Assessing Visitors’ Satisfaction at Parks Canada Sites

by

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AUTHOR’S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.
ABSTRACT

This study addresses the measurement of satisfaction. In doing so, it proposes a hypothetical conceptual framework for examining visitors’ satisfaction with their experiences in nature-based settings. Visitors’ overall satisfaction with their experiences was examined in terms of its relationships to visitors’ satisfaction with various site attributes, to visitors’ perceived importance of interpretive programs to learning, and how it is affected by visitors’ age, gender (male or female) and visitation pattern. The responses of 1309 Visitor Information Program (VIP) surveys returned by visitors to two national sites in Nova Scotia (Port Royal National Historic Site and Kejimkujik National Park and National Historic Site) provided the data for this study’s investigation. Secondary data analyses revealed that visitors’ satisfaction with the site attributes has the strongest effect on their overall satisfaction with their experiences. While visitors’ perceived importance to learning was also found to be positively correlated to overall experience satisfaction, when other variable are taken into consideration, its effect on overall satisfaction was found not to be statistically significant. Amongst these variables, gender was found to explain a significant amount of variance in visitors’ overall satisfaction with experiences in nature-based settings. Moreover, visitors of different age groups differ significantly in their perceptions of importance of interpretation to learning, and in their satisfaction levels. Although the findings show high levels of satisfaction at both sites, these are taken with caution. A discussion of the issues related to the measurement of satisfaction is provided, along with recommendations for a more discriminant, valid and reliable satisfaction measurement instrument.
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CHAPTER ONE: INTRODUCTION

Satisfaction is one of the most researched topics in tourism because of the understanding that visitors’ satisfaction is a vital element in the survival of any tourism attraction (Gursoy et al, 2003; 2007; Neal & Gursoy, 2008), playing a significant role in tourists’ decisions to recommend a place to others and revisit the sites (Kozak & Rimmington, 2000). There is the understanding that if consumers are not happy with the performance of one or more components of the destination, it is likely that their overall satisfaction will be affected (Pizam, Neumann & Reichel, 1978). The general agreement is that visitors’ overall satisfaction is a multidimensional construct based on the interaction between tourists and the elements at the tourism site.

Researchers have suggested that when examining tourists’ overall satisfaction, it is important to take into consideration elements related to both the attraction and the services provided (Kozak & Rimmington, 2000; Whipple & Tach, 1988). Thus, the measurement of satisfaction in tourism has a dual purpose, to provide information about customers’ needs and how well the organization or product is currently meeting these needs, but also to provide a platform for organizations to communicate with their customers and find out their likes, dislikes and overall satisfaction.

Neumann (1995) adds to the following purposes, noting that measuring consumer satisfaction is also a means to measure continuous improvement by addressing those elements that represent value-added to consumers, to achieve innovation through consumers, and also to measure competitive strengths. Thus, in measuring satisfaction, researchers and practitioners need to anticipate which components or attributes of the products and services offered need or should be included in the assessment of consumer satisfaction.
As related to nature-based tourism, Eagles (2002) notes that satisfaction with the experience is based on two fundamental components: “(1) appropriate levels of environment quality, and (2) suitable levels of consumer service” (p. 132). With these in mind, visitors’ experience has come to the attention of Parks Canada Agency as one of the most important aspects of visitation, providing Canadians with opportunities to learn and connect to various natural and cultural national sites. Parks Canada Agency’s mandate is therefore framed around not only protecting Canadian natural and heritage resources, but also around facilitation of meaningful experiences and provision of public education (Parks Canada, 2010).

Researchers have suggested that the interpretation offered at the sites may help increase visitors’ level of satisfaction, resulting in a more enjoyable experience (Weiler & Davis, 1993). Archer and Wearing (2001) note that “a primary objective of on-site interpretive programs is the enriching of visitors’ experiences by developing their awareness, appreciation and understanding of the range of natural and cultural values inherent in national parks” (p. 32). Thus, interpretive programs do not only have an educational role, but are also an important determinant of tourists’ satisfaction with their site visits and experiences. Moscardo (1996) points out that well-designed interpretive programs can create mindful visitors who have a greater appreciation and understanding of the site and of their actions at the site. Thus, interpretive programs in natural environments not only help to protect the site, but they also contribute to visitor enjoyment (Orams, 1996). Researchers agree that the interpretation provided at tourism sites is an essential component of the tourist experience, affecting visitors’ overall satisfaction (Garrod & Fyal, 2000; Laws, 1999; Moscardo, 1996; Poria, Reichel & Biran, 2006).
However, while there is agreement that satisfaction is an important factor in tourism and recreational settings being influenced by a number of factors, the measurement of satisfaction is debated by researchers (Noe & Uysal, 1997, Yuskel & Yuksel, 2001a). There have been various theories related to the measurement of satisfaction that have been proposed in the marketing and consumer behaviour literature, focused on providing respondent with or without the opportunity to compare satisfaction standards (e.g. Servqual, Servperf). However, regardless of the measurement approach, previous studies have found that satisfaction ratings are highly positive, respondents rarely using the lower end of measurement scales (Williams & Patterson, 1991). Peterson and Wilson (1992) note that “virtually all self-reports of customer satisfaction possesses a distribution in which a majority of responses indicate that customers are satisfied and the distribution itself is negatively skewed” (p. 62). While the positivity of self-reported satisfaction could be an actual reflection of satisfaction with products and services, there are more important conceptual issues related to the antecedents influencing satisfaction, and the research methodologies employed to gather satisfaction ratings that need to be considered.

**Study Purpose, Conceptual Framework and Research Questions**

The more fundamental issues related to satisfaction have concerned researchers interested in bridging the conceptual understanding of satisfaction, with the practical use of satisfaction measurement instruments. Yuskel and Yuksel (2001a) believe that the research devoted to understanding customer satisfaction is replete with issues related to how satisfaction is conceptualized and measured. Furthermore, Yuksel and Rimmington (1998) argue that the focus has previously been on providing a theoretical explanation of what satisfaction is, and less focus has been given to measurement issues. Thus, the main purpose of this study is to look more critically at how the measurement of satisfaction stands up to scrutiny. This will be accomplished
through an examination of a secondary data set used to gather information on visitors’ satisfaction in nature-based settings.

While various site attributes have been recognized in previous studies to be important elements influencing visitors’ overall satisfaction (Herrick & McDonald, 1992; Meng, Tepanon & Uysal, 2008), there is limited research in the context of nature-based sites. O’Neill, Riscinto-Kozub, and Van Hyfte (2010) argue that “little work has been undertaken aimed at defining the satisfaction construct in nature-based settings and those forces that make a real difference in evaluating overall satisfaction...” (p.142). To fulfill the purpose of this study, a hypothetical conceptual framework for assessing visitors’ overall satisfaction is proposed (Figure 1).

![Conceptual Framework of the Study](image)

**Figure 1:** Conceptual Framework of the Study
The conceptual framework of this study proposes that overall satisfaction with the site experience is the ultimate dependent variable. Existing research (e.g., Alegre & Cladera, 2006; Baker & Crompton, 2000; Fuller & Matzler, 2008; Joppe, et al., 2000) suggests that satisfaction with specific dimensions of a place influences overall satisfaction with the place. Previous research also shows that visitors’ satisfaction in natural settings is influenced by quality of interpretation and opportunity to learn through interpretation (Archer & Wearing, 2001; Hwang, et al., 2005; Moscardo & Woods, 1998; Tubb, 2003). Interpretations at national park and historic sites contribute to the visitor learning which in turn enhance the experience satisfaction. Generally, studies related to interpretive programs and activities offered at a historic and park site have focused on assessing the processes and purposes of interpretation programs (Kuo, 2002; Laws, 1998), and on the effect of the interpretive programs on visitors’ level of knowledge of the site and their behaviour (Austin, 2002; Carr, 2004; Light, 1995; Madin & Fenton, 2004; Prentice, Guerin & McGuan, 1998; Tubb, 2003). Few studies have looked at the relationship between tourists’ involvement in interpretive programs and their satisfaction with the tourism experience (Moscardo, 1996; Moscardo, Verbeek & Woods, 1998). Thus, it is also hypothesized that visitors’ overall satisfaction with their experiences is influenced by their perceived importance of site interpretation to learning.

In addition to the above, behavioural and demographic factors also influence visitors’ overall satisfaction with their visit. For example, repeat visitation has been considered to be an influential factor in tourists’ likelihood to recommend the destination and in their overall satisfaction with the site visits (Oppermann, 2000, Pritchard, 2003). Regarding demographic characteristics, Huh and Uysal (2003) found that gender influenced visitors’ overall satisfaction.
Researchers have also found that age is a significant factor affecting visitors’ overall satisfaction (Francken & Van Raaij, 1979 as cited in Andriotis, Ajiomirgianakis & Mihiotis, 2008). On the contrary, MacKay and Fesenmaier (1997) found statistical differences in tourists’ perceptions based on gender but not on age. In general, findings on the influence of demographic and behavioural factors and visitor satisfaction have been contradicting, suggesting the need for further research. Moreover, researchers have also noted that demographic and situational variables also moderate the relationship between various variables related to consumers’ satisfaction with products and services (Matzler et al, 2008). Thus, in this study, visitors’ age and their visitation pattern will be examined as possible moderators. This is because of the assumption that as visitors age and if they have visited the sites before, it is likely that their previous knowledge and experiences, which oftentimes comes with older age, are likely to moderate the relationship between their perceived importance of interpretation to learning and their overall satisfaction, and also of that between their satisfaction with the site attributes and their overall satisfaction with their experiences.

Although satisfaction studies have been popular in the tourism literature, research integrating the above determinants in a single conceptual framework predicting overall satisfaction with site experiences is limited in the literature. While the relationships between various independent variables and overall experience satisfaction, as the dependent variable, have been previously examined by researchers (e.g. Danaher & Arweiler, 1996; Hui, Wan & Ho, 2007; Kozak & Rimmington, 2000), the effect of tourists’ perceptions of the importance of interpretive programs on their overall satisfaction has received little attention (Moscardo, 1996). Thus, this study aims at incorporating visitors’ satisfaction with the site attributes, their
perceived importance of interpretation to learning, and their age, gender and visitation pattern to
better understand visitors’ satisfaction with their experiences in nature-based settings. This will
be done through an analysis of secondary data from VIP Surveys distributed by Parks Canada to
two sites in the Atlantic Region of Canada. Data collection methodologies and instrument
description will be presented in a later chapter. Given the study purpose above-mentioned, the
following research questions guide the investigation of this study:

1. What is the relationship between visitors’ site-specific attribute satisfaction and their
   overall satisfaction with the experience?
2. What is the relationship between visitors’ perceived importance of interpretation to
   learning and their overall satisfaction with the experience?
3. How do visitors’ age, gender and repeat visitation affect their levels of satisfaction with
   site-specific attributes, importance of interpretation to learning, and overall satisfaction
   with their experiences?
4. Do visitors’ age and visitation pattern moderate the relationships between their perceived
   importance of interpretation to learning and overall satisfaction with their experiences,
   and that between their satisfaction with the site attributes and overall satisfaction with the
   site experience?

Research Contribution

The main contribution of this study is related satisfactions measurement instruments. Although
the concept has been widely examined by tourism and leisure researchers, there is no consensus
related to how satisfaction should be measured, with various satisfaction measurement
frameworks being used by practitioners. This leads to confusion related to, not only which scale better captures visitors’ satisfaction, but also what are the actual components of the visitor satisfaction with products and services. There is little research focused on providing information related to how well satisfaction measurement instruments stand to scrutiny when the predictive power and reliability are being questioned (Yuksel & Rimmington, 1998). Thus, this study will provide an understanding of how well measurement instruments perform from a theoretical perspective, from issues related to design, items included, and scales used to measure satisfaction.

Also, little attention has been given to tourists’ satisfaction in nature-based setting, with the exceptions of a few studies focusing on national parks (Akama & Kieti, 2003; Hwang, Lee & Chen, 2005; Tonge & More, 2007). This paucity of research is also noted by Lee, Graefe and Burns (2004) who argue that the critical concepts of visitors’ perceptions of quality and satisfaction “have rarely been applied in nature-based tourism” (p.74). Thus, research on satisfaction in nature-based settings is a fruitful line of investigation. This is particularly important because understanding visitor satisfaction allows managers of protected areas to provide better services, thus increasing the likelihood of revisits and site sustainability (Tonge & More, 2007). This study therefore contributes to the little research focused on tourists’ satisfaction with their experiences at national park and historic sites.

