AN ABSTRACT OF THE THESIS OF

Sandra Huynh for the degree of Master of Science in Marine Resource Management presented on June 8, 2016.

Title: Understanding Visitor Motivations for Attending Fee-based Animal Encounter Programs

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Education programs at zoos and aquariums provide opportunities for visitors to learn and garner information on animal natural history and, hopefully, conservation messaging. Fee-based programs (programs with an additional fee on top of admission prices), which are commonly employed by zoos and aquariums to foster learning opportunities for visitors, are not well studied or present in the literature. The purpose of this project is to understand visitor motivations for participating in fee-based education programs and their perceptions of the program animals, both in the aquarium and the wild.

This project was conducted at the Oregon Coast Aquarium (OCAq) in Newport, Oregon, where interactive fee-based programs (“Sea Lion/Seal Kisses” and “Octopus Encounters”) were evaluated. Adult participants completed pre- and post-encounter questionnaires. They provided information on their motivations for attending the encounter and visiting OCAq that day, as well as answered questions on their perceptions of the program animal.
This project documented that during the summer season, most participants were vacationers and thought the encounter programs would be a fun, education, and unique experience. Participating in the encounter programs to celebrate an occasion was a major recurring theme. Another way of exploring visitor motivations was by identity-related motivations (Falk, 2009). Animal encounter program participants tend to be explorers and facilitators. Overall, participants were more worried about the health and status of the program animal in the wild than in the Aquarium. Interestingly, participants did not think about or seek information on the program animal much before or after the encounter, but the conservation of these animals was important to them. With this knowledge, Aquarium education program developers can begin to craft existing programs to incorporate appropriate conservation messaging for the animal encounter program audience.
Understanding Visitor Motivations for Attending Fee-based Animal Encounter Programs

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Dean of the Graduate School

I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Sandra Huynh, Author
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1. Introduction

Zoos and aquariums are institutions that offer opportunities for educating visitors about animals and their environment while also encouraging visitors to adopt pro-environmental behaviors (Patrick, Matthews, Ayers, & Tunnicliffe, 2007). Education programs provide the opportunity for visitors to learn and garner information on animal natural history and, hopefully, conservation messaging. This messaging in zoos and aquariums promotes caring for natural resources, maintaining local wildlife habitats, and participation in local efforts for environmental restoration and protection (Ballantyne, Packer, Hughes, & Dierking, 2007).

Many informal learning institutions—like zoos, aquariums, natural science centers and museums—house rescued or rehabilitated animals that are unable to return to the wild. These live animals, which may be featured in education programs, have created positive impacts on visitor learning and conservation attitudes (Visscher, Snider, & Vander Stoep, 2009). As visitors interact with live animals, they are able to make personal connections with wildlife, which may in turn promote emotional growth (Fraser & Wharton, 2007) and shape the decisions of future stakeholders like visitors, funders, and resource managers.

Within these institutions, a need for education program evaluation exists to gain a sense of program successes or areas of improvement. While zoos and aquariums routinely evaluate their programs, communication of findings to like-minded institutions has been limited. Education programs differ, but evaluation results may have relevance to other institutions. Some common types of education programs are animal keeper talks, volunteer/docent interpretation, and school programs.
Fee-based programs (programs with an additional fee on top of admission prices) are other types of learning opportunities available for zoo and aquarium visitors that are not well studied or represented in the literature. Examples of fee-based programs include behind-the-scenes tours and animal encounters, typically led by zoo and aquarium staff, like educators. Educators are on the frontline of science communication with the public, especially with fee-based programs where staff and guest interaction is part of the experience. Fee-based animal encounter programs are of particular interest because in addition to staff and guest interaction, an animal is involved. A critical evaluation of fee-based animal programs is necessary to understand the impact such programs have on visitors, and overall, to understand the relationship humans have with animals. Evaluating fee-based programs with animal interactions will help program developers understand and improve these programs, and such evaluation begins with assessing the audience.

Motivations for choosing to participate in fee-based animal encounter programs are unknown in the literature. Understanding visitor motivations helps program developers know why visitors choose to participate in a fee-based program, which could inform education efforts. Additionally, visitor perceptions of program animals are not well documented. Knowing visitor perceptions of program animals may allow program developers to cater the programming to the audience. The purpose of this project is to understand visitor motivations for participating in fee-based education programs and visitor perceptions of the program animals. Findings will inform program development and contribute to scientific literature on fee-based education programs at an aquarium.
The overall objective of this research is to establish a baseline understanding of fee-based program visitor motivations and perceptions of program animals. Specifically, this project aims to address the following questions:

1) What *motivates* aquarium visitors to participate in fee-based programs?
2) What *perceptions* do visitors have about wild and aquarium animals?
3) What *differences* are there between perceptions of visitors who attend the two animal encounter programs?
4) After their animal encounters, do visitors’ *perceptions* of the program animal change?
5) After their animal encounter, are visitors *likely to return* for another encounter with the same or different program animal?

To answer these questions, I examined fee-based animal encounter programs at the Oregon Coast Aquarium (OCAq) in Newport, Oregon. The OCAq offers animal encounter programs with the California sea lion (*Zalophus californianus*), harbor seal (*Phoca vitulina richardsi*), and the giant Pacific octopus (*Enteroctopus dofleini*). I surveyed adult participants using pre- and post-encounter questionnaires, which included a modified version of an existing tool for studying motivations. With over 200 participants surveyed, I found a variety of visitor motivations for attending the program and interesting results of visitor perceptions of program animals. In addition, I discuss interpretations of visitor responses and the advantages and limitations of using a modified tool for studying visitor motivations. I conclude with recommendations for education programming, future research, and a reminder of the importance of education programming at zoos and aquariums.
2. Background

2.1 Conservation education

Conservation education has become a major theme at zoos, aquariums, and some science museums and centers (Association of Zoos and Aquariums (AZA), 2016; Luebke & Matiasek, 2013; Patrick et al., 2007). Historically, humans kept animals purely for exhibition in menageries (Rabb, 2004), but the idea of keeping animals has shifted over the past thirty years to incorporate more ecological and environmental missions to promote animal and habitat conservation (Patrick et al., 2007). Many zoos and aquariums have mission statements with conservation goals (AZA, 2016; Mazur & Clark, 2001) that can influence the institution’s programming, exhibit, building, and layout design (Falk & Adelman, 2003). In general, conservation education has been a core component of programs at zoos and aquariums, and these institutions are operated with the belief that developing positive attitudes and behaviors toward wildlife can be achieved by observing live animals (Fraser & Wharton, 2007).

2.2 Connection to animals in nature

One’s connection to animals in nature plays an integral role in changing environmental attitudes and pro-environmental behaviors (Geng, Xu, Ye, Zhou, & Zhou, 2015; Patrick et al., 2007), and some studies have shown that a person’s proximity to nature can influence the strength of their connection to animals. For example, in a classroom, students’ environmental attitudes and knowledge strengthened after participating in a field experience rather than a classroom lesson (Duerden & Witt, 2010). In marine wildlife tourism, Zeppel and Muloin (2008) reported that close, active encounters with animals, rather than distant and passive viewing, changed tourist attitudes toward marine mammals. Increased opportunities for observation or interaction
with animals, such as up-close encounters, also influence positive emotional responses towards animals (Luebke, Watters, Packer, Miller, & Powell, 2016). Thus, animal interactions at zoos and aquariums may encourage similar shifts in attitudes for visitors (Wyles et al., 2013).

2.3 Animal education programs

The Association of Zoos and Aquariums (AZA) reported various elements in education programming that contribute to optimal experiences for the visitor, such as eye contact with animals, opportunities to feed animals, providing enrichment, animals approaching the visitor, and up-close viewing (Fraser et al., 2010). These elements are often incorporated into zoo and aquarium exhibit and programming design in the form of interpretive talks, animal training programs, and behind-the-scenes tours. In addition to close interaction with animals, visitors value getting information directly from tour guides and scientists (Zeppel & Muloin, 2008). With the combination of active animal interaction and interpretive presentations, zoos and aquariums are equipped with tools to incorporate conservation messaging in education programs that can lead to off-site benefits like greater environmental awareness (Zeppel & Muloin, 2008) and pro-environmental attitudes (Christensen, Rowe, & Needham, 2007).

Some education programs offered at zoos and aquariums, such as behind-the-scenes tours and animal encounters, are fee-based programs. These programs- also referred to as “premium programs,” “tours,” or “adventures” - require fees in addition to the price of admission. Zoos and aquariums incorporate animals into fee-based programs for public education, and these “program” animals are considered ambassadors for their wild counterparts and play an important role in connecting people to the natural world (AZA, 2015). Some institutions have encounter programs highlighting animals that may
be threatened or listed under the US Endangered Species Act (ESA) or on the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species (i.e. African penguin encounter at Mystic Aquarium), while others may have no explicit conservation message (i.e. Giraffe encounters at Detroit Zoo).

With the shift of education programs towards conservation messaging, program developers must adapt existing programming to reflect this change. This can be achieved through an evaluation in the form of a descriptive study of program participants, which would help establish a basis for program improvement (Diamond, Luke, & Uttal, 2009). Effective conservation communication requires understanding the audience’s needs and concerns, and such understanding also provides baseline information for future evaluation of conservation communication efforts in zoo and aquarium programming (Jacobson, 2009).
3. Theoretical Framework

Studying visitors requires careful planning and a solid understanding of the museum visitor experience, and it is important to use a framework to accomplish this. One such framework is the Contextual Model of Learning (Figure 1) developed by Falk and Dierking (2000). This model describes a visitor’s museum experience by explaining contexts of a visit and how these contexts shape the visit’s outcome. This model can also be applied for visits to zoos and aquariums. The Contextual Model of Learning’s benefits are that it specifically focuses on an informal learning experience, and it is relatively simple to understand. It helps the researcher think about the visit in a systematic way, incorporating the personal, socio-cultural, and physical contexts of a visit. Thus, this model is used as a descriptive tool to structure the present study. Furthermore, the Contextual Model of Learning sets the background for the identity-related visitor motivations model discussed later.

![Figure 1. Contextual Model of Learning (Falk & Dierking, 2000), image modified by Stuedahl (2013)](image_url)
3.1 Museum visitor experience

The Contextual Model of Learning identifies how a visitor’s museum (or zoo or aquarium) experience is shaped by three contexts. The **personal context** describes a visitor’s prior interests, motivations, and knowledge before entering a museum. The **physical context** is the museum’s exhibits and programs, and the **socio-cultural context** is the social interactions that occur within the museum to enhance a visitor’s experience (Falk & Dierking, 2000; Falk, 2009; Falk & Storksdieck, 2005). All three contexts, in addition to perceived museum affordances (how the museum can meet the visitor’s needs), influence how a visitor experiences the museum. For this study, I focus on the personal context of the learning model to address specific program evaluation goals such as understanding visitor motivations, perceptions, and satisfaction.

3.2 Visitor motivations

A visit to a zoo or aquarium is a prime example of **leisure**, as defined by Neulinger (1974). Leisure, often synonymous in the literature with **recreation**, has two components: 1) perceived freedom to enjoy an activity without constraint and 2) intrinsic motivation, where satisfaction comes from participating in the activity itself (Neulinger, 1974). Recreation and leisure studies often focus on participant motivations to understand why people recreate and partake in certain activities (Vaske, 2008). Motivation theory can be considered a way to study how behaviors are derived (Vaske, 2008). One method of investigating motivations is a “multiple satisfaction approach,” which suggests that a person is motivated by a variety of potential benefits and outcomes (i.e. socialization with friends, enjoying the outdoors, solitude) (Hendee, 1974). Other common motivations include learning, enjoying nature, teaching, and social and physical escape (Manfredo, Driver, & Tarrant, 1996).
Studies of visitors at museums, zoos, and aquariums have also suggested similar motivations and have gone as far as incorporating identity to explain a visitor’s motivation (Falk, 2009). Identity is how we define ourselves or how others see us. Falk (2009) describes identity as big “I,” which are personal characteristics like race, ethnic background, and gender, and little “i,” which change by situational context (e.g. being a fiancéé and then wife). Falk argues that big “I” identities primarily do not drive a person’s motivation to visit a museum. For example, it would be unlikely if my reason for visiting an aquarium were big “I” identities like being a Catholic-raised Asian-American woman. On the other hand, situated little “i” identities like being a Master’s student with a desire to learn about marine birds of the Oregon coast that day would better describe my motivation to visit an aquarium. Of course, there are situations when big “I” identities could influence someone’s motivation to visit a museum or participate in an activity, but most people do not think about big “I” identities when deciding to do so (Falk, 2009).

In a museum (or zoo or aquarium) learning context, visitors are thought to enter the institution with different identities (little “i”), depending on the nature of the visit and the visitor’s expectations. Furthermore, little “i” identity is also said to drive the visitor’s actions once inside the museum, zoo, or aquarium (Falk, 2009). Thus, Falk introduced the identity-related visitor motivations model for a museum visitor experience (Figure 2).
Using the Contextual Model of Learning, Falk incorporates identity-related motivations to link the visitor and the museum together and describe how visitors conduct their experiences and make meaning of their visit. These identity-related motivations dictate the personal, socio-cultural, and physical contexts of a visitor’s experience, and program developers can cater to those contexts when designing programs or exhibits to best meet a visitor’s needs.

