK**' (below).
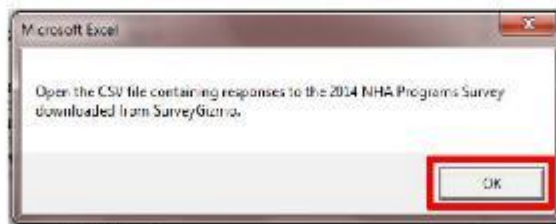
6. This should open your File Explorer window. Select the file titled, "XXXXXXXXXXXXXX-SurveyExport." (X's are part of a 14-digit sequence.)
   a. Select '**Open**' to continue.
   b. Select 'Cancel' to cancel.

i. If you choose to cancel, the following message will be displayed (below). If this occurs, just press 'OK.'

7. This begins the process of adding your new responses to the workbook.
   a. If no new responses are detected, then the following message will be displayed (below). If this occurs, just press 'OK.' This means that all the responses from SurveyGizmo are in the workbook already.

   b. If the wrong file was selected, or if another error occurs, a standard error message will be displayed. If this occurs, close the file without saving.

8. If the program has run successfully, then the 'Responses-Collapsed(2)' tab should be displayed.
   a. All filtering and sorting on this sheet will have been removed. The responses are now in order from earliest to most recent. To see the most recent responses, **sort** Column A—"Response ID"—from largest (most recent) to smallest (least recent). (Select cell A3 -> 'Sort and Filter'-> 'Largest to Smallest')
   b. **Save the file.**
9. You're done!

Explanation of the VBA Macros

Add_New_Responses:

Command Button: 'Add New' on 'Responses-Collapsed(2)' sheet of

  2014_ProgramsSurvey.xlsm

Purpose: To append new responses from a .CSV file downloaded from SurveyGizmo to the

  above-mentioned sheet.

Brief Overview of Actions:

- Opens downloaded file:
    - Prompts user to open the file they have already downloaded from
      SurveyGizmo.
    - Opens file explorer.
    - Opens file specified by given path.
        - Call this file **newResponses**
    - ErrHandler:
        - If user presses 'Cancel' on file explorer, exits sub.
- In newResponses and 2014_ProgramsSurvey.xlsm:
    - Deletes all responses in newResponses with a Response ID (column A)
      already found in 'Responses' sheet of 2014_ProgramsSurvey.xlsm
        - If no new responses exist, (no responses remain) notifies user and exits
          sub.
    - Copies and pastes fixed data—excluding geolocation information—to
      'Responses'
    - For checkbox grid questions ("Which of the following types of NHA
      Programs...?")
        - copies and pastes responses for given program types to 'Responses'
            - 'given program types': The answer options listed in the
              checkbox grid—excludes any written-in 'Other' options
        - Copies and pastes written-in 'Other' options that are not already listed
          in 'Responses-Other...' tabs
    - Copies and pastes other fixed responses from newResponses to this file.
    - Closes newResponses

ColumnStacked[100]_[tab abbreviation]:

Command Button: 'Change to Column Stacked' in Charts and Tables tabs

Purpose: To convert charts to type 'column stacked [100%]'

Brief Overview of Actions:

- Selects charts that existed in tab as of 12/15/2014, and converts chart type

Hidden Tabs

This workbook has hidden tabs, which should ideally not be changed by the user. This is an explanation of the contents and use for these tabs.

- **Responses**: contains all responses (fixed, not 'other' options) downloaded from SurveyGizmo.
    - *Reason why it's hidden*: to protect against sorting, without having to protect the sheet
- **Responses-Other-Attendance:** contains all written-in responses (for which a respondent checked at least one checkbox) for question, "Which of the following types of NHA programs have you attended in the past twelve months, and/or do you plan to attend?"
- **Responses-Other-TimePref:** same as above, except for question: "During the summer season, when are you most likely to attend the following types of NHA programs?"
- **Responses-Collapsed**: contains the same content as 'Responses-Collapsed(2)' but preserves all formulas. Pulls data from 'Responses' and 'Responses-Other...' tabs.
    - *Reason why it's hidden*: to protect these formulas without having to protect the sheet
- **Formulas:** preserves the formulas mentioned above, in case they are accidentally deleted or something else goes wrong