This research also addresses the need for further investigation into the relationships between tourists’ perceptions of the importance of interpretive programs to learning and their overall satisfaction. Research related to interpretation of natural and heritage sites is generally
devoted to site management issues (Austin, 2002; Orams, 1996; Staiff, Bushell, & Kennedy, 2002), the importance of interpretation in creating place identity (Park, 2010; Uzzell, 1996), or the effectiveness of various interpretive programs (Madin, & Fenton, 2004; Tubb, 2003). This study introduces visitors’ perceived contribution of interpretation to learning as a determinant of satisfaction. It also focuses on the possible moderating effects of age and repeat visitation on the relationship between satisfaction with site-specific attributes and overall satisfaction, and tourists’ perceived importance of interpretation to learning and their overall satisfaction with the site experience. Moreover, the comparative analysis of visitors’ satisfaction at two Parks Canada sites, will provide further theoretical contribution to the understanding of visitors’ satisfaction in two different settings and the unique determinants of satisfaction at each site. The uniqueness of each site under investigation and its respective visitors and their characteristics are likely to influence overall experience satisfaction. This study therefore provides an understanding of differences in visitors’ satisfaction based on the site visited.

Besides the above theoretical contributions, the study’s findings have practical implications for Parks Canada and for park site managers. The results of this study can help park managers understand the factors which contribute to visitors’ overall satisfaction with their site experience. The various relationships investigated can reveal whether tourists’ satisfaction with the site elements, and their perceived importance of interpretation to learning, are determinants of overall experience satisfaction. Moreover, the results will also provide park managers with information whether visitors’ age, gender and whether they are on a first visitation or repeat visitation influence satisfaction levels. These observations can aid park managers to better target their programs, but also to focus on specific site attributes to increase visitors’ levels of
satisfaction with their experiences. The results of this study may also allow park managers to make appropriate use of funds for improving park services to increase visitation. The comparison of visitors’ overall satisfaction in a national park site and national historic site provides Parks Canada Agency with information regarding how the different factors investigated in this study perform within the two different settings. Finally, but most important, this study can provide Parks Canada Agency with suggestions and recommendations related to the design of the satisfaction measurement instrument currently used, in hopes of better capturing visitors’ satisfaction with their visits at national parks and national historic sites.

Study Setting

Realizing the importance of providing an outstanding visitor experience, Parks Canada strives to remain relevant to Canadians by providing the opportunity for visitors to learn and connect to the sites visited. Parks Canada’s mandate to protect natural and heritage resources, to foster public understanding, appreciation and enjoyment, is at the core of agency’s regulations and management (Jager & Sanche, 2010). However, from 2001 to 2009, visitation to Parks Canada’s national parks and historic sites has dropped 9% (Parks Canada, 2010). This is somewhat surprising given that Parks Canada continues to be rated above established targets for satisfaction with the services provided and the staff (Parks Canada, 2008). This has led Parks Canada to move beyond looking only at satisfaction as a reflection of visitors’ experience, but also consider other factors such as their sense of learning while engaged in interpretive programs (Jager & Sanche). Enhancing the agency’s interpretive programs to enable visitors to participate, learn and enjoy their site visits, has been thus identified as one of the main influencers of a positive visitor experience.
CHAPTER TWO: THEORETICAL REVIEW

The following chapter focuses on a review of the literature related to the conceptualization of satisfaction. It also provides a summary of the various methods used by researchers to measure satisfaction in tourism. Based on these, the section concludes by highlighting the appropriate method used in this study to measure visitors’ satisfaction given that the study is based on an analysis of secondary data already collected by Parks Canada.

Conceptualizing and Measuring Satisfaction

The complexity and controversial nature of the definition and measurement of consumer satisfaction is well recognized by researchers (Chan & Baum, 2007, Oh & Parks, 1997). Definitions of satisfaction have varied amongst researchers. Yuksel and Yuksel (2001a) note that satisfaction has been defined as the cognitive or emotional response resulting from the consumption experience, or a comparison of benefits and costs to anticipated consequences. The debate is further stimulated by suggestions that satisfaction should be defined to reflect the connection between the cognitive and emotional processes involved (Oliver, 1997). Because the subjective judgements tourists make about their travel experiences are associated with their emotions towards the vacation attributes and experiences, tourists’ satisfaction could therefore be determined by their emotional assessment. Thus, consumer satisfaction can be defined as a cognitive-affective state resulting from cognitive evaluations, as well as from emotions these evaluations evoke. This approach to understanding satisfaction follows the leisure sciences’ approach which advocates that satisfaction is a psychological outcome, and that “intervening variables exist between level of service quality and level of satisfaction that are outside a service
provider’s control” (Crompton & Love, 1995, p. 12). Thus, tourists inevitably shape and create the recreation experience and their satisfaction. Satisfaction is therefore a fulfilment response, a judgement that the product and services provided have led to a pleasurable or unpleasurable experience, a cognitive-affective state derived from a tourist experience (del Bosque & San Martin, 2008).

Regarding the measurement of satisfaction, Kozak and Rimmington (2000) note that originally, in marketing, satisfaction studies followed either the expectation-perception gap model developed by Parasuraman, Zeithaml and Berry (1985), or the performance-only approach developed by Gronroos (1990). The expectation-perception model, or expectancy-disconfirmation paradigm (Oliver, 1980), considers consumer satisfaction or dissatisfaction to be a function of the disconfirmation arising from discrepancies between prior expectations and actual performance (Chen & Chen, 2010; del Bosque & San Martin, 2008). It is thus based on the belief that consumers develop expectations about a product or a service before consumption, however, post-consumption they compare the actual experience with their original expectations. Disconfirmation occurs when either actual performance is better than expectations (resulting in high levels of satisfaction); or when perception of the performance is below expectations (low levels of satisfaction). On the other hand, confirmation occurs when actual performance matches prior expectations, the perceived experience resulting to be just satisfactory (Hui, Wan & Ho, 2007).

Expectations are perceived likelihoods that a product or an experience has certain characteristics or it will lead to a particular outcome (Heung & Cheng, 2000). Like any other
consumers, tourists have initial expectations of what they would experience at a destination based on various sources of information they consulted or came in contact with. Their satisfaction is then dependent on how well their expectations are met at the destination. Dissatisfaction occurs when performance differs from what was being expected. In a tourism context, it is believed that “satisfaction is primarily referred to as a function of pre-travel expectations and post-travel experiences” (Chen & Chen, 2010, p. 31).

Following the gap model, researchers have used SERVQUAL instrument to measure satisfaction in tourism. Initially developed by Parasuraman et al. (1985), the model measures tangible and intangible service elements. It investigates gaps between what the supplier offers and tourists’ expectations, to know where quality may be improved. The scale includes five dimensions used to assess service quality: tangibles, reliability, responsiveness, assurance and empathy. Twenty-two statements are distributed across the dimensions and provide the calculation of each dimension’s score on consumer’s expectation and perceived performance. The difference between the two scores represents the perceived service quality for each dimension (Fick & Ritchie, 1991). It has been adopted by researchers in tourism to investigate tourists’ perceptions of service quality and satisfaction with various tourism services (Akama & Kieti, 2003; Tribe & Snaith, 1998; Vogt & Fesenmaier, 1995). In a park context, Hamilton, Crompton and More (1991) adapted SERVQUAL to examine which dimensions described service quality. Their study revealed that while that only four of the five original SERVQUAL dimensions were evident: tangibles (physical facilities, equipment, and appearance of personnel), reliability (ability to perform the promised service accurately and dependably), responsiveness (staff’s willingness to help customers and provide prompt service) and assurance (courtesy of
staff and knowledge, and ability to convey trust and confidence), with the tangibles dimension being the most important dimension in describing service quality.

Although SERVQUAL measures service quality, it has also been used to examine satisfaction due to the similarities in which the two concepts are conceptualized and operationalized (Baker & Crompton, 2000; Crompton & Love, 1995; Lee, Graefe & Burns, 2004). Some researchers argue that the two concepts are different, service quality being based on the level of standards for service attributes, while satisfaction on the level of customers’ perceptions of the experience (Crompton & Love, 1995, Oliver, 1993). In the context of natural settings, Lee, Graefe & Burns (2004) explain that service quality could be the evaluation of toilet or campground facilities, but satisfaction would be influenced by the weather, social interactions, but also by the quality of the natural setting facilities. Thus, the researchers note that satisfaction is a more subjective evaluation than service quality. If service providers can improve the quality of their services, tourists’ satisfaction is outside the providers’ control (Crompton & MacKay, 1989; Crompton & Love, 1995). Moreover, Baker and Crompton (2000) argue that “higher quality performance in facility provision, programming, and service are likely to result in higher level of visitor satisfaction” (p. 787). Thus, quality refers to the quality of the elements of a tourism product, whereas satisfaction refers to the quality of a visitor’s experience, which is dependent on how tourists interact and react to the tourism product attributes. This led Parasuraman, et al. (1994) to revise their earlier notion of satisfaction, suggesting now that “a customer’s overall satisfaction with a transaction [is] ...a function of his or her assessment of service quality, product quality, and price. This conceptualization is consistent with the ‘quality leads to satisfaction’ school of thought” (p. 121).
However, SERVQUAL has been criticized by researchers because of the use of a different score to measure perceptions and expectations (Hui, Wan & Ho, 2007), and the use of the difference between perceptions and expectations as an appropriate measurement and theoretical perspective (Getz, et al., 2001). Millan and Esteban (2004) explain that when consumers are questioned about their expectations and the level of performance receive, “it is possible to obtain a deficient evaluation, due to those individuals polled rarely evaluating the desired level in a manner inferior to that which has been received” (p. 536). It is further argued that the difference score can be dominated by the perceived performance score, because if the performance is positive it might influence the expectations score (Koelemeijer, et al. 1993 as cited in Millan & Esteban). Also, Yuksel and Yuksel (2001a) note that some tourists may have very little or no expectations at all especially if they have no knowledge or experience with the service. Thus, it is fallacious to consider expectations as a set of firm criteria to evaluate the SERVQUAL statements (Crompton & Love, 1995). Lastly, other researchers have questioned the applicability of SERVQUAL across industries, and the use of its unmodified form to gather information on consumer satisfaction (Tribe & Snaith, 1998; Getz, et al., 2001).

Some researchers have found the perceived-performance model (or performance-only model) as a better alternative to measure satisfaction (Tse & Wilton, 1988). The performance-only model avoids the use of expectations to measure satisfaction, because of the belief that, regardless of any prior expectations, tourists are likely to be satisfied if services and products perform at a high level (Kozak, 2001). The performance-only model led to the development of the SERVPERF instrument (Cronin & Taylor, 1992). Researchers found that SERVPERF
“consistently explained more of the variation in consumer perceptions and outperformed the Servqual (disconfirmation measure) in different service environments” (Yuksel & Yuksel, 2001b, p. 85). Fick and Ritchie (1991) brought further support for the model noting that “the mean perception of performance scores provide a good evaluation (if not a better one) of perceived service quality than the computed quality score” (p. 5). Similarly, in tourism, Crompton and Love (1995), in their research of six different methods to assess the quality of service in a festival context, found that performance-based operationalizations were the best predictors of quality, while the least were the disconfirmation-based operationalizations.

However, Yuksel and Yuksel (2001b) note that not all researchers found the performance-only measure to be the best predictor of satisfaction. Some researchers found that the expectation-disconfirmation model has a higher predictive power of overall satisfaction (i.e. Oliver & Swan, 1989). Moreover, it is noted that the use of performance ratings has its weaknesses because there is no standard to compare to when rating performance, and because it excludes any other thought processes involved in the mental decision of satisfaction (Oliver, 1989 as cited in Yuksel & Yuksel, 2001b). Nevertheless, supporters of the perceptions-only model argue that “measuring expectation is not a good way of proceeding anyways, because experiences are in fact perceptions of reality, and inherent in these perceptions are the prior expectations” (Gronroos, 1993, p.56). Thus, the performance-only model already measures the prior expectations which influence perceptions of service and product performance. Based on the various methods described used by researchers to measure satisfaction, and given the nature of this research which focuses on the analysis of already collected data, this study follows the performance-only model to measure satisfaction where visitors’ to Parks Canada Sites were
asked to rate the performance of various site attributes and services provided. The measurement instrument used to gather the data will be described in Chapter Three. Until then, the following section focuses on providing a review of the literature looking at visitors’ satisfaction and interpretation at historic and park sites.
CHAPTER THREE: THE CONCEPTUAL FRAMEWORK

The following chapter provides support for the conceptual framework proposed in this study. The first section focuses on the tourist experience and overall satisfaction with tourism experiences, followed by a discussion of the attributes and factors used to assess tourists’ satisfaction with tourism destinations. The concept of interpretation is also reviewed, along with the studies focused on the role of interpretation to learning and to visitors’ satisfaction. Lastly, studies looking at demographic and behavioral factors’ effect on satisfaction are discussed, along with a brief review of moderating effects of age and repeat visitation related to tourists’ satisfaction.