Identity-related motivations allow researchers to generalize similar groups of visitors into five distinct categories: experience seeker, explorer, facilitator,
professional/hobbyist, and recharger (Falk, 2009). An *experience seeker* is someone who visits because it is a “must see” destination, and they value the place as an important part of the community. An *explorer* is curious to learn new things and values the quality of the learning experience. Explorers often have prior experience in these learning settings. Parents and spouses, or anyone whose goal is to support the social or learning experience of someone they care about, are considered *facilitators*. A *professional/hobbyist* often pursues a personal passion and is characterized by having interests in specific or unique learning opportunities. A *recharger* visits to escape everyday life, and he or she is not attracted to crowds.

Although the theory behind audience segmentation of visitors through Falk’s identity-related motivations model has been debated (Dawson & Jensen, 2011), Falk (2011) argues his model is based on a more practical approach to help inform researchers studying visitors. This model was used in a study called “Why Zoos and Aquariums Matter” to describe zoo and aquarium visitors in AZA-accredited institutions (Falk et al., 2007). While these identity-related motivations for visiting a zoo or aquarium are thought to influence the visitor’s actions throughout the zoo or aquarium trip, the motivations have not been used to explore participation in specific activities. This study investigated if identity-related motivations can also describe visitors’ motivation for specifically participating in animal encounter programs.

3.3 Perceptions

To improve conservation messaging goals for animal encounter programs, program developers should have an understanding of how visitors perceive program animals. Perception has two distinct contexts. *Physical perceptions* (biological) relate to some stimulus (usually visual) that transmits information to the brain (Schiff, 1970).
Social perceptions are impressions of a social stimulus that has been potentially modified from the perceiver’s past experiences (Schiff, 1970). For this study, perceptions of animals in education programs take on the definition of social perception, which is used in discussing perception of the environment (Schiff, 1970). For example, one’s perception of the ocean may be different if they have only seen media images compared to another individual’s perception of the ocean who has lived on a coast.

Social perception does require a stimulus and initial awareness before a perception can be formed (Schiff, 1970). It should be made clear that awareness may be considered an aspect of perception, but the two are a bit different (Schiff, 1970). For example, if a person saw a sea lion for the first time lying on a dock, they are now aware of its existence in that area. After watching the sea lion for a while, that person starts to form a perception of the animal. Perhaps they may perceive that it is a large, vociferous animal. Additionally, perception and attitude should not be confused. While both are cognitive and experience-based, a perception often lacks the affective (like/dislike) component and is used when the subject (stimulus) has been present (Schiff, 1970). In the sea lion example, the person may begin to develop an attitude by thinking, “I don’t like sea lions because they’re noisy,” or “I like sea lions because I think it’s funny when they make noises at each other.” For the purpose of this study, I only explored social perception, which will be referred to as “perception” from this point.

3.4 Visitor satisfaction

While motivation research focuses on behaviors prior to an experience (i.e., what drives their decision to participate) and perception research informs how people observe the natural world, visitor satisfaction studies focus on immediate outcomes from the experience (Manfredo, Vaske, & Decker, 1995) and are a form of an individual’s
evaluation of the experience (Vaske, 2008). Satisfaction depends on the how the learning setting matches a visitor’s needs and expectations (Falk, 2009; Vaske, 2008). Visitor satisfaction encourages repeated visits (Som & Badarneh, 2011), which can benefit both the visitor and the institution. Thus, zoos and aquariums use visitor satisfaction to inform the management of successful programs or identify areas in need of improvement.
4. Methodology

4.1 Study Area
Data were collected at the Oregon Coast Aquarium (OCAq) during the summer (July-September) and fall (October-November) of 2015. The OCAq, located in Newport, Oregon, is a nonprofit organization that highlights marine ecosystems local to the Oregon coast and includes animal exhibits, daily keeper talks, and special programs for groups of all ages. In fiscal year 2015, it attracted 420,000 visitors. The OCAq was an ideal location for this study because of its two fee-based animal encounter programs.

4.2 Animal Encounter Programs
The OCAq is home to many animals naturally found along the Oregon coast, such as sea lions, seals, and octopuses. The OCAq’s sea lion and seal (pinniped) outdoor exhibit was designed to recreate a rocky shore habitat, and it includes large pools and viewing windows for guests to observe the animals. Pinniped public presentations led by mammal staff draw over 30,000 visitors annually. Behind the scenes, there is a special interactive fee-based program called “Sea Lion/Seal Kisses,” where visitors learn about the marine mammals at OCAq, take a behind-the-scenes tour of the facility, and ends with a “fishy kiss” from a harbor seal or California sea lion (OCAq, 2016). Organized and presented by the education and husbandry staff, the current script of “Sea Lion/Seal Kisses” favors natural history information rather than an explicit conservation message, although conservation messaging is a core component of many education programs at aquariums (AZA, 2016).

Similarly, “Octopus Encounters,” a fee-based program highlighting the giant Pacific octopus, engages visitors in a natural history lesson in a classroom with an educator guide before a 15-minute hands-on interaction with the animal. The octopus
exhibit mimics a cave with spaces for an octopus to hide. Signs direct visitors to the octopus cave, which blends in with the rocky shore outdoor area. During the encounter, guests can interact with the octopus at the exhibit or guests are taken to a different octopus housed in a round, blue pool behind the scenes. The pool typically accommodates a larger group of visitors.

Visitors must pre-register for the program, either prior to arrival at the OCAq or at the admissions desk the day of the visit. At the time of the study, both programs were the same price, $35 for OCAq members and $40 for non-members. Both programs also last around 30 minutes. Each program at the OCAq allows a maximum of 10 people per session, and participants must be eight years or older.

4.3 Study Sampling and Data Collection
Adults 18 and over who participated in “Sea Lion/Seal Kisses” or “Octopus Encounters” at the OCAq were recruited for this study at their arrival for the program.

A pilot study conducted in February 2015 provided valuable insight on sampling and data collection. Changes were made for summer and fall sampling. The first phase of data collection occurred on site at the OCAq, where I verbally recruited visitors, explaining the study purpose to the entire group and asked for willing participants (Appendix A). On-site questionnaires usually yield high response rates by allowing the researcher to explain the rationale of the study, and participants can ask for clarification on questionnaire items, avoiding item non-response (Vaske, 2008). Participants were told the pre-encounter questionnaire would take approximately 5 minutes to complete. I attempted a census of all adult participants, but anyone who arrived with less than 5 minutes before the encounter did not have time to complete the questionnaire and were consequently not recruited.
A number of adult participants who were recruited and provided consent completed a brief onsite paper questionnaire prior to their animal encounter (Appendix B). Following Dillman, Smyth, and Christian’s (2008) tailored method design, the first page of the questionnaire included items about motivations, perceptions, and demographics. The second page asked participants to provide their email address if they were interested in completing a second questionnaire two weeks later. Providing an email address was optional. As compensation for their time, participants who agreed to complete the follow-up questionnaire by providing their email address received a coupon for a free large beverage (Wyles et al., 2013) at the Aquarium’s Ferry Slip Café.

All completed questionnaires were given a numerical code, where they were marked “P” or “O” for pinniped or octopus, followed by the date, and participant number (e.g. “P-1001-02” means pinniped encounter, October 1st, participant 2). The questionnaires were placed in an envelope and kept in the physical possession of the researcher at all times while at the Aquarium, and was kept in a locked student office afterwards. For questionnaires on which the participant provided an email address, the numerical code was connected to that email address and the follow-up survey invitation and response described below. This code enabled the researcher to match a respondent’s answers between the initial and follow-up questionnaires. Once the questionnaires were matched, the code and email address were removed from the data.

Participants who provided an email address were sent an email invitation to complete a post-encounter questionnaire (Appendix C) about two weeks after their first survey (Toman, 2005). Qualtrics was used to send and track these invitations and responses. The email invitation included a link to the questionnaire. The first page of the
questionnaire included a standard cover letter and consent information, and participants were notified that completion of the questionnaire implies consent to participate in this research project. Participants were told this second questionnaire would take approximately 15 minutes to complete. One week after the first email invitation was sent, a reminder email was sent using the Qualtrics program to any individuals who had not responded.

4.4 Questionnaire items

The first few items on the pre-encounter questionnaires asked about the visitor’s experience with OCAq encounters. Visitors reported which encounter they were attending (pinnipeds “0” or octopus “1”), if this was their first encounter at OCAq (no “0” or yes “1”), and how they heard about the encounter program (choose from a list). Several visitors indicated participating in both encounters by checking both boxes, and this was later recoded as “2 - both.” They also reported the number of children attending the encounter with them, if any.

Motivations for attending the encounter and visiting OCAq that day were recorded in open-ended comment boxes, where visitors wrote in their responses. A yearlong study by the Monterey Bay Aquarium (MBAq) looked at motivations for their “Aquarium Adventures” fee-based programs. On the MBAq survey, visitors chose from a list of pre-determined categorical responses (Rigney, 2013). These categories were “experience something different,” “learn new information,” “share an interest or hobby with friends and family,” “celebrate a special occasion,” and “participated previously in an Aquarium Adventure” (Rigney, 2013). Because of the visitor size and program differences for the OCAq, I opted to begin with open-ended comment boxes and later
compare my results to MBAq’s results to see if I found similar themes and categories of motivations at the OCAq.

To explore how visitors perceived the program animals, I asked participants to answer a set of questions on a 4-point scale, with 1 being “not at all” and 4 being “a lot/very.” The perception items were carefully worded not to directly mention “conservation” for most of the questions, due to its broad meaning and varied connotations in mainstream usage. Rather than imply that a species needs protection by mentioning “conservation,” I attempted to narrow the focus by asking if participants were “worried about the health and status” of the program animal in the wild and at the OCAq.

The one question with “conservation” in the survey asked how important conserving the animal was for the visitor. Some prior awareness is required to form a perception of something, so I asked how much the visitors thought about or looked up information for the program animal before the encounter. My last scaled question asked if visitors felt “management” of the program animals would affect the visitors personally. This question was left ambiguous and did not specify whether this meant management of animals in the wild or in the Aquarium, namely to see what visitors would answer about management in general. Several of these questions were modeled after Irby’s (2011) climate conservation survey.

The last few questions asked demographic information, such as gender, age, education, and zip code. Gender, age, and education were collected to describe visitor backgrounds and to compare results to past studies of OCAq visitors (Hodak, 2008; Nickels, 2008). I asked for zip codes to determine where visitors were coming from. The
final two questions asked about repeated visits to OCAq and if the visitors were members of the OCAq.

The online post-encounter questionnaire asked the same questions, with the exception of different question phrasing for a post-encounter experience (e.g. “Since your encounter, how much have you thought about...”). The major differences on the post-encounter questionnaire were the addition of the motivation card-sort tool (described below), items that asked about program price and content satisfaction, and questions about likeliness to return to the same or different encounter program.

The Oregon Coast Aquarium currently uses an online surveying program for post-encounter satisfaction and feedback. During data collection, my questionnaire replaced the existing one. To keep the OCAq’s data collection consistent, I incorporated survey items important to the Aquarium that did not directly relate to my study. Examples of these items include describing one thing they learned from the encounter, and general comments on the encounter that will be shared with Aquarium staff for program development.

4.5 Motivation Card-Sort Tool

To explore motivations for visitors attending the Aquarium and participating in the animal encounter programs, I was curious to know if these visitors expressed identity-related motivations described by Falk (2009). Past work used a card-sort tool or a list of twenty identity-related motivations statements (Falk et al., 2007; Rowe & Nickels, 2011). With the help of Dr. Falk, I modified his card-sort tool to include Oregon Coast Aquarium-specific images rather than an assortment of images from similar learning institutions such as zoos, science centers, or museums (Appendix D). To incorporate the card-sort tool into the study, I included it in the online post-encounter questionnaire.
Participants chose one group of cards that best described their reason for visiting the Aquarium. Each group of cards described a different identity-related motivation, but the participant did not know the motivation categories.

4.6 Fall Sampling
To determine if there are seasonal differences in motivations and perceptions, I collected additional data in fall 2015. Data were gathered from October (a month after the end of summer season) to mid-November (before Thanksgiving to avoid the beginning of the winter holiday season). Due to decreased Aquarium attendance in the fall, the number of encounters offered per week also decreased.

Additionally, I added one last component to the onsite pre-encounter questionnaire that asked “Who paid for your encounter?” with responses “I paid for myself” and “Someone else paid for me.” This was added to explore any differences in motivations and perceptions for paying and non-paying adults.