Visitors’ Satisfaction with the Site Experience

To provide high quality and satisfactory experiences, tourism managers and marketers need to first understand the nature of the tourism or leisure experience. It has been argued that “it is not enough to offer a functional level of products and services...offerings must be accompanied by ‘experiences’ to differentiate themselves” (Walls, et al., 2011). In an increasingly competitive environment, leisure and tourism providers are challenged to provide consumers with unique, authentic, and high-quality products and services that create memorable experiences. However, to be able to create memorable experiences, it is first necessary to understand the leisure and tourism experience.

The relevant fundamental theories of leisure experience for this dissertation are those of Neulinger (1974) and Csikszentmihalyi (1975). Neulinger’s (1974) leisure paradigm is concerned with the state of mind of individuals, rather than the time or the type of activity people
are involved in. The paradigm rests on the interaction between perceived freedom and motivation. Perceived freedom refers to the freedom to choose and lack of constraint to engage in an activity, while motivation refers to “the source of satisfaction for engaging in a behaviour” (Janes, 2006, p. 28), which can be either extrinsic, based on some external motivation, or intrinsically derived. Neulinger argued that pure leisure can only be achieved when people engage in an activity completely free and intrinsically motivated, however, it is also recognized that various levels of engagement exist depending on the freedom and type of motivation.

The concept of “flow” developed by Csikszentmihalyi (1975) was developed based on interviews with participants involved in various work and leisure related activities. The findings revealed that “flow” occurs when people are so engaged in the activity that nothing else matter. Csikszentmihalyi noted that a state of “flow” can be described in terms of the following occurring elements: a challenging activity that requires a skill, a merging of action and awareness, clear goals and feedback, concentration on the task at hand, control, loss of consciousness, and transformation of time (Janes, 2006). While not all elements needs to be present in order to experience “flow”, the optimum experience oftentimes requires all of the above. To add to these theories, Lee and Shafer (2002) argued that the leisure experience is “an emerging state of mind resulting from the interactions between a leisure participant and his/her surroundings” (p. 291). This premise is based on two approaches to examining the meaning of the leisure and tourism experience, which include the explanation of it as related to the activities people engage in (Clawson & Knetsch, 1966), and on identifying the common themes participants attribute the a leisure experience (Mannell & Iso-Ahola, 1987).
Tourism scholars have also been interested in the nature of the tourism experience. MacCannell (1973) argued that the tourist experience is a sincere pursuit of the authentic, Urry (2002) described the tourist experience as a type of gaze based on anticipation constructed, sustained and reinforced by non-tourist practices such as mass media; whereas Cohen (1979) noted that a tourist experience includes different modes such as recreational, diversionary, experiential, experimental, and existential, all ranging from a “mere” pleasure to a search for meaning. Cohen argued that the tourism experience is a relationship between a tourist and various “centers”, relationship which is dependent on the worldview of the tourist, and the meanings created. Thus, tourists construct “private” worlds in which the tourists’ patterns of motivation define the different modes of tourists’ activities (Cohen, 1979). Based on Cohen’s modes of tourism experience, Ryan (1997) defined the tourism experience as a multifunctional leisure activity, involving entertainment and/or learning.

The notion of satisfaction has been tied to the leisure experience concept through the “post-hoc satisfaction” approach (Mannell & Iso-Ahola, 1987). The approach associates leisure experience with the satisfaction participants derive from engagement in a leisure or tourism activity. It assumes that “people are aware of their leisure needs or motivations, the kinds of experiences that will satisfy their needs, and that they can make accurate judgements about when these are met” (Mannell & Iso-Ahola, 1987, p. 321). Thus, the approach is grounded in the idea that people will engage in activities to satisfy unmet needs. Mannell and Iso-Ahola argue that the leisure satisfaction is influenced by the leisure experience and its characteristics because motives occur before a leisure experience, and satisfaction after the leisure experience.
This was previously noted by Leiss (1979) who found that satisfaction or dissatisfaction with a nature leisure experience is dependent on the recreational experience itself but also on satisfaction with the facilities, services and programs available during the leisure experience. Additionally, Alegre and Cladera (2006) hypothesized that tourists’ overall satisfaction with experiences at the Balearic Islands is influenced by their satisfaction with destination attributes. The results did not allow for the hypothesis to be rejected, suggesting that the characteristic components of the sea, sun and sand destination: the beaches, climate, the quality of the accommodation and surroundings, etc., were significant factors affecting tourists’ overall satisfaction with their holiday experiences. Also, Neal, Sirgy and Uysal (1999) hypothesized that satisfaction with travel and tourism trip experiences is a function of visitors’ satisfaction with the travel and tourism services they came into contact with. Their research related to the most recent leisure trip taken by a sample of faculty and graduate students at a large university, supported their assumption. Satisfaction with the trip experience was found to be significantly predicted by satisfaction with trip services. Lastly, Herrick and McDonald (1992) in their investigation of the factors affecting overall satisfaction with a recreational experience found that the overall experience is dependent on visitors’ satisfaction with the setting characteristics.

Thus, there have been various approaches to examining the tourist experience and satisfaction with the experience, ranging from looking at the subjective experience related to authenticity, pilgrimage journey taken to escape from home environment in hopes of finding novelty and chance. However, McCabe (2002) notes that the tourist experience is not only related to the subjective experience but it is also supported by the more objective elements tourists get involved in during the experience. The previously mentioned empirical studies...
focused on the objective elements affecting tourists’ satisfaction with their experiences support this belief. This study will follow the latter approach, where visitors’ satisfaction with their experiences is considered to be a function of visitors’ satisfaction with the various site elements they come into contact with. The following section further summarizes research related to tourists’ satisfaction with various components of the tourism destination.

**Visitors’ Satisfaction with Site-Specific Attributes**

Research on tourists’ perceptions of places in terms of their satisfaction with the destination and their satisfaction with specific place attributes has been a popular topic of research. Previous research suggests that “it is important to identify and measure CS with each component of the destination because consumer satisfaction or dissatisfaction (CS/D) with one of the components leads to CS/D with the overall destination (Pizam, Neumann, & Reichel, 1978 as cited in Kozak & Rimmington, 2000, p. 261). Neal and Gursoy (2008) perceive tourists’ satisfaction as “the total of travelers’ satisfaction with each service aspect of the whole system. In other words, a traveler’s satisfaction with tourism services is the product of his or her satisfaction with pre-trip services, satisfaction with services at the destination, and satisfaction with transit route services. Any dissatisfactory experience with any service aspect is likely to decrease a traveler’s satisfaction with travel and tourism services” (p. 55). This idea is shared by other researchers who believe that tourism destinations or attractions are a bundle of components related to the food, accommodation, transportation and entertainment offered. For example, Buhalis (2000) grouped destination attributes in the “six A’s”: attractions, amenities, available packages, activities, access, and ancillary services. However, it is also acknowledged in the literature that the relevance of each of these attributes is highly contextual, based both on the type of destination and the tourists visiting (Zabkar, Brencic & Dmitrovic, 2010). Thus, in tourism,
researchers have measured tourists’ overall satisfaction as a function of their satisfaction with different site-specific attributes.

Kozak and Rimmington (2000), in their study of tourists’ satisfaction with Mallorca, Spain, found the significant factors impacting levels of satisfaction to be: destination attractiveness, the tourist attractions and facilities, and the facilities and services at the destination airport. Hasegawa (2010) examined tourists’ satisfaction with visits to Hokkaido, an island in Japan. The effects of the degree of satisfaction with each aspect of the trip on tourists’ overall satisfaction was investigated, results revealing that “the satisfaction derived from the scenery and meals has the largest influence on the overall satisfaction” (p. 95). Furthermore, Japanese tourists’ satisfaction with Hong Kong as a travel destination, was significantly influenced by their satisfaction with accommodation and food, people, price, and culture (Heung & Cheng, 2000). Similar significant factors were found by Joppe, Martin and Waleen (2000) who examined tourists’ satisfaction with Toronto, Canada. The destination attributes perceived as high in satisfaction were factors such as transportation, shopping facilities and cultural events. Safety, value for money, cleanliness, signage and family oriented attractions, and hospitality of people were perceived as low on satisfaction. These studies have all investigated tourists’ cognitive evaluation of different attributes of tourism destinations and their influence on overall satisfaction with the tourism destinations.

McMullan and O’Neill (2010) assessed visitor’s overall satisfaction with different tourism attractions (i.e., natural attractions, festivals) by taking into account their emotional satisfaction, their cognitive product and service satisfaction, as well as tourists’ cognitive
dissonance. Specifically related to tourists’ cognitive satisfaction with the product and service, the researchers hypothesized that a higher degree of satisfaction in both these areas will lead to a higher degree of overall satisfaction. The items included in the cognitive products satisfaction scale and cognitive service satisfaction scale represented “standard product dimensions of tourism related to activities, amenities and services” (p. 33). The multiple regression analysis revealed that the independent variables explain a significant amount of variance in visitors’ overall satisfaction, with the product satisfaction and service satisfaction having the strongest effects. In a heritage setting, tourists’ satisfaction has been examined by Huh (2002) who looked at the relationship between heritage destination attributes and overall satisfaction. Multiple regression analysis revealed the main factors affecting tourists’ overall satisfaction were the heritage attractions offered at the destination, the culture attractions, and the maintenance factors.

Other studies related to tourists’ satisfaction have focused on tourists’ satisfaction with travel services such as travel agents, tour operators and tours (Ainscough, 2005, Augustyn & Ho, 1998; Bowen 2001; Campo & Yague, 2008; Dunn Ross & Iso-Ahola,1991; Geva & Gouldman, 1991; He & Song, 2009; Millan & Esteban, 2004; Ryan & Cliff, 1997); their satisfaction with festivals (Baker & Crompton, 2000; Crompton & Love, 1995; Lee, Petrick & Crompton, 2007; Yuan & Jang, 2008); tourist accommodations (Chan & Baum,2007; Chu & Choi, 2000, Crotts, Mason & Davis, 2009; Han & Back, 2007; Thomas & Butts, 1997; Yung & Chan, 2002), alpine ski resorts (Fuller & Matzler, 2008; Hudson & Shepard, 1998; Matzler, Fuller, Renzl, Herten & Spath, 2008), tourists’ satisfaction with cruises (Hosany & Witham, 2010; Huang & Hsu, 2010; Petrick, 2004; Petrick, Tonner & Quinn, 2006; Qu & Ping, 1999), and with the airline industry (Ostrowski, O’Brien & Gordon, 1993; Oyewole, 2001).
Yet, given the wide range of context within which tourists’ satisfaction has been addressed, limited research has been done to assess visitors’ satisfaction in nature-based settings (Naidoo, Ramseook-Munhurrun, & Seegoolam, 2011). Noe and Uysal (1997) examined visitors’ satisfaction with public outdoor recreational areas. It was hypothesized that satisfaction is predicted by instrumental and expressive attributes. Instrumental attributes were those elements used by visitors to achieve some desired outcome, while expressive elements were considered those elements derived from engagement in the experience such as sightseeing, fishing, swimming, etc. The research findings suggested that visitors’ satisfaction with various park sites in Mississippi and Florida was strongly connected to instrumental and expressive ratings.

Specifically, Noe and Uysal found that at historical attractions, visitors’ satisfaction was more dependent on instrumental factors such as restrooms and shelters. On the other hand, in those sites designed for outdoor recreation, overall satisfaction was highly dependent on expressive elements such as camping and swimming. This was confirmed by Tonge and Moore’s (2007) study on visitors’ satisfaction with marine parks, which revealed visitors’ satisfaction was highly associated with “access to, smell and conditions of the Swan River, the presence of dogs and places to park” attributes; while lower levels of satisfaction were associated with “cyclists, information signs and litter” (p. 772). On the other hand, the main factors influencing visitor satisfaction with two national parks in Tanzania were found to be “friendliness of guides” and “group harmony” for Kilimanjaro National Park visitors, while visitors to Serengeti National Park were satisfied with the “knowledge” and friendliness of the guides” and with the “group harmony”.
When examining the effect of different factors on satisfaction in a nature-based resort context, Meng, Teponon and Uysal (2008) found that the two main independent variables influencing tourists’ satisfaction with the resort destination were the level of friendliness and quality of service, and tourists’ satisfaction with the lodging facilities. The quality of the nature attraction and the services provided were also attributes measured by Akama and Kieti (2003) to measure visitors’ satisfaction with two national parks in East Africa. Lastly, Naidoo et al.’s (2011) research on various nature-based tourism attractions in Mauritius revealed that visitors’ overall satisfaction was a function of their satisfaction with five different independent variables: tangibles, price, communication, empathy and natural resources. The study’s findings showed that these variables explained a significant amount of variance in visitors’ overall satisfaction with their visits to various Mauritian nature-based tourism attractions.

Based on the above literature, it is evident that tourists’ or visitors’ overall satisfaction with their experiences has been generally assessed in terms of their satisfaction with various elements related directly to the destination or site visited. Thus, it is proposed in this study that visitors’ overall satisfaction with their experiences in a natural setting is positively related to their satisfaction with site-specific attributes (Figure 2).

**Figure 2:** The positive effect of satisfaction with site-specific attributes on visitors’ overall satisfaction with the site experience.
Interpretation in Natural Settings

While the concept of interpretation in tourism has been widely researched, no single definition has been yet adopted (Pooria, Biran, & Reichel, 2009). Generally, interpretation is considered the transmission of information for education purposes. The modern philosophy of interpretation has its roots in Tilden’s book “Interpreting our Heritage” (1957) that led to the American National Park Service to design and implement interpretation in all national parks (Kuo, 2002). Tilden (1977) defined interpretation as: “an education activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information” (p. 8).

Interpretation services in a natural setting serve as a management and educative tool, offering an important communication role between the park and visitors. In a natural setting, interpretation services provide visitors with information on the park regulations, but it also provides “a bridge for presenting the administration’s image and the required behavior and attitude of visitors” (Hwang, Lee & Chen, 2005, p. 143). However, the role of interpretation services in educating and creating a sense of place is the most crucial one, affecting tourists’ experience. Within this context, interpretation refers to the activities meant to provide visitors’ with a deeper understanding and heightened appreciation of the historical and natural significance of the sites (Pooria, Biran, & Reichel, 2009). In terms of how interpretation is delivered to visitors, Hwang, et al. (2005) note that interpretation occurs in two environments: attended and unattended. Attended interpretation refers to activities provided by an interpreter, lectures and discussions; while unattended interpretation is represented by publications, signs, exhibits, visitor centres and self-guided tours. A primary objective of on-site interpretative
programs is to enrich “visitors’ experiences by developing their awareness, appreciation and understanding of the range of natural and cultural values inherent in national parks” (Archer & Wearing, 2001, p. 12).

To investigate the effects of interpretation program on visitors’ learning, Tubb’s (2003), study in the High Moorland Visitor Centre in Dartmoor National Park, UK; revealed that interpretation services increased the knowledge and awareness of visitors. For example, post-visit, it was found that those respondents who participated in a “quiz” activity were more knowledgeable than those who did not. These findings were previously supported by Moscardo and Woods (1998) who found that visitors’ knowledge of the Wet Tropic World Heritage Area increased considerably due to the interpretive services offered. Similarly, Madin and Fenton (2004) examined how interpretation programs in the Great Barrier Reef Marine Park educate visitors about environmental issues. The results again showed that those who participated in the interpretive programme had a higher level of reef environmental knowledge post-exposure. Thus, visitors who engage in various interpretive programs learn more about the site. However, little research has been conducted to examine whether visitors’ perceptions of the importance of various interpretive programs effect levels of satisfaction with the site elements and with their overall satisfaction with experiences at the site.

Hwang, et al. (2005) argue that interpretation in a natural park setting plays an important role in visitors’ perception of service quality and thus satisfaction. Using the interpretation services of five National Parks in Taiwan, the researchers examined the relationship between tourists’ involvement, place attachment and interpretation satisfaction. Satisfaction with the
interpretation programs at the sites was found to be affected by tourists’ levels of involvement in various activities and by how attached they are to the sites visited. However, the researchers do not further investigate how satisfaction with the interpretive programs affects overall satisfaction with experiences in the national park. Also, Moscardo’s et al. (1998) research in Australia’s Wet Tropics World Heritage Rainforest revealed that Skyrail interpretations programs influenced visitors’ overall satisfaction. Specifically, those visitors who participated in the interpretation programs were significantly more satisfied with their visit than those who did not. This supports previous arguments by Light (1995) who noted that interpretive media contributes to the satisfaction and enjoyment of visitors. Thus, interpretive media have a dual role: contributing to visitor satisfaction and education visitors about the significance and importance of the site. With only a few studies looking at the relationships between interpretation and satisfaction, this study brings further theoretical development by examining the relationship between visitors’ perceived importance of interpretation to learning and their satisfaction with the site experience. It is assumed that, when visitors place a higher importance on learning from interpretive programs, their satisfaction with the experiences at the site will also increase. The following figure (Figure 3) shows the proposed relationships so far.
Figure 3: The positive effect of perceived importance of interpretation to learning on overall satisfaction with the site experience.

Age, Gender and Repeat Visitation

Satisfaction can also be influenced by tourists’ demographic characteristics and past experience (Woodside & Lysonski, 1989). In addition to testing the relationships proposed above, this study will also investigate the effects of age, gender, and repeat visitation on visitors’ perceived importance of interpretation to learning, on satisfaction with the site-specific attributes, and on overall satisfaction. Moreover, the moderating effects of age and repeat visitation on the relationship between the two independent variables and visitors’ overall satisfaction are also examined.

Regarding the impact of tourists’ age on their levels of satisfaction with destination attributes, in their study on tourists’ satisfaction with Mallorca, Spain, Kozak and Rimmington (2000) found that tourists between the ages of 15 and 24 years old were more likely to be
satisfied with all attributes of the destination than other age categories. Master and Prideaux (2000) also found variations between various age categories, although these variations were not significant at the 0.05 level. Contrary to Kozak and Rimmington’s findings, it was found that those Taiwanese tourists to Australia aged 40 or more were generally less satisfied than younger Taiwanese tourists. Lastly, Turkish tourists of different age categories were significantly different in their ratings of various destination attributes (Ozturk & Hancer, 2009). Thus, visitors’ age can be a factor influencing their perceptions of satisfaction with visits to Parks Canada sites. Jager and Sanche (2010) note that given the fact that the Canadian population is aging and has more time and resources for travel, Parks Canada is currently evaluating their offerings and opportunities presented at national parks and national historic sites in hopes of satisfying the needs and expectations of this evolving market.

Gender has also played an influential role in tourists’ overall satisfaction. While Master and Prideaux (2000) found no significant differences between Taiwanese men and women visiting Australia in their levels of satisfaction, Huh and Uysal (2003) found that overall satisfaction varies depending on gender. This was further supported by Qu and Li (1997) who found that Mainland Chinese male visitors to Hong Kong were more satisfied than female tourists. Analysis of Turkish tourists’ levels of satisfaction revealed identical results, where male tourists were significantly more satisfied than female tourists, and rated destination factors significantly higher than females did (Ozturk & Hancer, 2009). Thus, it is also assumed in this study that the respondents’ gender will influence levels of satisfaction with the site attributes and with the overall experience.
Regarding visitation patterns, Opperman (2000) noted that repeat visitation has been a popular topic of research in marketing and tourism literature because it is less costly for tourism destinations to attract repeat visitors than first time visitors, because it is also more likely that repeat visitation will result in loyalty and in recommendations, and also because when tourists become repeat visitors it reflects their satisfaction with the destination. Ozturk and Hancer (2009) note that past travel experiences have been shown in the literature to lead to increased levels of satisfaction because once tourists have previous travel experiences at a destination they are more likely to be satisfied. This was supported by Alegre & Cladera (2006) who hypothesized that previous visits to the Balearic Islands would positively influence tourists’ overall satisfaction levels with the destination. The study findings revealed that “tourists who repeat a visit to the same area are slightly more likely to award a high mark and less likely to award a pass” (p. 295). Furthermore, Baloglu et al. (2003) found that repeat visitors scored higher on satisfaction then first-time visitors. Also, Fallon and Schofield (2004), in their investigation of UK first-time versus repeat visitor satisfaction with Orlando, Florida, found that those who were repeat visitors rated all destination attributes significantly higher than first-time visitors. The results were also confirmed by Kozak and Rimmington (2000) in their study on tourists’ satisfaction with Mallorca, Spain where significant differences between the first-time and repeat tourists in their satisfaction were found, with first-time tourists’ satisfaction levels with all attributes being lower than those who were on a repeat visit. Thus, based on the abovementioned empirical studies, this study examines the impacts of age, gender and visitation patterns on their perceived importance of interpretation to learning, their satisfaction with site and service elements, and on their overall satisfaction with experiences at Parks Canada sites.
Figure 4: The effect of visitor characteristics on perceived importance of interpretation to learning, on satisfaction with site-specific elements, and on overall satisfaction with the site experience.

Moderating Effects of Age and Repeat Visitation

Moderating variables have been of interest to researchers looking at the relationship between satisfaction and loyalty, where age and repeat visitation have been found to moderate this relationship (Matzler et al, 2008). Moderators are stable characteristics or innate attributes of visitors or tourists, or a contextual variable that modifies a causal effect (Wu & Zumbo, 2008). It is further noted that “a moderation effect is a causal model that postulates “when” or “for whom” an independent variable strongly (or weakly) causes a dependent variable (Baron & Kenny, 1986). Moreover, moderating variables should not have a major effect on the dependent variable, if so, it will then be considered an independent variable (Castaneda, Fias & Rodriguez, 2007).
Wakefield and Baker (1998) argue that age should not be treated only as predicting variable for satisfaction, but also as a moderating variable. There are several reasons why age could be a moderator related to the way needs change with age. Matzler et al., (2008) note that older customers may attribute more importance to some factors and may have a comparison standard when evaluating a service or product than younger consumers would. This was previously shown by Bryant and Cha (1996) whose analysis of the data from the American Consumer Satisfaction Index found that customer satisfaction levels were higher with older age. Moreover, age was found to be a moderator in a number of studies looking at the relationship between customer satisfaction and loyalty (i.e. Homburg & Gierging, 2001) and customer satisfaction with a restaurant experience and behavioral intentions to recommend the restaurant and to return to the restaurant (i.e. Namkung & Jang, 2009). However, when investigating the moderating effect of age in the context of customer satisfaction with alpine resorts, Matzler et al. (2008) found that “age does not have a very strong moderating effect on the relationship between single satisfaction dimensions and overall satisfaction” (p. 409). Even so, the data revealed that for younger skiers, quality and safety were not important. These attributes become more important as people got older.