4.7 Analysis
After using Qualtrics to download response data into Microsoft Excel, I entered the Excel file into the IBM Statistical Package for Social Science (SPSS) for analysis. Descriptive statistics were used to illustrate demographic and satisfaction data in frequency charts for extrapolation of visual trends. Cross tabulation of the responses concerning visitor perceptions of animals discerned the perceptions between each encounter program. Independent samples t-tests were run to compare means for perceptions of program animals. Paired t-tests were used to compare pre-and post-encounter responses.
For analysis of motivations, I coded open text responses using a word frequency software (Wordle™) and a software for analyzing qualitative data (NVivo) to organize responses into themes. Motivation responses were also categorized into Falk’s identity-related motivations to compare pre- and post-encounter motivation responses for both visiting the aquarium that particular day and participating in the animal encounter. The categorization of identity-related motivations was checked with percent agreement inter-rater reliability of 75% for animal encounter motivations, which is considered an acceptable agreement (75% for 5 to 7 categories) (Hooke, 2014).

Identity-related motivations I coded for the participant’s motivation for visiting the aquarium were cross-checked with their response(s) to the modified card-sort tool from the online post-encounter questionnaire. This card-sort tool only asked about motivations for visiting the aquarium that day. The coded identity-related motivations were placed in Excel into four columns (Figure 3). In the first column, I coded the participant’s pre-encounter questionnaire response for attending the aquarium. I coded the participant’s post-encounter questionnaire open text entry response in the second column. The last two columns were the participant’s first and second choices of their identity-related motivation based on the card-sort tool. If three or more columns had the same code, I considered this the participant’s primary motivation (green boxes). If two of the four columns had the same code, I assigned this motivation with less confidence (blue boxes), with the caveats that they 1) had to come from one of my coded columns and one of the participant’s columns or 2) both had to come from my coded columns in case the card-sort tool is not valid. I labeled these as “final motivation” (purple box) but these were not used for further analyses.
To characterize likeliness to return, I asked about price and content satisfaction, whether or not they would return for the same or different encounter or tour program, and whether or not the visitors would recommend the program to others. SPSS and descriptive statistics were used to answer these questions.

Of the 77 respondents who started the online questionnaire two to three weeks post-encounter, 58% participated in “Sea Lion/Seal Kisses” and 42% participated in “Octopus Encounters.” The online questionnaire was not designed to incorporate visitors that attended both encounters, so responses pertaining to perceptions of program animals are assumed to correspond with the visitor’s choice of “Sea Lion/Seal Kisses” or “Octopus Encounters.” Using pre-encounter data for comparison, six post-encounter respondents reported attending both encounters. Based on survey ID numbers with a numbering protocol to distinguish encounters (“O” for “octopus” and “P” for “pinniped” or sea lions/seals), four of the six post-encounter respondents answered for different encounters in their pre- and post-encounter questionnaires. For example, a visitor that

<table>
<thead>
<tr>
<th>My code pre</th>
<th>My code post</th>
<th>Their answer 1</th>
<th>Their answer 2</th>
<th>Final motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6*</td>
<td>explorer</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>facilitator</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>explorer</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>9</td>
<td>1</td>
<td>unsure- experience</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>unsure</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>explorer</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>explorer/prof/hobby</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>explorer</td>
</tr>
</tbody>
</table>

Figure 3. Example of coding and assigning identity-related motivations. “6*” represented the online questionnaire response "I would not choose another set. My first choice was the main reason I came to the aquarium."
attended the “Octopus Encounters” first on a Saturday that knew they were also participating in “Sea Lion/Seal Kisses” would mark both encounters on their pre-encounter questionnaire. Because that visitor was surveyed at the time of the “Octopus Encounters,” their corresponding survey ID began with “O.” That same visitor taking the online post-encounter questionnaire would this time choose “Sea Lion/Seal Kisses,” making their responses assumed to be about different animals. Because of this discrepancy in the online questionnaire, the four respondents were not included for paired analyses related to grouping by animal encounter programs. They were, however, included in general means, grouping by seasons, and descriptive statistics.
5. Results

5.1 Participants

In summer 2015 (July-September), a total of 296 visitors (68% adults over 18, \(n=201\)) participated in the encounters on the days I surveyed. Although I attempted a census of all adult participants, 90% (180) of the adults were asked to complete the questionnaire due to the five-minute threshold I set for visitors prior to the encounter. In other words, 10% of the adults did not show up in time to complete the questionnaire and were automatically excluded. The response rate for the adults asked to participate was 83% \((n=149)\).

In fall 2015 (October-November), 83 visitors (86% adults over 18, \(n=71\)) participated in the encounters. Like in the summer, I attempted a census of adult participants, but 86% \((n=61)\) of the adults were recruited, with a response rate of 92% \((n=56)\).

Overall, 379 visitors (72% adults over 18, \(n=272\)) participated in the encounters. Eighty-nine percent \((n=241)\) of adult participants were asked to complete the questionnaire, with an 85% response rate \((N=205)\). Seventy-two percent \((n=147)\) of adults that completed the questionnaire provided email addresses for follow-up with the second questionnaire. Fifty-two percent \((n=77)\) responded to the online post-encounter questionnaire. Response rates are summarized in Figure 4.
5.2 Visitor residence

While most visitors to the Oregon Coast Aquarium came from Pacific Northwest states (Oregon, Washington, Idaho; Table 1), the summer season also attracted visitors from other parts of the country, as well as a handful of international visitors from Canada and Europe (Figure 5a). In the fall, the majority of visitors were local to the Pacific Northwest, with one international visitor (Figure 5b).

---

**Figure 4. Visitors’ participation by seasons**

<table>
<thead>
<tr>
<th>Total number of visitors during study</th>
<th>379</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visitors by season</td>
<td></td>
</tr>
<tr>
<td>Summer 2015</td>
<td></td>
</tr>
<tr>
<td>n= 296</td>
<td></td>
</tr>
<tr>
<td>Fall 2015</td>
<td></td>
</tr>
<tr>
<td>n= 83</td>
<td></td>
</tr>
<tr>
<td>Adult visitors</td>
<td></td>
</tr>
<tr>
<td>68%, n= 201</td>
<td></td>
</tr>
<tr>
<td>86%, n= 71</td>
<td></td>
</tr>
<tr>
<td>Actual number of adults asked</td>
<td></td>
</tr>
<tr>
<td>90%, n= 180</td>
<td></td>
</tr>
<tr>
<td>86%, n= 61</td>
<td></td>
</tr>
<tr>
<td>Pre-encounter response</td>
<td></td>
</tr>
<tr>
<td>83%, n= 149</td>
<td></td>
</tr>
<tr>
<td>92%, n= 56</td>
<td></td>
</tr>
<tr>
<td>Emails for post-encounter questionnaire</td>
<td></td>
</tr>
<tr>
<td>71%, n= 106</td>
<td></td>
</tr>
<tr>
<td>73%, n= 41</td>
<td></td>
</tr>
<tr>
<td>Post-encounter response</td>
<td></td>
</tr>
<tr>
<td>50%, n= 53</td>
<td></td>
</tr>
<tr>
<td>59%, n= 24</td>
<td></td>
</tr>
</tbody>
</table>

While most visitors to the Oregon Coast Aquarium came from Pacific Northwest states (Oregon, Washington, Idaho; Table 1), the summer season also attracted visitors from other parts of the country, as well as a handful of international visitors from Canada and Europe (Figure 5a). In the fall, the majority of visitors were local to the Pacific Northwest, with one international visitor (Figure 5b).
Figure 5. Maps of participant zip codes for summer 2015 (a) and fall 2015 (b). International locations other than Canada are not shown.
Table 1. Oregon Coast Aquarium visitors’ residence

<table>
<thead>
<tr>
<th></th>
<th>Pacific Northwest (OR, WA, ID)</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>66(^1)</td>
<td>34</td>
</tr>
<tr>
<td>Fall</td>
<td>72</td>
<td>28</td>
</tr>
<tr>
<td>Both</td>
<td>68</td>
<td>32</td>
</tr>
</tbody>
</table>

\(^1\)Cell entries are percentages, which are rounded up and may reflect rounding errors not adding to 100%.

5.3 Gender, age, and education

Data were gathered to explore visitor demographics for animal encounter program participants. Figure 6 summarizes the visitor demographics from the entire study.

![Visitor Demographics](image)

Figure 6. Summary of visitor demographics (Gender: N=204; Age: N=205; Education: N=203) for animal encounter programs in summer and fall 2015
Most animal encounter participants were female (62%, \(n=127\)), in the 26-35 and 36-55 age groups (66%, \(n=135\)), and had some college education or higher (84%, \(n=170\)).

5.4 Visits to the aquarium

Most of the participants visited the Aquarium “0-1” times (84%). A handful of participants visited the Aquarium “2-3” times (13%), and a few had repeated visits “4-5” and “6+” times (2% for both combined) (Figure 7). When asked if participants had an Aquarium membership, only 14% said they were members. The participants that had been to the Aquarium more than 4 times in the past 12 months were all Aquarium members.

For both seasons and type of encounter, 85% of visitors participated in the fee-based programs for the first time. Of those repeating encounters (\(n=30\)), only 9 visitors (30%) were members.

Figure 7. Proportion of repeat visits to the aquarium in the past 12 months (2015)
5.5 Finding the animal encounter programs

When asked how they found out about the animal encounters pre-encounter, most respondents reported using the “aquarium website,” followed by “recommendation (word of mouth),” and then finding out incidentally as a result of the “visit to the aquarium” that particular day (Table 2). No visitors said “social media” was the means of finding out about the programs.

Table 2. Reported ways of finding the animal encounter programs pre-encounter

<table>
<thead>
<tr>
<th>Grouping</th>
<th>Encounter Program (N=183)</th>
<th>Season (N=194)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sea Lion/Seal Kisses</td>
<td>Octopus</td>
</tr>
<tr>
<td>Visit to the aquarium</td>
<td>16(^4)</td>
<td>13</td>
</tr>
<tr>
<td>Aquarium website</td>
<td>56</td>
<td>54</td>
</tr>
<tr>
<td>Repeat customer</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Facebook/Twitter (social media)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Recommendation (word of mouth)</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>9</td>
</tr>
</tbody>
</table>

\(^1\)Cell entries are percentages of respondents reporting how they found the animal encounter programs.
\(^2\)Responses do not include those that picked multiple survey items (e.g. “Visit to the aquarium” and “Repeat customer”).
\(^3\)Responses did not include adults that marked participation for both encounter programs.
\(^4\)Percentages are rounded up and may reflect rounding errors not adding to 100%.

5.6 Children participants

The majority (61%, \(n = 126\)) of adult participants did not have children accompanying them during the encounters (Figure 8).
To look at differences in number of accompanying children by encounter types and seasons, I recoded this categorical variable into a dichotomous variable, where 0 = “no children” and 1 = “children.” For the two different encounters (n=193), about the same number of adults brought children under 18 to the encounters, with a few more attending “Sea Lion/Seal Kisses” (39%) than “Octopus Encounters” (34%). There was a significant difference between the number of accompanying children by seasons. In the summer (n= 149), 70 adults (48%) brought children, and in the fall (n= 56) only 8 adults (14%) had children participating in the encounters (t(140) =5.34, p<.001).

5.7 Motivations for visiting the aquarium

The Oregon Coast Aquarium attracts many tourists. In fiscal year 2015, the OCAq saw 420,000 visitors. In summer and fall of 2015, a subset of visitors who participated in OCAq’s fee-based animal encounter programs- including family groups, adult groups without children, and individual participants- were asked about their motivations for visiting the aquarium that particular day and attending the animal encounter programs.
Using a word frequency software, word clouds were created to depict the most frequent words from visitor responses (Figure 9). These images illustrated what visitors were saying in response to the motivation questions. For attending animal encounter programs, most visitors responded that they were motivated by a love for animals, and some would mention the specific program animals. After reviewing the word cloud for common themes, I conducted open coding analysis of the visitor motivation responses.

**Figure 9.** Word cloud of visitor motivations for attending fee-based animal encounter programs. This image was made using the word frequency software Wordle™.

Open coding of write-in responses on the pre-encounter questionnaire revealed several themes related to vacationing in the area. Two distinct groups of “vacationers” visited the OCAq. First, some vacationers purposefully planned to visit the OCAq as part of their vacation itinerary. For example, a typical response might be “We always go to
aquariums wherever we vacation, and this trip was scheduled for a while.” The second type of vacationers made an incidental trip to the OCAq, perhaps after seeing an advertisement or some recommendation (either through word of mouth or print). An example response would be, “We were on our way to [destination] and heard great things about the aquarium and decided to stop by.” These responses would also be paired with phrases like “it sounded like fun” or “it’s something new on our vacation.” Example of codes and number of references for each code is represented in Figure 10.

![Figure 10](image)

Figure 10. Example of coding for "vacation" with number of references from the visitor comments

A subgroup of vacationers that specifically mentioned Newport were Oregon locals ($n=16$). For instance, “We always come here when we’re in Newport” or “Visiting a friend in Newport and love to come here” are examples of more localized visitors with past experiences at the OCAq or Newport in general.

Beyond reasons for being in the area, visitors also mentioned interests in animals, and more specifically, marine life. “Interests” varied in strength throughout the responses, where some stated simply “interest in animals,” to stronger feelings or more detailed interest, such as “I’ve always been interested in octopus and I think they’re fascinating!”

Interests in aquarium animals also varied by who was interested within visiting groups. For instance, “I’ve always been interested” or “I think” are statements with clear
motivation being personal interest in the content. The next type of response showed a group interest, such as “We love aquariums” or “We love nature and science.” Finally, comments like “An out of town friend was visiting and this is a place that interests her” or “My son wanted to come for his birthday” revealed a third category of responses that deferred to someone else’s interest.

Finally, the last major theme of why visitors were at the Aquarium that day was for a celebration. Several children and adults celebrated birthdays. Other adults celebrated engagements, honeymoons, anniversaries, and even divorce. Many of these celebratory motivations also appeared in responses for participating in the animal encounter programs (e.g. “It’s my wife’s birthday, and she loves octopuses”).

5.8 Motivations for attending fee-based programs

Twelve percent (n= 25) of the visitors reported the animal encounter was the primary motivation for coming to the aquarium that particular day. Many of the surveyed visitors celebrated a special event and participated in the animal encounter program as a special activity, for which the encounter was purchased as a gift. Responses such as “This encounter was a wedding gift” or “It’s my daughter’s birthday” reflected this theme. Some visitors went as far as scheduling the encounter as a surprise gift for someone they cared about. “My wife wanted to surprise me with this encounter for our anniversary” or “It’s my friend’s birthday, and we’re surprising her- she loves seals!” were some examples of responses describing a surprise celebration.

Motivations for attending the animal encounter program included varying strengths of interest in/love for animals and interest in program animals specifically. Participating in the encounter programs was also described as “doing something different from a regular visit.”
Figure 11 depicts a summary of motivations from open coding of visitor responses for both visiting the Aquarium and attending the encounter.

5.9 Identity-related motivations

In an attempt to categorize Aquarium visitors and encounter participants, I used Falk’s (2009) identity-related motivations as a basis of organizing visitors. Many text comments were too vague to be categorized. However, for the content that could be categorized, explorers and facilitators made up the majority of visitors, with explorers being the highest number all around. For visiting the Aquarium, explorers and facilitators
had similar proportions (Table 3). Although many self-reported being a recharger using the card-sort tool, no visitors had primary motivations identified from any of their written responses for being rechargers as described in the literature, so I did not use those responses to determine final motivations, as described in Figure 3 in the previous chapter. (These final motivations were only used for cross-checking motivations and were not included in any analyses.)

Explorers, on the other hand, were the most common group of that participated in the animal encounters (Table 4). Approximately 20% fewer people had a facilitator motivation for attending the encounters compared to explorers. A small percentage of visitors had professionals/hobbyists characteristics, like stating long-term interests in a particular animal or explicitly describing a photography hobby, for example.

For visitors that did not have one obvious motivation, I created a “dual motivations” category. This phrasing is different from Falk’s “dual dominance” because I did not utilize a scale to let visitors self-report strength of motivations to determine “dominance.” Additionally, instead of reporting “non-dominance” according to the literature, where multiple statements could not determine one or two particular identity-related motivations, I categorized many responses as “too vague” because too little information was available to understand and categorize visitors. For instance, one or two word responses like “vacation” or “sounded fun” did not reveal any common characteristics of identity-related motivations.
Table 3. Proportions of identity-related motivations for visiting the aquarium pre- and post-encounter.

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Visiting Aquarium (Pre n = 199)</th>
<th>Visiting Aquarium (Post n = 76)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience Seeker</td>
<td>151</td>
<td>17</td>
</tr>
<tr>
<td>Explorer</td>
<td>33</td>
<td>37</td>
</tr>
<tr>
<td>Facilitator</td>
<td>29</td>
<td>26</td>
</tr>
<tr>
<td>Professional/Hobbyist</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Recharger</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dual Motivations</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Too Vague</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

1Percentages are rounded to the nearest whole number and may reflect rounding errors not adding to 100%.

Table 4. Proportions of identity-related motivations for attending the animal encounter programs.

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Attending encounter (Pre n = 201)</th>
<th>Attending encounter (Post n = 76)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience Seeker</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Explorer</td>
<td>38</td>
<td>36</td>
</tr>
<tr>
<td>Facilitator</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Professional/Hobbyist</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Recharger</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dual Motivations</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Too Vague</td>
<td>32</td>
<td>33</td>
</tr>
</tbody>
</table>

1Percentages are rounded to the nearest whole number and may reflect rounding errors not adding to 100%.

I compared the identity-related motivations and found that for those that could be categorized, explorers and facilitators make up most visitors to aquariums (Table 5). Animal encounter program participants are more likely to be explorers, and the proportion of facilitators participating in these programs changes seasonally, with more facilitators in the summer.
Table 5. Oregon Coast Aquarium animal encounters participants’ identity-related motivations for visiting the Aquarium by season compared to past studies

<table>
<thead>
<tr>
<th>Motivation</th>
<th>OCAq encounters Sum 2015 (n=149)</th>
<th>OCAq encounters Fall 2015 (n=56)</th>
<th>OCAq visits final (n=75)</th>
<th>OCAq¹ Sum 2007 (N=101)</th>
<th>OCAq²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp. Seeker</td>
<td>14¹</td>
<td>16¹</td>
<td>1³</td>
<td>0</td>
<td>3.6</td>
</tr>
<tr>
<td>Explorer</td>
<td>31</td>
<td>38</td>
<td>37</td>
<td>7.9</td>
<td>13.0</td>
</tr>
<tr>
<td>Facilitator</td>
<td>33</td>
<td>18</td>
<td>17</td>
<td>11.9</td>
<td>11.5</td>
</tr>
<tr>
<td>Prof/Hobby</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>8.9</td>
<td>8.6</td>
</tr>
<tr>
<td>Recharger</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>6.5</td>
</tr>
<tr>
<td>Dual-domin.</td>
<td>3*</td>
<td>2*</td>
<td>7*</td>
<td>8.9</td>
<td>8.6</td>
</tr>
<tr>
<td>Non-domin.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>57.4</td>
<td>48.2</td>
</tr>
<tr>
<td>Too vague</td>
<td>12</td>
<td>18</td>
<td>36</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

¹For these categories, “dominance” was not measured in this study. “Dual” means two potential motivations determined without a strength scale.
²Nickels (2008)
³Rowe & Nickels (2011). Sample size of the OCAq site was not mentioned in their study.
³Percentages are rounded to the nearest whole number and may reflect rounding errors not adding to 100%.

5.10 Visitor perceptions of program animals: pre-encounter

Pre-encounter questionnaire responses revealed various visitor perceptions of program animals (Table 6). Responses were coded on a 4-point scale. Mean values from 1.00 to 1.49 were considered “not at all” labels, 1.60-2.49 were “a little,” and the values in between (1.50-1.59) fell in a range from “not at all” to “a little.” Similar range criteria were set for the other scaled mean values (Figure 12).

<table>
<thead>
<tr>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00-1.49</td>
<td>Not at all</td>
</tr>
<tr>
<td>1.50-1.59</td>
<td>A little</td>
</tr>
<tr>
<td>1.60-2.49</td>
<td>Somewhat</td>
</tr>
<tr>
<td>2.50-2.59</td>
<td>A lot/Very</td>
</tr>
<tr>
<td>2.60-3.49</td>
<td></td>
</tr>
<tr>
<td>3.50-3.59</td>
<td></td>
</tr>
<tr>
<td>3.60-4.00</td>
<td></td>
</tr>
</tbody>
</table>

Figure 12. Range criteria and labels for mean values
Program animals, including those in the fee-based encounters, are ambassadors for their wild counterparts. Visitors were “a little” worried ($M = 1.73$) about the health and status of program animals in the aquarium, to “somewhat” worried ($M = 2.71$) about the same animals in the wild. The issue of conserving the program animals is “somewhat” ($M = 3.33$) important to the visitors personally. Visitors thought about the program animals “a little” to “somewhat” ($M = 2.57$) before participating in the encounter, but only looked for information “a little” ($M = 1.97$). Finally, the management of the program animals would affect the visitors personally “a little” to “somewhat” ($M = 2.56$).

When comparing visitor perceptions of each program animal from the two encounters, there were similar results (Table 7). The only significant difference was that visitors from “Octopus Encounters” were more worried about the program animal in the wild than visitors from “Sea Lion/Seal Kisses” ($t(191) = 2.26, p = .025$).

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean (M)</th>
<th>Std Dev (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worry about health and status of program animal in aquarium$^1$</td>
<td>205</td>
<td>1.73</td>
<td>1.00</td>
</tr>
<tr>
<td>Worry about health and status of program animal in wild$^1$</td>
<td>205</td>
<td>2.71</td>
<td>.99</td>
</tr>
<tr>
<td>Importance of conserving program animal$^1$</td>
<td>205</td>
<td>3.33</td>
<td>.82</td>
</tr>
<tr>
<td>How much thought about program animal before encounter$^2$</td>
<td>205</td>
<td>2.57</td>
<td>.91</td>
</tr>
<tr>
<td>How much looked for information on program animal before encounter$^2$</td>
<td>205</td>
<td>1.97</td>
<td>.91</td>
</tr>
<tr>
<td>How much management of program animal will affect visitor personally$^2$</td>
<td>202</td>
<td>2.56</td>
<td>.85</td>
</tr>
</tbody>
</table>

$^1$Variables measured on a 4-point scale of 1 “not at all” to 4 “very”
$^2$Variables measured on a 4-point scale of 1 “not at all” to 4 “a lot”
Table 7. Independent samples t-tests of pre-encounter visitor perceptions of program animals from each encounter

<table>
<thead>
<tr>
<th>Encounter 1</th>
<th>Sea Lion/Seal Kisses (n=120)</th>
<th>Octopus Encounters (n=73)</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worry about health and status of program animal in aquarium²</td>
<td>1.79</td>
<td>1.62</td>
<td>1.24</td>
<td>.216</td>
</tr>
<tr>
<td>Worry about health and status of program animal in wild²</td>
<td>2.58</td>
<td>2.90</td>
<td>2.26</td>
<td>.025</td>
</tr>
<tr>
<td>Importance of conserving program animal²</td>
<td>3.28</td>
<td>3.41</td>
<td>1.13</td>
<td>.260</td>
</tr>
<tr>
<td>How much thought about program animal before encounter³</td>
<td>2.55</td>
<td>2.59</td>
<td>.29</td>
<td>.771</td>
</tr>
<tr>
<td>How much looked for information on program animal before encounter³</td>
<td>1.90</td>
<td>2.03</td>
<td>.97</td>
<td>.332</td>
</tr>
<tr>
<td>How much management of program animal will affect visitor personally³</td>
<td>2.55⁴</td>
<td>2.58</td>
<td>.29</td>
<td>.773</td>
</tr>
</tbody>
</table>

¹Cell entries are means.
²Variables measured on a 4-point scale of 1 “not at all” to 4 “very”
³Variables measured on a 4-point scale of 1 “not at all” to 4 “a lot”
⁴n=119 instead of n=120, due to a missing response

Visitor perceptions by seasons without separating types of encounter did not differ significantly. Comparing visitor perceptions by season and separating types of encounter, however, was significantly different for “Octopus Encounters” (Figure 13). Visitors were slightly more “worried about the health and status of the program animal in the aquarium” during the summer (M= 1.75, “a little”) than in the fall (M= 1.36, “not at all”) (t(71) = 2.27, p=.026). Visitor perceptions of “Sea Lion/Seal Kisses” were not significantly different by seasons.
5.11 Visitor perceptions of program animals: post-encounter

Similar to the means from pre-encounter perceptions, visitors were “not at all” to “a little” worried \((M=1.58)\) about the health and status of program animals in the Aquarium, to “somewhat” worried \((M=2.73)\) about the animals in the wild (Table 8).