Lastly, the visitation pattern (first time vs. repeat visitors) was also found to moderate the relationship between satisfaction and intentions to repurchase in the context of cruise passengers (Petrick, 2004), and the relationship between satisfaction with the alpine ski resort attributes and overall satisfaction with experiences (Matzler et al., 2008). Specifically, Matzler et al. found that repeat tourists to the alpine ski resort paid more attention to the variety of slopes than those who were there only for the day, thus moderating the relationship between attribute
satisfaction and overall satisfaction with their experiences at the resort. Repeat visitation was found to partially moderate the relationship between restaurant customers’ perceived physical environment quality and satisfaction (Ryu & Han, 2011). It was found that, when comparing to first-time consumers, the repeat visitors’ perception towards the quality of restaurant attributes was a better predictor of their satisfaction with the restaurant experience. This could be because of the past experience itself which allowed for more salient perceptions, compared to the first time visitors who might base their perceptions on prior expectations of the experience outcome. The moderating effects of age and repeat visit could provide a better understanding of the relationships between perceived importance of interpretation to learning and overall satisfaction with the Parks Canada site experiences, and that between their satisfaction with the site-specific attributes and overall satisfaction with Parks Canada site experiences.
Figure 5: The moderating effects of age, and repeat visitation on the relationships between the IVs an overall satisfaction with the site experience.
CHAPTER FOUR: METHODOLOGY

Methodological Framework

This study is guided by a post-positivist framework. Henderson (2011) argues that using post-positivism in leisure studies can “enable researchers to expand their options for data collection and will also underline pragmatic need to conduct research and examine findings that work” (p.342). Crotty (1998) notes that post-positivism challenges the claims to objectivism and absolute precision, providing a less arrogant form of positivism where the truth is approximated and statements of truth are challenged. Furthermore, Ryan (2006) describes post-positivism as a broad epistemology that brings together theory and practice, and which recognizes that many different techniques can be used to collect and analyze the data. This is because of the acknowledgement that social sciences are fragmented, and that knowledge is socially constructed (Henderson, 2011).

The paradigm has been previously used by researchers interested in tourist satisfaction evaluation. For example, Gale and Beeftink (2005 as cited in Handerson, 2011) used post-positivism to examine tourists’ satisfaction within the context of a tourism behaviour model, and to use a mixed method approach to data collection. Thus, post-positivism is appropriate for this study because of the analysis of secondary data gathered through the use of a questionnaire. The data analysis will result in the generalization of the findings to the population under investigation – the Parks Canada site visitors. Lastly, post-positivism is appropriate because of the assumed relationships presented in this study, relationships which have been derived based on previous knowledge, but which are further examined to reveal whether they are true.
Study Sites

Both Parks Canada sites where the data were gathered for this dissertation have been chosen due to the site managers’ interest in examining visitors’ satisfaction with their site visits. The Parks Canada website, www.pc.gc.ca, offers detailed information about all National Parks and National Historic Sites in Canada.

Port-Royal National Historic Site

On the website dedicated to Port-Royal National Historic Site, it is mentioned that the attraction features a reconstruction of 17th century buildings of a former French colony named Port-Royal. The site is located near the town of Annapolis Royal, Nova Scotia, along the Annapolis River and Basin (Figure 6). As a living museum, where costumed interpreters educate visitors about the sites’ history, Port-Royal National Historic Site offers learning experiences related to the beginnings of European colonization and settlement, French construction techniques and other survival skills used at that time. The site can be explored through self-guided tours or guided tours. Further, to preserve the cultural and historical resources, as well as to offer visitors meaningful experiences, a draft management plan has been prepared based on consultation with the public. The draft is currently awaiting consultation with the Aboriginal community in order to complete it and seek internal approval.

In 2008-2009, the site received a total of 22,805 visitors. Of these visitors, among those who responded to the VIP survey, 97% reported they were satisfied with their visit, and 67% reported they were very satisfied with their visit. Moreover, 84% of visitors who responded to the VIP survey at Port Royal National Historic Site reported that they learned about the heritage
and significant of the place while visiting the site (Parks Canada, 2009). These indicators were used by Parks Canada to assess visitors’ experiences at Port Royal National Historic Site.

**Figure 6**: Location of Sites

**Kejimkujik National Park and National Historic Site**

Kejimkujik is the only Park Canada site that is designed as both a National Park and a Historic Site. The park consists of two separate areas: the main park area located in the interior of Nova Scotia, 174 kilometres south-west of Halifax; and the Kejimkujik Seaside area located on the Atlantic Coast, 185 kilometres south of Halifax (Figure 6). Visitors to the park have the opportunity to spend the night in the park’s Jeremy’s Bay Campground, site which offers both tent and trailer camping. While at the site, visitors can visit the Visitor Reception Centre to look at the displays of local plants and animals, or can take part in interpretive guided tours to learn
more about the culture and nature of the site. The park provides visitors with opportunities to learn about the Mi’kmaq people who inhabited Kejimkujik due to its central location as a canoe route between the Bay of Fundy and the Atlantic Coast. Visitors can also learn about the activities early Europeans were involved in such as farming, logging, gold mining, and the early resort era. One of the most popular activities at Kejimkujik is hiking. The park provides a variety of trails for those interested in exploring the natural, cultural and historical significance of the park. Amongst other favourite activities at the park are biking, canoeing and kayaking, fishing, swimming, bird watching, and winter sports such as cross-country skiing and snowshoeing. Unique experiences such as Dark Sky Viewing also attracts visitors interested in exploring the universe.

The 2010 Kejimkujik National Park and National Historic Site Management Plan highlights the strategic directions of the sites. Along with the protection of natural and cultural resources, site management is devoted to provide visitors with meaningful experiences and opportunities to learn. To improve visitors’ experiences at Kejimkujik, the plan highlights the need to conduct research to evaluate visitor experiences, work with the Mi’kmaq to provide a better interpretation plan of the cultural landscape, and improving and assessing various interpretation plans, recreational opportunities, and promotional efforts. The plan also highlights visitation trends. Approximately 40,000 people visited Kejimkujik National Park and National Historic Site in 2009. The site attracted a majority of repeat visitors who came to the site for a day trip to engage in various activities such as walking, hiking, picnicking and stopping at the Visitor Centre (Parks Canada, 2010). Results of previous VIP survey revealed that, 97% reported they were satisfied with their visit, 64% reported they were very satisfied with their visit, and
52% of respondents to the survey reported they learned about the heritage and significant of the place while visiting the site (Parks Canada, 2009). Thus, by comparing the results of previous VIP survey at the two sites, it is evident visitors to Parks Canada sites are generally satisfied with the services provided at the sites, however, their reported level of learning differs based on the nature of the site. For those visiting a historic site, there are higher levels of reported learning compared to those visiting a national park, although Kejimkujik is also a historic site.

**Data Collection Instrument**

The Visitor Information Program (VIP) is a self-administered questionnaire (Appendix A and B) used by Parks Canada to collect information from a sample of visitors to various sites over a five-year period. The questionnaire includes both close-ended and open-ended questions focusing on a core set of national indicators, as well as site-specific topics chosen by local site managers. In addition to the paper questionnaire, basic demographic and visitation information are collected using a standardized tally sheet. The tally sheet provides information about differences between those who have completed the questionnaire and those who did not. The tally sheets are matched with the corresponding survey by a serial coding system.

The core national indicators on the VIP questionnaire are used to gather data about visitors’ socio-demographic profile, their levels of participation in various facilities, services and programs at the visited sites, and the level to which the sites’ national significance is understood. Another objective of the VIP survey is to determine visitors’ levels of satisfaction with a variety of aspects. Specifically, visitors’ satisfaction is assessed in two sections:
1) Satisfaction with site-specific elements

At Kejimkujik National Park and National Historic Site, visitors’ satisfaction with eight visit elements were measured: visit information prior to arrival, visitor center, washroom cleanliness, learning activities, recreational activities, family activities, Wi-Fi service, and information kiosks. At Port-Royal National Historic Site these elements were: visitor prior to arrival, washroom cleanliness, learning activities, recreational activities, and family activities. Moreover, at both sites, visitors’ satisfaction with eight Parks Canada staff service elements was assessed: staff welcome at arrival, conveying their knowledge of Kejimkujik, being courteous, providing service in your official language of choice, meeting your needs and expectations, offering personalized service, demonstrating their passion for Kejimkujik, responding to comments or complaints. All items were measured on a 5-point scale where 1 is “not at all satisfied”, and 5 is “very satisfied”.

2) Overall satisfaction with the visit experience

This section of the questionnaire assessed visitors’ satisfaction with six overall visit elements: availability of activities, availability of services, quality of activities, quality of services, condition of site facilities used, and perceived value for entry fee. The section also gave visitors the opportunity to rate their overall visit. An extra item was included for the Kejimkujik National Park and National Historic Site: value for camping fee. All elements were measured on a 5-point scale where 1 is “not at all satisfied”, and 5 is “very satisfied”.
The “perceived importance of interpretation to learning” was measured by asking respondents to indicate how important a number of interpretation programs were in contributing to their learning. At Port-Royal National Historic Sites, these items were: walk/tour delivery by staff, presentation/talk, re-enactments/demonstrations, interaction with staff, pamphlets/brochures, interpretive panels, exhibits, and self-guided tours. At Kejimkujik National Park and National Historic Site, the items were: walk/tour delivery by staff, interaction with visitor centre/kiosk staff, pamphlets/brochures, interpretive panels, exhibits, self-guided tour, interpretive programs, musical concerts, and festivals and events. All items were measured on a 5-point scale, where 1 is “not at all important” and 5 is “very important”.

Demographic variables such as gender and age; and the behavioral variable of repeat visitation were also used as variables in this study. Previous research has shown that these variables influence satisfaction (e.g., Baloglu et al., 2003; Huh & Uysal, 2003; Master & Prideaux, 2000). Respondents to the VIP survey were asked to identify their gender, to write down their year of birth, and to identify whether they were on their first visit to the site or they have visited in the past.

The current VIP survey was designed in 2009 by a Parks Canada team (van der Leest, personal communication, 2011). The content of the survey, the items and scales used, are revised in yearly meetings by social scientists based on their knowledge of the needs of the various sites being surveyed and the priorities of the national Parks Canada office. The team responsible for revising the 2009 VIP survey was chaired by a national VIP coordinator represented by a senior social scientist, along with one representative from each regional office.
(Atlantic Canada, Ontario, Quebec, and Western/Northern Canada). All representatives were either senior or intermediate level social scientists of various functions within the Agency such as statistician, economist, or market researcher. The roles of the team included coordination and provision of the survey design and the development of the questions; yet, the final decision regarding the survey design was made by the Chief Social Scientist, Dr. Brenda Jones (van der Leest, personal communication, 2011). However, Parks Canada national office has not assigned any formal responsibilities to any team or branch for leading the VIP program (Parks Canada, 2009).

Sample Size and Sampling Procedures

Any visitor to Port Royal National Historic Site and Kejimkujik National Park and Historic Site comprised the population of interest for the Visitor Information Program. Both single visitors and groups were included in the study, however, only those over the age of 17 were eligible to complete the VIP survey (Visitor Information Program Planning Report, 2011). At Kejimkujik National Park and Historic site, data gathering started on June 24th and ended on August 31st, 2011. A total of 789 completed surveys were returned. At Port-Royal National Historic Site, distribution of the survey started on June 20th and ended on August 31st, 2011, with a total of 455 surveys completed and returned. Thus, from both sites, there were a total of 1244 completed VIP surveys.

The objective for the VIP survey is to collect a sample as representative as possible of those visiting Parks Canada sites (van der Leest, personal communication, May 26, 2011). As such, a surveyor is usually positioned at the site’s point of entry to approach incoming visitors.
and ask for their participation in the survey. The “next available visitor” approach has been adopted by Parks Canada due to declining response rates (van der Leest, personal communication, May 26, 2011). When the surveyor intercepts a visitor group of two or more people, the “next birthday” sampling approach is used to ensure random sampling among group members. The surveyor introduces the group to the survey, and then asks the person in the group with the next birthday to respond to the tally sheet questions. The person who completed the tally sheet is also asked to complete the VIP survey. Thus, only one survey is distributed per visitor group. Once completed, surveys can be returned on-site, to designated deposit boxes or to any staff person. However, if respondents chose to take the survey with them and respond at a later time, the envelope has pre-paid postage, thus, providing respondents with the opportunity to mail-in completed surveys.

As a quasi-probability method, the next birthday technique was proposed by Salmon and Nichols (1983) who assumed that the occurrence of birthdays is random (as cited in Gaziano, 2005). However, Lind, Link and Oldendick (2000) found that “the informant was even more likely to nominate the wrong respondent when the Next Birthday method was applied” (p. 887) when compared to the Last Birthday method. Moreover, it was also found that the Next Birthday method included more females than males, and that it took longer per interview than other selection techniques (Salmon & Nichols, 1983 as cited in Gaziano, 2005).

The next birthday sampling technique can sometimes take longer than other methods because potential participants have to go through two separate stages. In the case of the VIP survey, the first step is an intercept survey where a respondent is asked whether he/she is willing
to participate. Upon agreement, the surveyor records their basic demographic and visitation information on a tally sheet that is standardized for all sites. At the end of the tally sheet the participants are asked whether they are willing to take a survey and complete it at the end of the visit. If they agree, the surveyor records the survey number on the tally sheet to connect the completed surveys to the corresponding demographic and visit information.