Table 8. Means table of visitor perceptions of program animals post-encounter

<table>
<thead>
<tr>
<th>Perception</th>
<th>(n)</th>
<th>Mean ((M))</th>
<th>Std Dev ((SD))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worry about health and status of program animal in aquarium(^1)</td>
<td>73</td>
<td>1.58</td>
<td>.97</td>
</tr>
<tr>
<td>Worry about health and status of program animal in wild(^1)</td>
<td>73</td>
<td>2.73</td>
<td>.96</td>
</tr>
<tr>
<td>Importance of conserving program animal(^1)</td>
<td>73</td>
<td>3.18</td>
<td>.86</td>
</tr>
<tr>
<td>How much thought about program animal after encounter(^2)</td>
<td>71</td>
<td>2.49</td>
<td>.92</td>
</tr>
<tr>
<td>How much looked for information on program animal after encounter(^2)</td>
<td>71</td>
<td>2.18</td>
<td>.93</td>
</tr>
<tr>
<td>How much management of program animal will affect visitor personally(^2)</td>
<td>71</td>
<td>2.72</td>
<td>.99</td>
</tr>
</tbody>
</table>

\(^1\)Variables measured on a 4-point scale of 1 “not at all” to 4 “very”

\(^2\)Variables measured on a 4-point scale of 1 “not at all” to 4 “a lot”
Although means of visitor perceptions between pre- and post-encounter did not significantly differ, it is interesting to note some of the changes (Table 9). While visitors’ worry about the animal in the wild barely increased, visitors’ worry about the animal in the Aquarium decreased. The issue of conserving the program animals is still “somewhat” ($M=3.18$) important to the visitors personally, but it did decrease. Since the encounter, visitors thought about the program animals less than before the encounter, but only “a little” ($M=2.49$). Visitors looked for information on the program animal more after the encounter, but the mean response was still “a little” ($M=2.18$). Finally, after participating in the encounter, the management of the program animals would “somewhat” ($M=2.72$) affect the visitors personally, an increase from pre-encounter response when they felt “a little” to “somewhat” affected ($M=2.56$).

Table 9. Independent samples t-test of visitor perceptions of program animals pre- and post-encounter

<table>
<thead>
<tr>
<th></th>
<th>Pre$^1$</th>
<th>Post$^1$</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worry about health and status of program animal in aquarium$^2$</td>
<td>1.73 ($N=205$)</td>
<td>1.58 ($n=73$)</td>
<td>1.14</td>
<td>.257</td>
</tr>
<tr>
<td>Worry about health and status of program animal in wild$^2$</td>
<td>2.71</td>
<td>2.73</td>
<td>.12</td>
<td>.903</td>
</tr>
<tr>
<td>Importance of conserving program animal$^2$</td>
<td>3.33</td>
<td>3.18</td>
<td>1.33</td>
<td>.183</td>
</tr>
<tr>
<td>How much thought about program animal after encounter$^3$</td>
<td>2.57 ($n=71$)</td>
<td>2.49</td>
<td>.64</td>
<td>.522</td>
</tr>
<tr>
<td>How much looked for information on program animal after encounter$^3$</td>
<td>1.97</td>
<td>2.18</td>
<td>1.69</td>
<td>.092</td>
</tr>
<tr>
<td>How much management of program animal will affect visitor personally$^3$</td>
<td>2.56$^4$</td>
<td>2.72</td>
<td>1.28</td>
<td>.201</td>
</tr>
</tbody>
</table>

$^1$Cell entries are means.  
$^2$Variables measured on a 4-point scale of 1 “not at all” to 4 “very”  
$^3$Variables measured on a 4-point scale of 1 “not at all” to 4 “a lot.” N=36.  
$^4$n=203
Comparing visitor perceptions of each program animal from the two encounters (Table 10) once again showed similar results to overall perceptions. Visitors from “Octopus Encounters” felt more importance of conserving the program animal than visitors from “Sea Lion/Seal Kisses” felt about their program animal ($t(67)= 2.48, p= .016$). “Octopus Encounters” visitors also looked for information on the program animal more than “Sea Lion/Seal Kisses” visitors ($t(65) = 2.04, p= .046$).

**Table 10. Independent samples t-tests of post-encounter visitor perceptions of program animals from each encounter**

<table>
<thead>
<tr>
<th>Encounter</th>
<th>Sea Lion/Seal Kisses (n=38)</th>
<th>Octopus Encounters (n=31)</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worry about health and status of program animal in aquarium$^2$</td>
<td>1.61</td>
<td>1.55</td>
<td>.24</td>
<td>.812</td>
</tr>
<tr>
<td>Worry about health and status of program animal in wild$^2$</td>
<td>2.74</td>
<td>2.65</td>
<td>.39</td>
<td>.696</td>
</tr>
<tr>
<td>Importance of conserving program animal$^2$</td>
<td>2.97</td>
<td>3.45</td>
<td>2.48</td>
<td>.016</td>
</tr>
<tr>
<td>How much thought about program animal after encounter$^3$</td>
<td>2.28</td>
<td>2.71</td>
<td>1.94</td>
<td>.057</td>
</tr>
<tr>
<td>How much looked for information on program animal after encounter$^3$</td>
<td>1.94</td>
<td>2.39</td>
<td>2.04</td>
<td>.046</td>
</tr>
<tr>
<td>How much management of program animal will affect visitor personally$^3$</td>
<td>2.61</td>
<td>2.84</td>
<td>.93</td>
<td>.355</td>
</tr>
</tbody>
</table>

$^1$Cell entries are means.

$^2$Variables measured on a 4-point scale of 1 “not at all” to 4 “very”

$^3$Variables measured on a 4-point scale of 1 “not at all” to 4 “a lot.” N=36.
Overall visitor perceptions of program animals by seasons did not significantly differ, although fall visitor responses had higher means than summer visitors for “worry about the animal in the wild,” “importance of conserving program animal,” and “thought about” and “looked for” the program animal after the encounter (Table 11).

Table 11. Independent samples t-tests of post-encounter visitor perceptions of program animals by season

<table>
<thead>
<tr>
<th></th>
<th>Season</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Summer</td>
<td>Fall</td>
<td>t-value</td>
<td>p-value</td>
<td></td>
</tr>
<tr>
<td>Worry about health and status of program animal in aquarium$^2$</td>
<td>1.61</td>
<td>1.50</td>
<td>0.46</td>
<td>0.646</td>
<td></td>
</tr>
<tr>
<td>Worry about health and status of program animal in wild$^3$</td>
<td>2.61</td>
<td>2.96</td>
<td>1.58</td>
<td>0.121</td>
<td></td>
</tr>
<tr>
<td>Importance of conserving program animal$^2$</td>
<td>3.12</td>
<td>3.29</td>
<td>0.79</td>
<td>0.431</td>
<td></td>
</tr>
<tr>
<td>How much thought about program animal after encounter$^3$</td>
<td>2.42</td>
<td>2.65</td>
<td>1.01</td>
<td>0.318</td>
<td></td>
</tr>
<tr>
<td>How much looked for information on program animal after encounter$^3$</td>
<td>2.13</td>
<td>2.30</td>
<td>0.76</td>
<td>0.451</td>
<td></td>
</tr>
<tr>
<td>How much management of program animal will affect visitor personally$^3$</td>
<td>2.77</td>
<td>2.61</td>
<td>0.64</td>
<td>0.522</td>
<td></td>
</tr>
</tbody>
</table>

$^1$Cell entries are means.
$^2$Variables measured on a 4-point scale of 1 “not at all” to 4 “very”
$^3$Variables measured on a 4-point scale of 1 “not at all” to 4 “a lot”
Comparing visitor perceptions of encounter animal by season was only significantly different for “Octopus Encounters” visitors being more “worried about the health and status of the program animal in the aquarium” in the summer ($n=19$, $M=1.84$, “a little”) than in the fall ($n=12$, $M=1.08$, “not at all”) ($t(22) = 2.81$, $p = .010$) (Figure 14). This was similar to results from the pre-encounter responses (see Figure 13).

![Octopus Encounters](image)

*Figure 14. Post-encounter visitor perceptions of “Octopus Encounters” by season. Mean values are measured on a 4-point scale of 1 “not at all” to 4 “very/a lot.”*

Participant responses were matched from pre- and post-encounter questionnaires for visitor perceptions of program animals. Paired t-tests revealed two survey items significantly differed (Table 12). “Importance of conserving program animal to you personally” ($t(68) = 2.92$, $p = .005$) and “How much have you thought about the program animal” ($t(66) = 2.53$, $p = .015$) both decreased from pre- to post-encounter responses.
Table 12. Paired t-tests of visitor perceptions of program animals

<table>
<thead>
<tr>
<th>Perception of Program Animal</th>
<th>Pre</th>
<th>Post</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worry about health and status of program animal in aquarium (^2) (n=69)</td>
<td>1.61</td>
<td>1.58</td>
<td>.33</td>
<td>.742</td>
</tr>
<tr>
<td>Worry about health and status of program animal in wild (^2) (n=69)</td>
<td>2.81</td>
<td>2.70</td>
<td>.97</td>
<td>.336</td>
</tr>
<tr>
<td>Importance of conserving program animal (^2) (n=69)</td>
<td>3.52</td>
<td>3.19</td>
<td>2.92</td>
<td>.005</td>
</tr>
<tr>
<td>How much thought about program animal (^3) (n=67)</td>
<td>2.76</td>
<td>2.48</td>
<td>2.53</td>
<td>.014</td>
</tr>
<tr>
<td>How much looked for information on program animal (^3) (n=67)</td>
<td>2.10</td>
<td>2.15</td>
<td>.40</td>
<td>.694</td>
</tr>
<tr>
<td>How much management of program animal will affect visitor personally (^3) (n=66)</td>
<td>2.76</td>
<td>2.74</td>
<td>.16</td>
<td>.874</td>
</tr>
</tbody>
</table>

\(^1\)Cell entries are means.
\(^2\)Variables measured on a 4-point scale of 1 “not at all” to 4 “very”
\(^3\)Variables measured on a 4-point scale of 1 “not at all” to 4 “a lot”

Separating paired responses by encounters show the same results for “Sea Lion/Seal Kisses,” where “Importance of conserving program animal to you personally” and “How much have you thought about the program animal” both significantly decreased from pre- to post-encounter responses (Figure 15). The “importance of conserving program animal” decreased from 3.45 “somewhat” to 2.97 “somewhat” (t(37) = 2.69, p=.011). “How much have you thought about the program animal” decreased from 2.72 “somewhat” to 2.28 “a little” (t(35)= 3.30, p=.002).
The only significant change for “Octopus Encounters” was a decrease in “worry about health and status of program animal in wild” ($t(30) = 2.36, p= .025$), where the responses still fall under “somewhat” worried (pre: $M= 3.00$; post: $M= 2.65$) (Figure 16).
5.12 Paying and non-paying participants

In the fall, one pre-encounter item was added to the questionnaire to explore potential differences in responses based on whether or not the visitors paid for themselves. Although the responses did not significantly differ between the two types of paying visitors, a general trend showed visitors that had someone else pay for their encounter \((n=13)\) had higher mean responses to the visitor perceptions questions post-encounter than visitors that paid for themselves \((n=11 \text{ for first three questions}; n=10 \text{ for last three questions}; \text{Figure 17})\).

![Figure 17. Means for fall post-encounter responses on visitor perceptions of program animals by paying visitors. Mean values are measured on a 4-point scale of 1 “not at all” to 4 “very/a lot.”](image)

I investigated if identity-related motivations could describe this trend, but it does not seem to make a difference with this sample size.
5.13 Visitor satisfaction

Participants who completed the post-encounter questionnaire \((n = 71)\) were asked about program price and content satisfaction. Participants responded on a 5-point scale from 1 “Very dissatisfied” to 5 “Very satisfied.” While participants were mostly satisfied \((44\%, n = 31)\) to neutral \((31\%, n = 22)\) about price, they were very satisfied \((69\%, n = 49)\) with program content (Figure 18). Two percent \((n = 3)\) were dissatisfied with the price, and 1\% \((n = 2)\) were dissatisfied and very dissatisfied about the program content.

![Program Satisfaction](image)

*Figure 18. Satisfaction of animal encounter program content and price*

In addition to visitors being mostly satisfied with the animal encounter programs, 93\% \((n = 66)\) of the visitors would recommend the programs to a friend. The 7\% \((n = 5)\) that would not recommend the program to a friend had various associated responses. One visitor was satisfied with the program itself, but was very dissatisfied a professional photographer was not at the encounter to capture the moments. Two visitors were very satisfied with the programs, but would not recommend the program to a friend. They did, however, report they would want to participate in other programs. Another visitor that
was neutral about price and dissatisfied with content would not recommend the program, but they did indicate participating in two other encounters. The last person felt neutral about the experience and would not recommend the program because they were from out of state and did not have any Oregon friends to whom they could recommend the program.

Ninety-seven percent of the visitors would participate in another encounter or special tour, indicated in Figure 19. The 7% (n= 5) that would not participate in another encounter or tour included the two visitors mentioned above. The other three visitors were neutral to very satisfied about their experience and did not specify why they would not participate in another encounter or tour.

![Figure 19. Tours and encounters that visitors indicated they would participate in the future](image-url)
6. Discussion

6.1 Encounter program participants

The purpose of this study was to understand visitors that participate in fee-based animal encounter programs by looking at demographics, motivations for participating, perceptions of the program animal, and satisfaction.

The high response rate of visitors who participated in the study likely resulted from using an on-site paper questionnaire and attempting a census of all adult participants by verbally recruiting to a small, captive audience prior to the encounter. Although on-site questionnaires may interrupt a visitor’s activity, visitors that arrived for the encounter early did not seem to mind filling out the questionnaire while waiting for the education staff to begin the tour.

6.2 Demographics

Rowe and Nickels (2011) reported a 30:70 male to female ratio of a random sample of visitors during a study at the OCAq in 2008. They commented on uncertainty in whether or not this ratio represented the gender makeup of the OCAq audience or if it was because females were more willing to participate in the study (Rowe & Nickels, 2011). In an earlier study during summer 2007 at OCAq, Nickels (2008) found a 34:52 male to female ratio. Because this study involved an attempted census of particular programs and found a 38:62 male to female ratio, the past research would seem to be a good reflection of the gender makeup of the general OCAq audience. I would argue that visitor demographics have not changed much in the past six years. However, more robust data collection is needed for more accurate baseline information for future reference.

OCAq visitors are highly educated. About 84% of adult participants from summer and fall 2015 reported to have some college education or higher. This falls between
Nickels’s (2008) study of OCAq visitors in summer 2007 (61%) and Hodak’s (2008) study of OCAq’s visitors in winter/spring 2008 (89%).

6.3 Visits to the Aquarium

About 14% (n = 28) of all visitors said they were Aquarium members. Aquarium members pay an annual membership fee for Aquarium admission, so spending extra money on an encounter may have seemed like the only price they paid that day. Additionally, members get a discounted price on the encounter, so that may have encouraged participation.

A small number of visitors were repeating encounter participation, regardless of Aquarium membership and the incentive of a discount on the program. Some repeat encounter participants that were not Aquarium members returned to participate in the encounter programs to share the experience with someone else (n = 7). Other repeat encounter participants (n = 12) answered “seemed interesting/fun,” “birthday/wedding,” or mentioned love of the encounter animal. One participant specifically explained, “We did it last year and wanted to do it again.” This information was provided by the participants in their motivation for attending the encounter responses.

6.4 Finding “Octopus Encounters” or “Sea Lion/Seal Kisses”

Similar to Monterey Bay Aquarium’s study (Rigney, 2013), the majority of visitors found the animal encounter programs through the OCAq website. This was consistent with participants of both “Octopus Encounters” and “Sea Lion/Seal Kisses,” regardless of season. This might be due to increased Internet access and use (Perrin & Duggan, 2015). Interestingly, however, no visitors used social media as a means of finding the encounter programs. The OCAq had social media presence through Facebook, Twitter, and Instagram, but the OCAq may not have been actively using social media to
market encounter programs at the time of the study. Visitors might not use social media, as it may be more popular in certain age groups over others (Perrin, 2015). Only 15% of adult encounter participants were 18-25 years of age. Additionally, because most participants visited the OCAq for the first time, it is not likely they use social media before a visit. It is more likely that visitors seek out OCAq social media platforms after a visit to keep up with Aquarium news or to share their experiences (e.g. using a “hashtag” to accompany an image of their experience on social media platforms like Twitter or Instagram).

6.5 Attending with children

One interesting observation of animal encounter participants was that most of the visitors attended without children, which is different from general aquarium visitors that usually bring children (Falk & Heimlich, 2009). This could be due to several factors. First, the fee to participate may deter parents to purchase an encounter ticket for their child. Additionally, because there is no price difference for adult and child, this would prevent parents with multiple children from participating. Many parents also have small children, and the OCAq’s policy is that only children 8 years or older are allowed to participate for safety reasons.

A parent could also decide that interacting with a large marine mammal or invertebrate with many arms could be dangerous or not appropriate for their child’s learning level. For example, Rigney (2013) found that more adult groups attended “Behind the Scenes” and “Jellies Tour” at the Monterey Bay Aquarium. On the other hand, 100% of the adults that participated in “Underwater Explorers” visited with children since the program is catered to children (Rigney, 2013). At the Oregon Coast Aquarium, more children participated in animal encounter programs in the summer than
in the fall, probably as a result of a higher volume of children during the summer vacation season.

6.6 Paying and non-paying adults

The distinction between paying and non-paying adults was added as a survey item in the fall. Although the responses did not significantly differ, and the sample size was low (n= 24), results show that visitors that had someone else pay for their encounter had higher mean responses to visitor perception questions post-encounter. Higher mean responses are interpreted as more concern for the animal and its conservation and management. The visitors that did not pay for their encounter may have had higher mean responses because several of those visitors (n= 7) received the encounter as a gift, whereas in the group that paid for themselves, no one was the recipient of the encounter as a gift. This group also seemed to be more interested in the experience itself rather than express interest in the actual animal (n= 10). The paying group also had a few more visitor motivation responses for being at the encounter for someone else (n= 7) than those visitors that did not pay and were there for someone else (n= 2). A limitation for higher means overall in the non-paying group could be the smaller sample size (n= 21 compared to n= 35 for the paying group).

This study did not investigate price effects on visitors beyond general satisfaction questions, but it would be interesting to see if this pattern occurs on a longer time scale with a larger sample. I also compared identity-related visitor motivations between the paying and non-paying groups, but the results were inconclusive and could also benefit from a larger sample size.
6.7 Motivations

At the Oregon Coast Aquarium, I found that visitors had a personal interest in animals in general or marine animals in particular, or someone else in their group had that interest. Visitors were also participating in the encounters because it was a unique opportunity to be up close to an animal, and many also attended the encounter programs for a celebration.

A recent study at the Monterey Bay Aquarium (MBAq) used a pre-determined list of motivations and had visitors fill out a card during check-in for their program. They first conducted a qualitative study to determine these categories, and then they performed the study for a year. Results are reported in Table 13.

Table 13. Motivating factors for Monterey Bay Aquarium participants in "Aquarium Adventures" (Rigney, 2013)

<table>
<thead>
<tr>
<th>Motivating Factor</th>
<th>(n= 6093)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience something different</td>
<td>71(^1)</td>
</tr>
<tr>
<td>Learn new information</td>
<td>53</td>
</tr>
<tr>
<td>Share an interest or hobby with friends and family</td>
<td>28</td>
</tr>
<tr>
<td>Celebrate a special occasion</td>
<td>15</td>
</tr>
<tr>
<td>Participated previously in an Aquarium Adventure</td>
<td>10</td>
</tr>
</tbody>
</table>

\(^1\)Cell entries are percentages as reported by Rigney (2013)

Interestingly, they also had “celebrate a special occasion” as a motivation for participating in the program. One issue, however, is the broad statement of “experience something different.” This motivation could be expanded or clarified for more depth. “Sharing an interest or hobby with friends and family” is also vague because it is not clear who has the interest or hobby. I should also note that MBAq visitors were able to choose multiple motivations, so primary motivations were hard to determine.
Using an open comment text area for visitors to report their motivation was the ideal method for this study. Although the MBAq’s method may have worked for their institution, their motivation categories may not have been generalizable because of the size differences of the institution and potentially differing demographics compared to the OCAq. The types of encounter programs offered also vary between the two aquariums. Starting with visitor comment responses would help inform future surveys for the OCAq.

6.8 Identity-related motivations

Participants of encounter programs had various motivations for visiting the Aquarium, as described above. When using the identity-related motivations model, responses about “vacation” were not useful because being on vacation is not an identity. If visitors described interests driving the vacation activities, then the responses may have information useful to identity-related motivations. Identity-related motivations had to look beyond the overall trip and focus on aquarium-specific motivations.

A typical experience seeker response would discuss wanting the experience of visiting the Aquarium, or they heard it was a popular place to visit. Experience seekers are generally tourists that come to the Aquarium because it’s the thing to do in town. This identity could carry over to motivations for participating in the encounter, where responses reflected motivations for the overall Aquarium visit. These experience seekers are likely to want to get the most out of the Aquarium visit, even including animal encounter programs. As tourists, they may not come back to this Aquarium in the near future.

Explorers dominated identity-related motivations for both visits to the Aquarium and participation in the encounter. These visitors expressed a love for OCAq or aquariums in general. Explorers also mentioned that the Aquarium visit was specifically
to participate in the encounter. Participating in the encounter for explorers satisfied some curiosity and love of learning about an interesting animal. Animal encounter programs are ideal for explorers for that very reason, as these programs provide a unique educational experience.

Facilitators may be the easiest identity-related motivation to describe since facilitators’ primary interests deal with the experience of a loved one. Facilitators are socially driven and are never alone. Some facilitators I saw during this study were parents, grandparents, siblings, significant others, and close friends. On more than one occasion, facilitators incorporated the animal encounter program as a surprise or a gift for someone. More facilitators were at the OCAq during the summer than during the fall. This could be connected to a higher number of children attending in the summer. Facilitators also accompanied adult explorers and professional/hobbyists. Some responses that represented this included “my friend loves seals” or “my wife has a photo hobby and wanted to come.”

Professionals/hobbyists are likely interested in premium programs (Falk, 2009). During this study, I did not identify many professionals/hobbyists. Visitors that stated a long-time interest in a particular animal (e.g. “Octopuses are my favorite animal and I even have one tattooed on my arm!”) were categorized as professionals/hobbyists. Other hobbyists included photographers. These respondents explicitly stated photography was their hobby in their motivation responses. Generally, professionals/hobbyists make up a small percentage of aquarium visitors (Falk, 2009), so it was not surprising I also found a smaller number. However, with the idea that they were interested in premium programs
like encounters and behind the scenes tours, I did expect more professionals/hobbyists attending the encounter.

*Rechargers* are another small group of visitors. However, in this study I did not find any *rechargers*. While aquariums often provide the space for relaxing, reverence, and awe (Falk, 2009; Rowe & Nickels, 2011), I found that animal encounter participants did not consider relaxing as their primary motivation for being at the Aquarium or participating in the encounter that day. Animal encounter programs may also not appeal to *rechargers* for various reasons. First, meeting an animal and having a close encounter is an active and participatory activity. *Rechargers* much prefer passive activities such as casually browsing exhibits or sitting down and observing the scenery. Watching a pinniped swim through the water or watching an octopus change colors may be relaxing, but only in an observation setting. Unless interacting with animals is relaxing for some people, this study did not capture this particular group of *rechargers*. *Rechargers* also value the aesthetic of an aquarium’s setting, so they may not find an encounter behind the scenes pleasing, where artwork and aesthetic appeal are lacking.

I created two extra categories for coding identity-related motivations: *dual motivations* and *too vague*. *Dual motivations* simply imply that a visitor’s response had characteristics of two different identity-related motivations. For example, a visitor response like “Love the undersea world and want to support by treating my daughter to a sea lion kiss to celebrate her divorce” would be categorized as both *explorer* and *facilitator*. Although there were a small number of dual motivations, it is important to note that more than one motivation is possible. Responses were also categorized as *too vague*, and this occurred when visitors wrote down one word, such as “vacation” or
“birthday” and gave no further details to adequately characterize the responses into identity-related motivations. Roughly 32% of the responses coded for identity-related motivations were “too vague,” and this could be an artifact of the limitation of a short questionnaire, where visitors kept responses minimal and did not have time for detailed responses.

6.9 Motivation card-sort tool

The original card-sort tool incorporated images from various informal learning institutions (Falk, 2008a; Falk, 2008b). Facility-specific card-sort tools had never been done before, so I decided to modify it to reflect the visitor’s experience at the Oregon Coast Aquarium. Finding appropriate images to match the 20 statements representing the identity-related motivations was challenging. Each picture was carefully considered and went through several drafts before a finalized version was agreed upon.

For the most part, I believe the tool is useful with place-specific pictures accompanying the text. However, validity is an issue with some of the images. When many visitors chose the set of recharger images as their primary motivation, I went back to the tool and examined the pictures. I think the recharger pictures reflect the institution well, but because two of the pictures highlight the same exhibit twice and is, in my opinion, one of the more popular exhibits, participants gravitated toward that set of pictures. I also compared their text responses, none of which reflected typical recharger characteristics. Therefore, I concluded that this set of pictures for rechargers was reliable, but not valid. If this tool is used again, the pictures need to be changed and go through another evaluation to test for reliability and validity. With repeated validity assessments, the use of place-specific images for the card-sort tool could contribute to the literature.
Using the tool in an online survey was very simple and straightforward. The only issue was that some participants seemed disinclined to answer the first time when the set of pictures appeared, but answered when asked for a second choice to choose a primary motivation for attending. Participants then may have either felt obligated to choose a set of images, or participants may not have realized selecting a set of images would mark their choice. Unfortunately, this is hard to verify. Only a few people chose not to answer.

One major limitation of the online method is that the different motivations are grouped for the respondent, and strength of motivation dominance cannot be determined. Respondents were only given two chances to pick motivations and there were no scaled answers to more accurately determine primary motivations.

6.10 Changing identities

Rowe and Nickels (2011) found that motivations for visiting an aquarium change seasonally, with less explorers and more professionals/hobbyists in the summer and more explorers in the winter. Earlier I stated that explorers dominated the identity-related motivations for the participants I surveyed. While my methods did not utilize the same motivation tool as Rowe and Nickels (2011), I thought it interesting that- setting explorers aside- I also had more professionals/hobbyists in the summer than in the fall. I speculate this is because of the higher volume of visitors in the summer, at least for my study. Professionals/hobbyists already make up a small percentage of visitors overall, so having more visitors may increase the chance a professional/hobbyist is part of the study sample.