Lastly, the surveyors were trained before the VIP survey was scheduled to begin, and a survey calendar was drafted to ensure the survey is given out and respondents are selected at different times during the day, and different days during the week. This is done to ensure that all times are covered during the survey period, and that participants are recruited across all seven days of the week. At both sites, at least one or two surveyors administered the survey at least five days per week. At Port-Royal National Historic Site, the surveyor was located at the point of entry/exit of the site. At Kejimkujik National Park and National Historic Site the intercept locations included: the visitors centre (2 days per week), campgrounds (2 days per week), and the beach, Jake’s Landing, and the canteen (1 day per week). At both sites, surveying was done between operating hours, and the surveyors’ break times were staggered to help capture a more representative sample.

**Data Analysis**

To address the main purpose of this dissertation, which is the critical examination of the satisfaction measurement instrument, the data analysis process will adhere to a typical approach to analyzing satisfaction data in order to highlight the potential issues arising from using secondary data gathered for a different purpose. The results of the VIP Survey were forwarded to
the researcher by a representative of the Parks Canada Atlantic Services in October 2011. An SPSS database was produced for each site using a national standardized template to name and code each variable. The close-ended questions on the questionnaire were scanned through optical scanning equipment, while the open-ended questions were entered manually to reduce input errors. To ensure data quality, the data were checked for missing values, for potentially wrong inputs, and for outliers. Specifically, the data cleaning involved a 3-step process. In first phase errors such as lack of data, excess of data, outliers and inconsistencies are identified. The second step involves diagnosing the identified errors into missing value, normal value, extreme value, and suspect value; while the third phase involves the treatment of the data which is done either by correcting, deleting or leaving the values entered unchanged. Moreover, to make sure that there are no scanning errors, at least 10% of the completed records are inspected manually (Parks Canada, 2011).

In this study, to examine visitors’ overall satisfaction with their experiences at the two sites, a number of statistical tests were employed. First, descriptive statistics were run to get a general idea about the main characteristics and patterns in the data related to variable frequencies, means and standard deviation. Also, to assess if the data is normally distributed, the skewness of each construct was examined. Skewness is related to the symmetry of the data distribution, such that if there are many high scores the data will be positively skewed, while if there are many low scores the data is negatively skewed (Diekhoff, 1992). The acceptable values for skewness fall between -2 and +2. It is important to understand how data are distributed in a sample because extreme scores might distort statistical tests. While skewness is
generally not an issue in large data sets, the shape of the distribution of key variables should be examined (Halpenny, 2006).

The internal consistency of each variable in the model was assessed using the Cronbach alpha test. The alpha minimum standard is somewhat debated in the literature, with some researchers accepting only values above .80 (Kozak & Rimmington, 2000; Nunally, 1978), however, a minimum standard of .70 (Nunkoo & Gursoy, 2011), and even 0.60 (Lee, Lee, & Wicks, 2004) has also been accepted. In this study, all factors with a reliability coefficient above 0.70 will be considered to be acceptable, leading to a refined scale based on reliable variables.

A variety of inferential statistics were employed following the above-mentioned step. First, correlation analyses were run to provide information about the strength of the relationship between the various variables proposed in this study’s model. Second, the results of a series of factorial analyses of variance (two-way ANOVAs) were examined to investigate the possible main and interaction effects of respondents’ age, gender and their visitation pattern on perceptions of importance of interpretation to learning, their satisfaction with the site attributes, and also their overall satisfaction with the site experience. In a third step of the data analysis, hierarchical multiple regression analysis allowed for the various relationships proposed in this study to be tested in terms of their explained variance on overall satisfaction. Multiple regression uses a number of predictors to look at their influence on a dependent variable (Diekoff, 1992). Heung and Qu (2000) note that multicollinearity should be examined to see if the independent variables are highly correlated to each other, fact which could “undermine the power of each independent variable on the variance of the dependent variable” (p. 65). Multicollinearity is
assessed by the tolerance and variable inflation factor (VIF) values for each independent variables in the model. Tolerance lies between 0 and 1.0, where a value close to 0 indicates that a variable is almost a linear combination of the other independent variables (Chan, 2004). Acceptable tolerance range is above .30. The VIF value is the reciprocal of tolerance and is thus computed as 1/tolerance. Only variables with VIF values below the threshold of 10 were kept in the analysis (Heung & Qu, 2000; Ho, 2006, Nunkoo & Gursoy, 2011).

Multiple regression analysis was employed in a number of satisfaction studies looking at tourists satisfaction with hospitality services (Pizam & Ellis, 1999), with tourism destinations (Kozak & Rimmington, 2000), and tourism attractions (McMullan & O’Neill, 2010). Kozak and Rimmington (2000) tested the influence of several independent variables on tourists’ overall satisfaction with Mallorca, Spain. The model accounted for 71% of the variation in the dependent variable. Also, Heung and Cheng (2000) used multiple regression analysis to look at the influence of predicting variables (destination attributes grouped in eight factors) on tourists’ overall satisfaction with Hong Kong. Specifically, the main factors affecting overall satisfaction were: Accommodation and food $\beta=0.265$, People $\beta=0.191$, Price $\beta=0.161$, and Culture $\beta=0.108$. The standardized estimates $\beta$ of each variable show the relative importance of variables in the model, thus, the larger the $\beta$, the higher the importance of the independent variable on the dependent variable. $R^2$ was 0.264 which suggested that 26% of the variation in Japanese tourists’ overall satisfaction was explained by the eight travel dimensions. Also, the F-ratio of 42.427 ($p<0.001$) meant that the results of the regression model did not occur by chance.
Lastly, the moderating effects of age and repeat visitation on the relationships between visitors’ perceived importance of interpretation to learning and their overall satisfaction with the site experience, and the relationship between visitors’ satisfaction with the site-specific attributes and their overall satisfaction with the site experience were tested as part of the hierarchical multiple regression analyses. Frazier, Tix and Barron (2004) note that multiple regression should be used to test moderating effects when the moderator variable is categorical and, especially when it is continuous, because retaining the true nature of the variable can result in fewer Type I and Type II errors for detecting moderator effects. Hierarchical multiple regression has been previously used to examine interaction effects in customer behaviour studies looking at the interaction effects of service satisfaction, value attainment and positive mood (de Ruyter & Bloemer, 1999), and also in studies related to tourism services examining the moderating effect of “evaluation of fellow customers” on the relationship between “customer-to-customer interaction incidents” and customer satisfaction (Wu, 2007).

Use of Secondary Data Sets

Secondary data sets refers to data that has already been collected by public or private agencies, and it is made available to other researchers interested in analyzing the data to examine and test various hypotheses (Vartanian, 2011). There are numerous advantages and disadvantages of using secondary data sets in research. In a technologized world, where information is easily shared, the use of secondary data has increased and, Leskies (1998) argues that many doctoral students choose to use already collected data for their doctoral dissertations.
Some of the advantages related to using secondary data sets include cost and time effectiveness compared to having to gather primary data. The design of the questionnaire, the printing of the questionnaire, as well as the time need to gather the data, and input the data, can take a considerable amount of money and time. Also, a researcher is likely to gather a smaller sample than an agency would. With larger data sets, there is a higher likelihood of representation of the population, as well as the opportunity to perform more advanced statistical analyses (Vartanian, 2011). Moreover, Leskies (1998) notes that secondary data sets would provide researchers with opportunities to conduct longitudinal research, as well as to conduct comparisons between various groups. This is true in the context of this research, where the secondary data sets will provide information on the similarities and differences between the two Parks Canada sites used in this study to examine the measurement of satisfaction.

However, while the advantages of secondary data sets are very practical, the disadvantages of using secondary data sets tend to be more conceptual. A major disadvantage of using secondary data sets is that the data was not collected for the same purpose researchers intend to use it. The lack of involved in the creation of the questionnaire, in the type of questions being asked, or the scale being used to measure the construct of interest could become problematic: “…if variables or constructs were not defined or measured in the same way as a student would prefer, he or she faces limitations based on poor, unacceptable, or even unavailable indicators” (Leskies, 1998, p. 159). Especially in the context of researching satisfaction, where the conceptualization and measurement of satisfaction differs, it could be that the items and questions on the already constructed measurement instrument do not actually measure satisfaction. Vartanian (2011) notes that some surveys may be only skimming the
surface of a concept, asking very broad questions, while the research questions might be looking for more specific aspects of the concept under research. As such, a survey might be limited to only a few mutually exclusive categories, which will not allow the researcher to get an insight into the nuances of customer satisfaction.

Secondary data sets have been previously used by researchers interested in measuring consumer satisfaction. For example, Fuller and Matzler (2008), in their research on the factors affecting satisfaction in various lifestyle segments, used the data from the “Tourism Quality Check” study which gathers customer satisfaction ratings with over ten alpine ski resorts in Europe. The measurement instrument included 34 times related to various aspects of the ski resort, all rated on a scale from 1 (very satisfied) to 5 (very unsatisfied). Also, overall satisfaction was also measured on a 5-point-scale. Also, Hasegawa (2010) used the data from the Annual Report on the Survey of Tourists’ Satisfaction 2002 to examine the attributes affecting tourists’ overall satisfaction in Hokkaido, Japan. Respondents were also asked to report their levels of satisfaction on a scale from 1 (very dissatisfied) to 5 (very satisfied), on a number of items related to their satisfaction with the food, the souvenir items, accommodations, service, transportation facilities, tourist facilities, view, and also their overall satisfaction. In both cases, no issues related to the use of secondary data sets are discussed by the researchers. Furthermore, He and Song (2009) also utilized the data from a 9-year long HKCSI survey focused on consumers’ ratings of the quality of products sold in Hong Kong, to examine the mediating role of satisfaction on the relationship between quality perceptions and repurchase intentions. Hence, secondary data sets have been identified by researchers to be valuable resources of information for examining customers’ satisfaction in a variety of hospitality and tourism settings.
CHAPTER FIVE: FINDINGS

The following chapter presents the results of using typical analyses to examine visitors’ satisfaction, analyses used to explore the various relationships proposed in the hypothetical conceptual framework. The analyses results are presented as if there is complete confidence in the measurement instrument used to examine visitor satisfaction. This is done to later highlight the many issues which can arise from the use of secondary data sets. In the first section, the characteristics of the sample are presented, along with a description of the main variables examined in the study. This section also discusses the reliability of each variable. The relationships between the variables of interest in this study are examined using correlation analyses, a series of factorial analyses of variance (ANOVA), and hierarchical multiple regression. The findings are presented in two sections, one focused on the analyses results of the Port Royal National Historic Site dataset, and the following one focused on the analysis of the Kejimkujik National Park and National Historic Site dataset.

Port Royal National Historic Site

Treatment of Data

The report following the VIP at Port Royal National Historic Site, notes 1049 visitors accepted filling out the questionnaire at interceptions. Of these, 524 visitors returned completed questionnaires, resulting in a response rate of 50%. Although Parks Canada goes through a process of data cleaning as highlighted previously, the data were screened when received to identify any errors that might affect the analysis and interpretation of variables. The frequencies, means, and standard deviations were investigated to identify any data entry errors.
Although in large samples (over 200 cases), skewness and kurtosis are not generally a problem, Tabachnick and Fidell (2001) recommend an examination of the shape of distributions from the key variables. This was also done due to the nature of satisfaction related distributions which researchers note tend to be negatively skewed (Peterson & Wilson, 1992). An explanation of the treatment of items which presented low variability is presented in the following section. Lastly, an analysis of the frequency of the variable “age” revealed that four respondents were under the age of 17. Thus, four questionnaires have been removed from the total sample, resulting in a sample of 520 respondents.

**Description of Sample**

**Table 1** summarizes the characteristics of the Port Royal National Historic Site sample. Of the 520 visitors who responded to the VIP survey at Port Royal National Historic Site, the majority of 300 respondents were females (60.4%), and 197 respondents were males (39.7%), with 23 respondents (4.4%) not disclosing their gender. In terms of their age, the average age of visitors to Port Royal National Historic site is 54 years old ($\bar{X} = 53.70$), with the youngest two respondents being 18 years old (.4%) and the oldest respondent being 81 years old (.2%). Twenty-six respondents (4.96%) did not report their year of birth. The variable “age” used in this study was calculated based on the year of the study (2011) minus the respondents’ declared year of birth.

Regarding their visitation patterns, 76 % of the respondents were visiting Port Royal National Historic site for the first time (n=395), while 23% (n=115) were at the site on a repeat visitation. Fourteen (2.7%) of respondents did not answer whether they were visiting the site for
the first time or they were on a repeat visit. The repeat visitation items have been recoded so that those who responded that it was their first time visiting were recoded “0” to denote the fact that they have never visited the site before. On the other hand, the respondents who answered that they have been at the site this year, in previous years, or this year and previous years, have all been recoded into “1” to denote the fact that they were returning visitors.

Table 1: Demographic and Behavioral Characteristics of Visitors to Port Royal National Historic Site

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Gender</th>
<th>Repeat Visitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>498</td>
<td>197</td>
<td>391</td>
</tr>
<tr>
<td>%</td>
<td>95.8</td>
<td>39.6</td>
<td>77.3</td>
</tr>
<tr>
<td>Mean</td>
<td>53.70</td>
<td>60.4</td>
<td>22.7</td>
</tr>
<tr>
<td>SD</td>
<td>13.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max</td>
<td>89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Description of Model Variables

The following section describes the characteristics of each of the variables included in the conceptual framework related to Port Royal National Historic Site. The characteristics of the independent items in each the composite measures are presented in terms of mean, standard deviation, and skewness. The internal validity of the scale items is also examined as reflected by the reliability coefficient beta (β).
Importance of Interpretation to Learning

The importance of interpretation to learning was assessed in the VIP survey at Port Royal National Historic Site by asking respondents to rate the perceived importance of eight different interpretation items measured on a 5-point scale where 1 is “Not at all important” and 5 is “Very important”. These items were: “walk tour delivered by staff”, “presentation talk”, “reenactments/demonstrations”, “interaction with staff”, ”pamphlets/brochures”, “interpretive panels”, “exhibits”, and “self-guided tours”. While not all respondents answered each of the items related to their satisfaction with the interpretation elements, responses varied from 209 respondents (40%) for the “reenactments/demonstrations” item, to 466 respondents (90%) for the “interaction with staff”.

The first step in computing the independent variable named “importance of interpretation to learning” was to examine the score distributions of each item related to interpretation. Based on descriptive statistics, those items with skewness higher than 2 and lower than -2 were eliminated. This resulted in the elimination of four items: “presentation talk” (\(\bar{X}=4.60, \text{SD}=0.71\)), “interaction with staff”( \(\bar{X}=4.62, \text{SD}=0.70\)), and “exhibits” (\(\bar{X}=4.61, \text{SD}=0.68\)). Based on the elimination of the non-normal data, the composite measure “importance of interpretation to learning” resulted being composed of five items with normal distribution of scores: “walk/tour delivered by staff”, “reenactments/demonstrations”, “pamphlets/brochures”, “interpretive panels”, and “self-guided tours”. The mean values range from \(\bar{X}=4.58, \text{SD}=0.76\) for “walk/tour delivered by staff” (n=280), to \(\bar{X} = 4.17, \text{SD}=1.09\) for “reenactments/demonstrations” (n=209), which suggests that respondents perceived the interaction with staff to be the most important in contributing to their learning, and the latter the least important contributor to their learning. The
distributions of the scores of these items are all negatively skewed, which indicates that respondents tend to rate the importance of the items to learning higher than the mean score, with fewer lower scores.

The composite measure named “importance of interpretation to learning” consists of the five items presented in Table 2. A total of 404 respondents (78%) of those who responded to the VIP survey, answered to at least three of the five items in the composite measure named “importance of interpretation to learning”. On a scale from 1 to 5, where 1 is “Not important at all” and 5 is “Very important”, the respondents generally found that the different interpretation services were relatively important to their learning ($\bar{x}=4.31$, SD=0.62). The values for skewness fell within the acceptable range, indicating the normality of the composite measure. Moreover, Cronbach’s alpha for this scale was 0.65.

Table 2: Descriptive Statistics for Importance of Interpretation to Learning

<table>
<thead>
<tr>
<th>Service</th>
<th>n</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Skewness</th>
<th>Reliability coefficient ($\alpha$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk/tour delivered by staff</td>
<td>280</td>
<td>4.58</td>
<td>0.76</td>
<td>-1.89</td>
<td></td>
</tr>
<tr>
<td>Re-enactments/demonstrations</td>
<td>209</td>
<td>4.17</td>
<td>1.09</td>
<td>-1.43</td>
<td></td>
</tr>
<tr>
<td>Pamphlets/brochures</td>
<td>430</td>
<td>4.22</td>
<td>0.90</td>
<td>-1.05</td>
<td></td>
</tr>
<tr>
<td>Interpretive panels</td>
<td>398</td>
<td>4.20</td>
<td>0.91</td>
<td>-1.04</td>
<td></td>
</tr>
<tr>
<td>Self-guided tours</td>
<td>417</td>
<td>4.38</td>
<td>0.87</td>
<td>-1.61</td>
<td></td>
</tr>
<tr>
<td>Importance of interpretation to learning</td>
<td>404</td>
<td>4.31</td>
<td>0.62</td>
<td>-0.89</td>
<td>0.65</td>
</tr>
</tbody>
</table>
Satisfaction with Site-Specific Attributes

Visitors’ satisfaction with 13 different site elements and service elements at Port Royal National Historic site was measured using the same 5-point scale. These site and service elements were: “information prior to arrival”, “washroom cleanliness”, “learning activities”, “recreational activities”, “family activities”, “staff welcome at arrival”, “staff conveying their knowledge of the site”, “staff being courteous”, “staff providing service in your official language of choice”, “staff meeting your needs and expectations”, “staff offering personalized service”, “staff demonstrating their passion for this site”, “staff responding to comments or complaints”.

Descriptive statistics revealed that, specifically with the items related to the staff services elements, there was very little variability between the scores, with most respondents rating the staff services 5 “very satisfied”. A closer look at the histograms and the skewness of each item, led to the elimination of nine items that showed very little to no variability of responses. These items were: “staff welcome at arrival” ($\bar{X}=4.90$, $SD=.34$), “staff conveying their knowledge of the site” ($\bar{X}=4.90$, $SD=.43$), “staff being courteous” ($\bar{X}=4.92$, $SD=.32$), “staff providing service in your official language of choice” ($\bar{X}=4.90$, $SD=.50$), “staff meeting your needs and expectations” ($\bar{X}=4.80$, $SD=.52$), “staff offering personalized service” ($\bar{X}=4.70$, $SD=.66$), “staff demonstrating their passion for this site” ($\bar{X}=4.80$, $SD=.55$), “staff responding to comments or complaints” ($\bar{X}=4.90$, $SD=.40$). The skewness values for all of the above fell well beyond -2 and 2, another factor that led to the elimination of these variables.
The remaining items left with normally distributed scores were: “visit information prior to arrival”, “washroom cleanliness”, “learning activities”, “recreational activities”, and “family activities” (Table 3). Respondents’ perceptions of satisfaction with the site elements ranged from $\bar{X}=4.62$, $SD=0.65$ for the satisfaction with the “washroom cleanliness” (n=352), to $\bar{X}=4.17$, $SD=1.00$ for the satisfaction with the “recreational activities” at the site (n=149). Regarding the composite measure of “satisfaction with site elements”, 44% (n=231) of those who returned the completed VIP survey answered to at least three of the five questions related to the composite measure of “satisfaction with site and service elements”. These respondents were relatively satisfied with the site elements ($\bar{X}=4.35$, $SD=0.65$). The Cronbach’s alpha for this scale is 0.83.

Table 3: Descriptive Statistics for Satisfaction with Site-Specific Attributes

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Skewness</th>
<th>Reliability coefficient (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit information prior to arrival</td>
<td>354</td>
<td>4.28</td>
<td>0.85</td>
<td>-0.94</td>
<td></td>
</tr>
<tr>
<td>Washroom cleanliness</td>
<td>352</td>
<td>4.62</td>
<td>0.65</td>
<td>-1.86</td>
<td></td>
</tr>
<tr>
<td>Learning activities</td>
<td>318</td>
<td>4.35</td>
<td>0.82</td>
<td>-1.13</td>
<td></td>
</tr>
<tr>
<td>Recreational activities</td>
<td>149</td>
<td>4.17</td>
<td>1.00</td>
<td>-1.18</td>
<td></td>
</tr>
<tr>
<td>Family activities</td>
<td>131</td>
<td>4.31</td>
<td>0.89</td>
<td>-1.30</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with Site-specific Attributes</td>
<td>231</td>
<td>4.35</td>
<td>0.65</td>
<td>-1.16</td>
<td>0.83</td>
</tr>
</tbody>
</table>
Overall Satisfaction with the Site Experience

The dependent variable in the conceptual framework proposed in this model, “overall satisfaction” is a composite measure of the items presented in Table 4. The original scale measuring visitors’ overall satisfaction had eight items: “availability of activities”, “availability of services”, “quality of activities”, “quality of services”, “conditions of the site facilities you used,”, “value for entry fee”, and “your overall visit”. However, due to the non-normality exhibited, three items were eliminated: “conditions of the site facilities you used” (\( \bar{X}=4.82, \ SD=.41 \)), “value for entry fee” (\( \bar{X}=4.80, \ SD=.54 \)), and “your overall visit” (\( \bar{X}=4.80, \ SD=.52 \)). The first item eliminated presented a skewness value of -2.25, the second item’s skewness value was -3.32, while the third item presented a skewness of -2.50. Looking at the frequency of responses, it was revealed that around 80% of the respondents who answered these items, responded they were “very satisfied” resulting in little variability of scores.

Thus, the four items left and used for further analysis were: “availability of activities”, “availability of services”, “quality of activities”, and “quality of services”. Regarding the individual scale items, descriptive analysis revealed that visitors levels of satisfaction with the “quality of services” were the highest (\( \bar{X}=4.63, \ SD=0.61, \ n=395 \)), while they were less satisfied with “availability of activities” (\( \bar{X}=4.20, \ SD=0.93, \ n=290 \)). In terms of visitors’ overall satisfaction, the data revealed that visitors were generally satisfied with their visits to Port Royal National Historic Site (\( \bar{X}=4.42, \ SD=0.69 \)). These results are based on responses from 54% of visitors who returned the VIP survey (\( n=282 \)) and who answered at least three of the four items in the composite measure named “overall satisfaction”. Also, the Cronbach alpha reliability test confirmed that the scale was internally reliable at \( \alpha=0.89 \).
Table 4: Descriptive Statistics for Overall Satisfaction with the Site Experience

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Skewness</th>
<th>Reliability coefficient (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of activities</td>
<td>290</td>
<td>4.20</td>
<td>0.93</td>
<td>-0.97</td>
<td></td>
</tr>
<tr>
<td>Availability of services</td>
<td>390</td>
<td>4.49</td>
<td>0.75</td>
<td>-1.51</td>
<td></td>
</tr>
<tr>
<td>Quality of activities</td>
<td>275</td>
<td>4.39</td>
<td>0.83</td>
<td>-1.34</td>
<td></td>
</tr>
<tr>
<td>Quality of services</td>
<td>395</td>
<td>4.63</td>
<td>0.61</td>
<td>-1.71</td>
<td></td>
</tr>
<tr>
<td>Overall Satisfaction with the Site Experience</td>
<td>282</td>
<td>4.42</td>
<td>0.69</td>
<td>-1.34</td>
<td>0.89</td>
</tr>
</tbody>
</table>

Relationships amongst Model Variables

Inter-construct Correlation

Table 5 shows the relationships between the six variables examined in this study. Pearson’s Product Correlation Coefficient ($r$) lies between 0 and ±1, where 0 means there is no correlation between the constructs, and ±1 means there is a perfect positive or negative correlation between the variables. “Age” shared significant correlations only with “gender” ($r = -0.090, p ≤ 0.05$). This relationship was a small negative correlation which implies that as age increases, there are more females than male respondents in the study. No significant relationships exist between “gender” and the other variables, or between “repeat visitation” and the study’s main constructs.
Table 5: Correlation among Model Variables – Port Royal National Historic Site