Identity-related motivations are situational. Described as little “i” identities, they change by context (Falk, 2009). Capturing someone’s identity-related motivation at one
moment in time could be useful, especially when understanding motivations for actions like participating in an animal encounter program.

However, identity-related motivations do not represent the complexity of a person’s identity. For example, a trip to the Getty Museum for my roommate’s birthday may mean that my primary motivation would be facilitator. However, during the trip my identity-related motivations change. As I walk through the French and Italian paintings, I may consider myself a professional/hobbyist while I examine familiar paintings and mentally analyze the media used or compare the art to those I saw in Rome, Italy. When I walk to the gardens, however, I transform into a recharger. On a broader scale, my roommate may be celebrating her birthday, but she knew her invited friends would enjoy the museum as explorers. Does this, then, make her a facilitator knowing this trip would satisfy our curiosity to learn? Finally, many of us had never been to the Getty Museum before, but we were willing to go because it was a once in a lifetime experience we might not do again. Then, are we experience seekers?

For this study with Oregon Coast Aquarium animal encounter participants, the complexities came from mixed responses, particularly when post-encounter responses did not match their pre-encounter response. For example, a participant said he was on vacation to Oregon and heard great things about the Aquarium pre-encounter (experience seeker), but then he specifically and only mentioned an interest in the octopus post-encounter (explorer). Without more detail or a follow-up conversation with this participant, his true motivation(s) for participating in the encounter program are inconclusive. Using identity-related motivations this way may not be the most accurate method to describe a visitor’s aquarium experience as a whole, but it might be useful in
some aspects, especially in designing specific exhibits and programs with the right audience in mind, like animal encounter participants.

6.11 Visitor Perceptions of Program Animals

Perceptions of animals in current literature are widely studied in mammals, such as non-human primates (Leighty et al., 2015), marine mammals (McCloskey, 1986), bats (Hoffmaster, Vonk, & Mies, 2016) and “cute” animals (Nekaris, Campbell, Coggins, Rode, & Nijman, 2013). For instance, people negatively perceive bats as blood-sucking animals that carry disease thanks to popular culture associations with vampires (Hoffmaster et al., 2016). On the other hand, an Internet image search of the slow loris could elicit responses leading to positive perceptions (Nekaris et al., 2013).

At the Oregon Coast Aquarium, what are the visitor perceptions of the giant Pacific octopus, California sea lion, or harbor seal? The purpose of understanding visitor perceptions is to get a sense of what people feel towards the animal, and ultimately, what people might feel towards its conservation.

The term “conservation” implies many different things. Nickels (2008), for example, found using the word “conservation” while surveying turned off visitors for participating in her study. She claimed, “‘conservation’ is loaded with feelings, emotions, obligations and polarity” (Nickels, 2008, p. 59). In my set of perception questions, I replaced the word “conservation” to “health and status,” implying concern for animal welfare in the wild and in the Aquarium. Pre-encounter questionnaire results show visitors were more worried about the animal in the wild than in the Aquarium, which could suggest visitors’ trust in the Aquarium’s capability to care for the animals at the facility. However, using the words “health” and “status” may affect the responses, especially when considering individual animals in the Aquarium and their wild
counterparts. Visitors might think about a population’s “health and status” in the wild, whereas at the Aquarium, they interacted with one representative animal. Furthermore, the word “health” might be relevant to an individual’s health, whereas “status” may describe a group’s standing in a natural issue (e.g. one tagged tiger shark’s health compared to the status of sharks in the Bahamas). Individual and population distinctions were not clear for these questionnaire items and could be improved for future surveys.

Overall, perceptions did not change seasonally, with the exception of one variable for “Octopus Encounter” participants in the fall, who were “not at all” worried about the program animals in the Aquarium compared summer participants worrying “a little.” Because the responses for the other perception items were almost the same for fall and summer, it is unclear why this particular question is different for “Octopus Encounter” participants.

I was curious to explore the extent of visitors’ prior perceptions of program animals by asking how much they thought about or looked for information on the program animal. Typically, visitors thought about the program animal more than looking up information. I asked about the “management of the program animal,” which implies someone else taking action to care for the animal. The term “management” in this question was left vague to see how visitors would respond. Management of animals could refer to Oregon Coast Aquarium management through animal husbandry staff, or management of wild animals through other organizations like the U.S. Fish and Wildlife Services or National Oceanic and Atmospheric Administration (NOAA) Fisheries. Regardless of who manages the animals, visitors felt management of the animals was “somewhat” important to them personally.
One question purposefully used the word “conserving” to see if it was important to the visitor, and interestingly this question had the highest mean response. This shows the potential influence of the word “conserve” in a questionnaire item. The term “conservation” is very broad with multiple meanings to different people. Visitors felt conservation of the program animal was important, yet they worried less about the “health and status” of the animal, and they spend little time thinking about the animal or looking up information on the animal. It is also possible that visitors think “conservation” of all animals is important, but it is hard to tell. Are visitors leaving it up to Aquarium staff or other professionals to handle conservation efforts?

A recent report by the Association of Zoos and Aquariums (AZA) Conservation Education Committee (CEC) pointed out a concern that conservation messaging in programs can lead to visitors feeling like they did not have to actively engage in conservation efforts, and that they felt scientists and other professionals were doing the job (Anderson & Bradshaw, 2015). If Oregon Coast Aquarium visitors seem to feel similarly, then one suggestion for program development is to incorporate messaging that makes the visitor feel involved in caring for the animals. The OCAq currently thanks encounter program participants for coming, explaining that their admission fees for their visit goes back to Aquarium funds to feed the animals they just saw. However, some type of ask throughout the program might work.

Post-encounter questionnaire responses yielded similar visitor perception results to the pre-encounter questionnaire, where the highest response was in the question with the word “conserving.” Although not statistically significant, visitor responses from paired t-tests for worry about health and status of animal in the Aquarium decreased,
which is good for the Aquarium. Similarly, visitors also worried less about the animal in
the wild. Could the Aquarium be responsible for changing visitor perceptions of animal
welfare in the Aquarium and wild? Do visitors think animals are better off under human
care where they are protected from predators, get fed each day, and are given medical
care? Did the Aquarium relieve concern for the animals in the wild? While these
questions where not answered in the scope of this study, it would be interesting to follow
up with interviews and ask why some perceptions changed.

Although these questions attempted to get a sense of how visitors perceived
current conservation of the program animals without necessarily being explicit about the
definition, a better understanding of visitor perceptions would come from using the same
phrase for “conservation” for all of the question items. For example, I could have used
“health and status” for each perception item had I not been limited by length and time of
a short, on-site paper questionnaire. The questionnaire was designed specifically for the
encounter with a limited timeframe in mind, which influenced the survey design. Short
questions did not leave room for longer questions or give participants enough time to
think through and give a detailed response.

6.12 Shifting to conservation messaging

In 2015, the Oregon Coast Aquarium’s “Octopus Encounter” attracted 628
visitors while “Sea Lion/Seal Kisses” had 708 visitors. During summer and fall seasons,
the participants were satisfied with the program content and indicated they would return
for another tour or encounter. With the apparent success of these programs, the OCAq is
in a good place to begin changing parts of the content to have a conservation theme. The
purpose of documenting visitor perceptions of the program animals was to see if a
conservation message was appropriate for the audience. “Octopus Encounters” visitors
generally worried more about their program animal than “Sea Lion/Seal Kisses” visitors did (had higher mean responses overall). Post-encounter, “Octopus Encounter” visitors’ worry about the animal decreased. “Sea Lion/Seal Kisses” participants’ worry about the health and status of the pinnipeds in the Aquarium did not change. Only “Octopus Encounters” participants looked for more information after the visit. Interestingly, how much the visitor thought about the program animal and the importance of conserving the animal decreased for both encounters.

Nickels (2008) suggested that immediately after visiting, Oregon Coast Aquarium visitors’ attitudes toward conservation issues increases. While my study did not measure attitude toward conservation specifically, my post-encounter results suggest animal encounter program participants at OCAq had little to no change in their perceptions after two weeks. First, attitude and perception are not the same, but in this context, I believe the end goals of the two studies were looking for any changes in visitors. Nickels (2008) commented that using an immediate post-encounter questionnaire might not have been the ideal measure of change, especially since she would not know if visitor attitudes persisted in the future. Using a two-week post-encounter questionnaire may have yielded different results for her study.

Secondly, Nickels (2008) looked at attitudes for conservation in general, while I focused on particular animals. Nickels’ (2008) found that OCAq visitors did not think about conservation or learning about conservation, potentially due to her evaluation instrument not being specific enough or due to the lack of conservation messages throughout the Aquarium at the time. This study used questions geared towards program animals. A good place to begin changing the script to incorporate conservation messaging
is through the animal encounter programs. A smaller, more targeted audience for conservation messaging may be more successful than a larger, general audience (Braus, 2009). Based on visitor motivations, and more specifically visitor identity-related motivations, the explorer and professional/hobbyist audience would be receptive to changes in program messaging. This audience would be most interested in special programs to satisfy a curiosity or need to learn (Falk, 2009).

The OCAq’s education goal is to shift its programs towards more conservation messaging, but in an inclusive and inherent manner. The program animals at the OCAq are not listed under the US Endangered Species Act or IUCN Red List, whereas at aquariums that do have these threatened animals, the animal’s sustainability would be the programming focus. Thus, the OCAq has the opportunity to incorporate messaging that helps visitors foster a positive connection with animals without eliciting negative feelings (e.g. despair from knowing the animal is threatened). The conservation messaging could be geared towards developing appreciation for the animals and the Aquarium’s role in animal welfare.

Pinnipeds are popular marine mammals along the Oregon coast, with a healthy population of wild male California sea lions residing in the Yaquina Bay across from the OCAq. The content of the pinniped encounter currently includes how staff care for the animals (i.e. veterinary care, no predators, food) compared to issues a wild population may naturally encounter. Pinnipeds could also be good ambassadors for anthropogenic issues like marine debris. Octopuses are known for their intelligence, but there are rare opportunities for educational encounters with octopuses. The current messaging is mostly about an octopus’s natural history, which includes an octopus’s short lifespan and
reproductive cycle. Specifically for the giant Pacific octopus, there is no real conservation concern aside from instances of commercial and recreational harvest.

Challenges to revamping program messaging are dependent on the animal species, but my results show there is not much difference between how visitors perceive the animals from the two programs. Program content could mention other similarities and differences between the local population and the animals in the Aquarium, but the challenge is finding information that resonates with visitors without risking negative reception.

6.13 Limitations and future research

Limitations to this study included survey design for a time-sensitive program. Animal encounter program participants were asked to be present at the encounter meeting area five minutes prior to the scheduled program time. This timeframe was the ideal opportunity to recruit visitors to participate in the study. The encounter programs had to start on time due to Aquarium staff schedules, and for the visitors to have the most of their encounter experience without being rushed. I also could not recruit visitors after this five-minute threshold, which affected my attempt at a census of all adult participants,

The on-site questionnaire I administered yielded high response rates. The questionnaire items were carefully crafted to attempt answering all research questions, but some wording issues (i.e. “conservation,” “management”) may not have accurately represented the questions and could have affected visitor responses.

The modified identity-related motivations card-sort tool with Oregon Coast Aquarium-specific images was an interesting addition to the post-encounter questionnaire. Although most respondents seemed to have no issues using the tool by selecting a set of images that best represented their motivation for going to the Aquarium,
several respondents did not choose a set of images (they chose the set of words instead) or did not answer at all, and it is inconclusive as to why. Unlike other identity-related motivations instruments, I did not measure strength of motivations, which would be insightful since these identities are situated and change by setting. In general, categorizing visitors using the identity-related motivations is audience segmentation, which could be a limitation because each visitor comes with different experiences and expectations.

For future research, I would clarify wording of the perception items, including mentioning individual animals or an animal population. Ideally, given the time and resources, interviews would provide more insight on a visitor’s motivations and perceptions. It would be interesting to investigate big “I” identities and potential roles in animal encounter participation or influences on post-encounter responses, if any. Expanding the sample size would provide more robust data, and I would also be able to compare all seasons. Another way of expanding the sample size would be to analyze fee-based programs at multiple aquariums. I would also explore the “fee” part of “fee-based programs.” Although I did not focus on price effects, it would be interesting to know more about differences in price and perception of program value, particularly comparing encounter programs at other institutions.

Finally, after investigating the personal context of a visitor’s museum (or aquarium) experience, the next step would look into the physical and socio-cultural contexts of Falk’s (2009) museum visitor experience model. Through these contexts, the incorporation of conservation messaging in animal encounter programs could be framed
by exploring what the Aquarium (physical) could offer, and how visitors react to new messaging personally and with others (socio-cultural).
7. Conclusion

Fee-based programs provide visitors a unique opportunity to interact with animals and give a chance for visitors to develop a deeper appreciation for the animal and its care. This study set out to understand what motivates Oregon Coast Aquarium visitors to participate in fee-based animal encounter programs, as well as begin to understand how visitors perceive the program animals. Visitors have a general interest in either the animal or the experience of doing something different during their visit, and perception of animals are not much different between two types of program animals, like pinnipeds and octopuses.

Motivations can help program developers better understand the audience and improve program content accordingly, as does understanding visitor perceptions of program animals. Understanding both motivations and perceptions is one part of program evaluation. By getting an idea of the audience, program developers can identify goals and desired outcomes. For programs looking to shift to conservation messaging, such as the fee-based programs at the Oregon Coast Aquarium, knowing the program audience is important because catering a conservation message to the wrong audience may not be effective (Jacobson, 2009).

Implementing conservation messaging takes careful consideration of the potential visitor outcomes. Messages must inspire appreciation and action without eliciting negative reactions to the issue. The topical content of the messaging depends on each institution’s goals, and it will take inter-departmental teamwork and collaboration to achieve the desired conservation goals. While developing education programs to include
conservation messaging is a work in progress at informal learning institutions worldwide, program developers are continually exploring ways to evaluate and make improvements.

Using Falk’s (2009) identity-related motivations to describe visitor motivations for going to the Aquarium, I was able to characterize the visitors that attended fee-based programs and found that most participants were explorers or facilitators accompanying explorers. With many of the program participants categorized as explorers who want to learn and are curious about animals at the Aquarium, and with visitors feeling it is very important to conserve the program animals, the OCAq animal encounter program participants are the ideal audience for conservation messaging.
References


Appendices
Appendix A: Recruitment verbal script

Recruitment verbal script

My name is Sandra Huynh and I am a graduate student in the Marine Resource Management program at OSU. I am working on a research project and would appreciate your help. I would like to help the Oregon Coast Aquarium and Oregon State University to better understand visitor motivations for participating in fee-based programs, as well as visitor perceptions of the animals from the programs outside of the aquarium. I am asking participants in the Sea Lion/Seal Kisses and Octopus Encounters programs if they would be willing to complete a brief survey. The survey will take approximately 5 minutes to complete and will be completed at this time. Your participation will help us improve the relevancy and quality of the fee-based programs at the Oregon Coast Aquarium. Your participation is completely voluntary and confidential. We hope you can take this time to help us better the experience of our visitors.

Are you willing to participate in this study by completing this survey?

(If yes, student gives the participant a copy of the survey and the explanation of research and reads the following: Thank you. At the end of the survey you will see a space where we ask for your email address so that we may send you a follow-up survey in 2 weeks. This section is optional. If you agree to participate in this follow-up survey by providing your email address, we would like to compensate you for your time. When you return your completed survey to me (the researcher), please let me know you have agreed to participate in the follow-up survey and you will receive a coupon for a free large beverage at the Ferry Slip Café as a thank you for helping us with this study. If you have questions about how we will use your email address, please feel free to ask at any time.

If no, the student thanks for the person for their time).

Study title: Understanding visitor motivations to attend fee-based animal encounter programs
PI: Christine Olsen

Sandra Huynh
Graduate Student Researcher
Marine Resource Management
Oregon State University
huynhsa@onid.oregonstate.edu
(xxx) xxx-xxxx
Appendix B: Pre-encounter questionnaire and codebook

Thank you for participating in this research survey! Please note that there are no wrong answers, and you can stop participating at any time.

Please check or circle your answer.

1. Is this your first Oregon Coast Aquarium Special Tour and Encounter?
   - No 0
   - Yes 1

2. Will you participate in “Sea Lion/Seal Kisses” or “Octopus Encounters” today?
   - Sea Lion/Seal Kisses 0
   - Octopus Encounters 1
   - Both 2

3. How did you hear about the program?
   - Visit to the aquarium 0
   - Facebook/Twitter (or other social media) 3
   - Aquarium website 1
   - Recommendation (word of mouth) 4
   - Repeat customer 2
   - Other (Please specify) 5

4. Who paid for your participation in the program?
   - I paid for myself 0
   - Someone else paid for me 1

5. How many children (under 18) are accompanying you on this Special Tour and Encounter?
   - 0
   - 1
   - 2
   - 3
   - 4+

6. What motivated you to attend this Special Tour and Encounter?

7. What motivated you to come to the aquarium today?

Please indicate your responses by circling the appropriate number.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>A little</th>
<th>Somewhat</th>
<th>Very</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. How worried are you about the overall health and status of the sea lions/seals or octopuses in the aquarium?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. How worried are you about the overall health and status of the sea lions/seals or octopuses in the wild?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. How important is the issue of conserving sea lions/seals or octopuses to you personally?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

9-Missing Please continue on the back
Please indicate your responses by circling the appropriate number.

11. How much have you thought about the health and status of sea lions/seals or octopuses before today?
   - Not at all
   - A little
   - Somewhat
   - A lot

12. How much have you looked for information regarding the health and status of sea lions/seals or octopuses before today?
   - Not at all
   - A little
   - Somewhat
   - A lot

13. How much do you think the management of sea lions/seals or octopuses will affect you personally?
   - Not at all
   - A little
   - Somewhat
   - A lot

9- Missing

Please provide us with some information about you. While these responses will not be linked to you personally, it does help us understand the responses we get from everyone who takes the survey.

14. Gender
   - Male
   - Female
   - Other

15. Zip code

16. Age
   - 0-19
   - 20-24
   - 25-29
   - 30-34
   - 35-39
   - 40-44
   - 45-49
   - 50-54
   - 55-59
   - 60-64
   - 65-69
   - 70-74
   - 75+

17. Your educational background
   - Some high school
   - High school
   - Technical
   - Some college
   - College degree
   - Graduate work

18. How many times in the past 12 months have you visited the Oregon Coast Aquarium?
   - 0-1
   - 2-3
   - 4-5
   - 6-7
   - 8-9
   - 10 or more

19. Are you a member of the Oregon Coast Aquarium?
   - No
   - Yes

Are you willing to take another follow-up survey in approximately 2 weeks? If so, please provide your email address below. As compensation for your time completing this second survey, you will receive a coupon for a free large beverage at the Ferry Slip Café. Please let the researcher know you have agreed to participate in this second study so that she can give you your coupon. Your information will remain completely confidential and will only be used to send you a brief questionnaire in two weeks. Once you have completed the follow-up questionnaire, your email address will be removed from the record of your responses.

Email address: _____________________________________________________________

Thank you very much for completing this survey. We know your time is valuable.
Appendix C: Post-encounter questionnaire

Dear Participant,

You are being invited to take part in a brief survey. The purpose of this project is to understand visitor motivations for participating in fee-based educational programs and to understand visitor perceptions of the animals from the program both within and beyond the walls of the aquarium.

Participation is voluntary. You may stop answering questions at any time, and you may skip any questions you do not want to answer. There are no known risks and no specific benefits for you associated with participating in this study. There is a small risk associated with completing an online survey (described below). Your help is extremely valued because you will be helping us to create better experiences for future visitors. The survey should take approximately 15 minutes.

We are selecting adults over the age of 18 to complete this survey. Only the people carrying out this study will have access to this data. Upon completion of this survey, your email address will be removed from the record of your responses. General findings will be shared with staff at the Oregon Coast Aquarium. The findings will also be included in a graduate thesis project and may be published in an academic journal.

If you have any questions about our work, please contact Sandra Huynh using the information below. If you have questions about your rights as a participant, please contact Oregon State University Institutional Review Board (IRB) at (541) 737-8008 or by email at IRB@oregonstate.edu.

By clicking “Next” you are agreeing to participate in this research study.

Thank you,

Sandra Huynh
Graduate Student Researcher
Oregon State University
huynhsa@onid.oregonstate.edu
Study title: Understanding visitor motivations to attend fee-based animal encounter programs
PI: Christine Olsen, PhD

Risks associated with online surveys: There is a possibility of a breach of confidentiality, or your data may be intercepted, corrupted, lost, or arrive late or incomplete. OSU and the survey hosting company (Qualtrics) do everything possible to ensure these things do not happen and that your data is delivered to the research team safely for the benefit of future visitors.

Did you participate in "Sea Lion/Seal Kisses" or "Octopus Encounters" during your visit?
Sea Lion/Seal Kisses
Octopus Encounters

How did you hear about $(q://QID2/ChoiceGroup/SelectedChoices)$?
Visit to the Aquarium
Aquarium website
Repeat customer
Facebook/Twitter (other social media)
Recommendation (word of mouth)

Other (please specify)

How many children (under 18) accompanied you?
0
1
2
3
4+
Think about your experience with $(q://QID2/ChoiceGroup/SelectedChoices)$. What motivated you to attend this program?

What motivated you to visit the aquarium in general on the day of your encounter?

The next set of questions will help give more insight on visitor motivations.

Please look through each of the five sets of images and select one set of images that best represents your reason(s) for coming to the aquarium.
Set 2
The aquarium is more inspiring than going to the mall or a movie.
These are the kinds of places people like me go to.
My family/friends learn things here they can’t in other places.
My wife/partner/husband made me come.

Set 3
I came because it satisfies my curiosity.
I am not an expert, but I like to learn about things.
I like to support the learning of my children/significant other.
This is a good way to share quality time with family/friends.
I was hoping to find out more about something in particular.

It relates to the kind of work I do and I find it useful.

This is my hobby and I come here all the time.

I’m quite knowledgeable but like to keep up with what’s new.

I feel at peace in these surroundings.

I discover things about myself when I come here.

I find going helps me get away from the normal rush of life.

I don’t get to be in spaces like this every day.
If you had to choose another set of images, which would you select?

Set 1
Set 2
Set 3
Set 4
Set 5

I would not choose another set. My first choice was the main reason I came to the aquarium.

If you feel like none of these statements best describe your motivations for attending the Special Tour and Encounter OR the Oregon Coast Aquarium in general, please add any comments below.

The next section asks questions about your experience with the Special Tour and Encounter.
Since your Special Tour and Encounter:

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>A little</th>
<th>Somewhat</th>
<th>Very</th>
</tr>
</thead>
<tbody>
<tr>
<td>how worried are you about the overall health and status of sea lions/seals or octopuses in the aquarium?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>how worried are you about the overall health and status of sea lions/seals or octopuses in the wild?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>how important is the issue of conserving sea lions/seals or octopuses to you personally?</td>
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<td></td>
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</table>

Since your Special Tour and Encounter:

<table>
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<td>how much had you thought about the health and status of sea lions/seals or octopuses?</td>
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<td></td>
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<td>how much have you looked for information regarding the health and status of sea lions/seals or octopuses?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>how much do you think the management of sea lions/seals or octopuses will affect you personally?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Do you feel your perception of sea lions/seals or octopuses has changed in a **positive** way?

Yes

No

Do you feel your perception of sea lions/seals or octopuses has changed in a **negative** way?

Yes

No

Please share something you learned during your experience.

__________________________

How satisfied were you with the **price** of your Special Tour and Encounter?

Very Dissatisfied

Dissatisfied

Neutral

Satisfied

Very Satisfied

How satisfied were you with the **content** of your Special Tour and Encounter?

Very Dissatisfied

Dissatisfied

Neutral

Satisfied

Very Satisfied
Would you recommend this program to a friend?

No
Yes

Please explain why you would or would not recommend this program to a friend.


Would you participate in any of these Special Tours and Encounters next time? Check all that apply.

Sea Lion/Seal Kisses
Dive the Aquarium
Behind the Scenes Tours
Octopus Encounters
I would not participate in another Special Tours and Encounters program

Are there any additional comments you’d like to share about your experience?


Please provide us with some information about you. While these responses will not be linked to you personally, it does help us understand the responses we get from everyone who takes the survey.
Gender
Male
Female
Other

Zip Code

Age
18-25
26-35
36-55
56-74
75+

Your educational background
Some high school
High school
Technical
Some college
College degree
Graduate work
How many times in the past 12 months have you visited the Oregon Coast Aquarium?
0-1
2-3
4-5
6+

Are you a member of the Oregon Coast Aquarium?
No
Yes

Thank you for your participation in this survey!

Sandra Huynh
Graduate Student Researcher
Oregon State University
huynhsa@onid.oregonstate.edu
Appendix D: Modified card-sort tool

**Experience Seeker**

- I was told that it is one of the best places to visit around here.
- I wanted to be able to say that I'd been there.
- This place is a landmark in this community.
- I wanted to have fun.

**Explorer**

- I came because it satisfies my curiosity.
- I am not an expert, but I like to learn about things.
- The aquarium is more inspiring than going to the mall or a movie.
- These are the kinds of places people like me go to.
**Facilitator**

- My family/friends learn things here they can't in other places.
- I like to support the learning of my children/significant other.
- This is a good way to share quality time with family/friends.

**Professional/Hobbyist**

- I was hoping to find out more about something in particular.
- It relates to the kind of work I do and I find it useful.
- This is my hobby and I come here all the time.
- I'm quite knowledgeable but like to keep up with what's new.
Recharger

I feel at peace in these surroundings.

I discover things about myself when I come here.

I find going helps me get away from normal rush of life.

I don’t get to be in spaces like this every day.