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Gender</th>
<th>Repeat visitation</th>
<th>Importance of interpretation to learning</th>
<th>Satisfaction with site-specific attributes</th>
<th>Overall satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender a</td>
<td></td>
<td>.090*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat visitation b</td>
<td></td>
<td></td>
<td>.066</td>
<td>.064</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Importance of interpretation to learning</td>
<td>.091</td>
<td>.092</td>
<td>.038</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction with site-specific attributes</td>
<td>-.011</td>
<td>.063</td>
<td>-.19</td>
<td>.543**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>.071</td>
<td>.001</td>
<td>-.44</td>
<td>.381**</td>
<td>.581**</td>
<td>1</td>
</tr>
</tbody>
</table>

a: binary variable where male=0, female=1
b: binary variable where first time visitation=0, repeat visitation=1
*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

Significant relationships exist between the three different composite measures of the study: “importance of interpretation to learning” and “satisfaction with site-specific attributes” as the independent variables, and “overall satisfaction” as the dependent variable. The strongest correlation was found between “satisfaction with site-specific attributes” and “overall satisfaction” ($r = .581$, $p \leq 0.01$), followed by the relationship between “importance of interpretation to learning” and “satisfaction with site-specific attributes” ($r = .543$, $p \leq 0.01$). The weakest relationship was found between “importance of interpretation to learning” and “overall satisfaction” ($r = .381$, $p \leq 0.01$). These results indicate that higher levels of respondents’ perceived importance of interpretation to learning leads to a higher level of satisfaction with the site-specific attributes at Port Royal National Historic Site. Also, higher levels of satisfaction
with the site-specific attributes lead to a higher satisfaction level with the overall visit and experience at Port Royal. This is not surprising as visitors’ satisfaction with the various services and elements at the site would be related to their perceptions of how satisfactory their experiences at the site were. Also, respondents’ levels of satisfaction with the site-specific attributes is more strongly related to higher levels of overall satisfaction than their perceived importance of interpretation to learning is related to overall satisfaction with their visits. This could be because, when thinking about their overall experience at the site, visitors do not necessarily think about the importance of interpretive programs to learning, if this was not a primary motivator for visiting the site.

The significant correlations between the composite measures of interest in this study support the study’s assumptions that satisfaction with site attributes, and higher perceptions of importance of interpretation to learning would lead to higher levels of overall satisfaction with experiences. However, this conclusion is taken with caution due to the negatively skewed nature of data that can affect the strength and significance of correlations. However, it was interesting to note the lack of significant correlation between the demographic and behavioral variables and the composite constructs. While the independent variables of age, gender and repeat visitation do not seem to be significantly correlated with the other variables of interest, the following section examines if their combined effect has a main or interaction effects on visitors’ satisfaction with site attributes, their perceived importance of interpretation to learning, and on their overall satisfaction with their experiences at Port Royal National Historic Site.
Factorial Analyses of Variance (ANOVA)

A series of two-way ANOVAs were run to further investigate the effects of age, gender and repeat visitation on not only the dependent variables of overall satisfaction with the site experience, but also on visitors’ perceived importance of interpretation to learning and on their satisfaction with the site attributes. Moreover, in the correlation analysis, the relationships between age and the other variables was investigated with respondents’ age in years. The subsequent analyses are looking at the possible effects of age categories on the various variables of interests. To do so, the variable of “age” initially measured in years, was recoded into five age categories as follows: 17-29 years old, 30-39 years old, 40-49 years old, 50-59 years old, and 60 and over. Frequencies of the newly-formed age categories revealed that the majority of respondents (39%) visiting Port Royal were 60 years old and above (n=194), followed by those 50 to 59 years old (24%) (n=120). The smallest age category (5.8%) was represented by those between the ages of 17 and 29 years old (n=29).

In the first ANOVA, the main and interaction effects of age and gender on visitors’ perceptions of the importance of interpretation to learning were examined (Table 6a). A second analysis looked at the possible main and interaction effects of age and gender on visitors’ satisfaction with the site-specific attributes (Table 6b). In a third analysis, the main and interaction effects of age and gender on the dependent variable of overall satisfaction with the site experience were examined (Table 6c).
Table 6a: Two-way ANOVA test on importance of interpretation to learning by gender and age

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.709</td>
<td>1.905</td>
<td>.168</td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>.417</td>
<td>1.119</td>
<td>.347</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>4</td>
<td>.502</td>
<td>1.349</td>
<td>.251</td>
</tr>
</tbody>
</table>

Table 6b: Two-way ANOVA test on satisfaction with site-specific attributes by gender and age

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.186</td>
<td>.439</td>
<td>.508</td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>.611</td>
<td>1.443</td>
<td>.221</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>4</td>
<td>.006</td>
<td>.015</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Table 6c: Two-way ANOVA test on overall satisfaction with site experience by gender and age

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.111</td>
<td>.227</td>
<td>.634</td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>.227</td>
<td>.467</td>
<td>.760</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>4</td>
<td>.538</td>
<td>1.105</td>
<td>.355</td>
</tr>
</tbody>
</table>

When looking at the extent to which gender and age combined to explain visitors’ perceived importance of interpretation to learning, their satisfaction with the site-specific attributes, or their overall satisfaction with their experiences at Port Royal National Historic Site, both factors showed no significant main or interaction effects on none of the dependent variables examined (p > .05).
Another set of three ANOVAs were run to further investigate the combined effects of age and repeat visitation on the three dependent variables (*Table 7a, 7b, 7c*). However, again, repeat visitation and age do not have any significant main effects or interaction effects on visitors’ perceived importance of interpretation to learning, on their satisfaction with the site-specific attributes, or on their overall satisfaction with their experiences at Port Royal National Historic Site (p > .05).

*Table 7a: Two-way ANOVA test on importance of interpretation to learning by age and repeat visitation*

<table>
<thead>
<tr>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>.457</td>
<td>1.197</td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>1</td>
<td>.308</td>
<td>.807</td>
</tr>
<tr>
<td>Interaction Effects</td>
<td>4</td>
<td>.127</td>
<td>.333</td>
</tr>
</tbody>
</table>

(*age X repeat visitation)*

*Table 7b: Two-way ANOVA test on satisfaction with site-specific attributes by age and repeat visitation*

<table>
<thead>
<tr>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>1</td>
<td>.429</td>
<td>1.008</td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>4</td>
<td>.038</td>
<td>.090</td>
</tr>
<tr>
<td>Interaction Effects</td>
<td>4</td>
<td>.273</td>
<td>.640</td>
</tr>
</tbody>
</table>

(*age X repeat visitation)*
Table 7c: Two-way ANOVA test on overall satisfaction with site experience by age and repeat visitation

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>1</td>
<td>.153</td>
<td>.308</td>
<td>.873</td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>4</td>
<td>.045</td>
<td>.090</td>
<td>.764</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong> (age X repeat visitation)</td>
<td>4</td>
<td>.053</td>
<td>.106</td>
<td>.980</td>
</tr>
</tbody>
</table>

Lastly, although the correlation analysis revealed that there is no relationship between gender and the model variables, or repeat visitation and the model variables, three more ANOVA analyses were run to investigate if the combined effect of gender and repeat visitation have a significant main or interaction effect on visitors’ perceived importance of interpretation to learning, their satisfaction with the Port Royal site attributes, and finally on their overall satisfaction with their experiences at Port Royal National Historic Site (Table 8a, 8b, 8c).

Table 8a: Two-way ANOVA test on importance of interpretation to learning by gender and repeat visitation

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.362</td>
<td>.938</td>
<td>.333</td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>1</td>
<td>.285</td>
<td>.739</td>
<td>.391</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong> (gender X repeat visitation)</td>
<td>1</td>
<td>.253</td>
<td>.656</td>
<td>.419</td>
</tr>
</tbody>
</table>
Table 8b: Two-way ANOVA test on satisfaction with site-specific attributes by gender and repeat visitation

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.156</td>
<td>.370</td>
<td>.544</td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>1</td>
<td>.006</td>
<td>.014</td>
<td>.905</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>1</td>
<td>.077</td>
<td>.183</td>
<td>.669</td>
</tr>
</tbody>
</table>

Table 8c: Two-way ANOVA test on overall satisfaction with site experience by gender and repeat visitation

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.215</td>
<td>.447</td>
<td>.504</td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>1</td>
<td>.361</td>
<td>.753</td>
<td>.386</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>1</td>
<td>.553</td>
<td>1.151</td>
<td>.284</td>
</tr>
</tbody>
</table>

Similar to the results of previous ANOVA analyses looking at the main and interaction effects of age, gender and repeat visitation on the three dependent variables, the results of the final three ANOVA analyses reveal again no significant main or interaction effects of gender and repeat visitation on visitors’ to Port Royal perceived importance of interpretation to learning, on their satisfaction with the site attributes, or on their overall satisfaction with their experiences at Port Royal National Historic Site (p > .05). Therefore, Port Royal visitors’ perceived importance of interpretation to learning, their satisfaction levels with the site attributes, and lastly their
satisfaction with the experience at Port Royal are all independent from the effect of their age, gender or whether they were visiting the site for the first time, or as repeat visitors. Lastly, a test of homogeneity of variance (Lavene’s statistic) yielded significant levels >.05 for all previous ANOVA analyses, indicating that variances can be regarded as homogeneous for all groups.

Hierarchical Multiple Regression

To investigate the explained variance of age, gender, repeat visitation, perceived importance of interpretation to learning and satisfaction with site-specific attributes on visitors’ overall satisfaction with their experiences at Port Royal National Historic Site, hierarchical regression analysis was performed. The analysis did not control for respondents age, gender or whether they were visiting for the first time or they were returning visitors. The standardized coefficients $\beta$ are reported to indicate the amount of change that occurs in the dependent variable with each unit change in each of the independent variables. The adjusted $R^2$ values reveal whether including additional variables has a significant effect on the amount of variance explained in the dependent variable of overall satisfaction.

In the first step of the hierarchical analysis (block 1), the variation caused by age and gender on overall satisfaction with visits to Port Royal National Historic Site was investigated. In the second step (block 2), repeat visitation was added to examine the extent to which this variable explains amount of variation in overall satisfaction. In the third step of the hierarchical multiple regression (block 3), the importance of interpretation to learning and satisfaction with site-specific attributes were included. Lastly, in a fourth step (block 4), the interaction effects were added to examine the possible combined effects of age and importance of interpretation to learning, and age and satisfaction with site attributes on visitors’ overall satisfaction with their
experiences at Port Royal. Also added to this step to be investigated, were the possible interaction effects of repeat visitation when combined with visitors’ perceived importance of interpretation to learning and their satisfaction with the site attributes on perceptions of experience satisfaction. Table 9 summarizes the findings of this hierarchical multiple regression. First, while Pearson’s correlation only checks for multicollinearity between two variables, the tolerance measure was used to examine the strength of the linear relationships among all independent variables. The tolerance and VIF values for all variables fell within the acceptable range (all values tolerance >.30, all VIF values <10). The tolerance values ranged from .689 to 1.000, while the VIF values ranged from 1.000 to 1.452.
Table 9: Summary of Hierarchical Regression Analysis for Variables Predicting Overall Satisfaction – Port Royal National Historic Site (n=133)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
<th>Model 4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.040</td>
<td>.648</td>
<td>.037</td>
<td>.679</td>
<td>.049</td>
<td>.521</td>
<td>.045</td>
<td>.556</td>
</tr>
<tr>
<td>Gender *</td>
<td>.003</td>
<td>.976</td>
<td>.007</td>
<td>.993</td>
<td>.011</td>
<td>.889</td>
<td>-.019</td>
<td>.802</td>
</tr>
<tr>
<td>Repeat visitation *</td>
<td>-.031</td>
<td>.731</td>
<td>.011</td>
<td>.889</td>
<td>.014</td>
<td>.860</td>
<td></td>
<td></td>
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<tr>
<td>Importance of interpretation to learning</td>
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<td></td>
<td></td>
<td></td>
<td>.104</td>
<td>.250</td>
<td>.676</td>
</tr>
<tr>
<td>Satisfaction with site-specific attributes</td>
<td></td>
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<td></td>
<td></td>
<td>.478</td>
<td>.000</td>
</tr>
<tr>
<td>Age X Importance of interpretation to learning</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.519</td>
</tr>
<tr>
<td>Age X Satisfaction with site-specific attributes</td>
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<td></td>
<td>.335</td>
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<td>Repeat visitation X Importance of interpretation to learning</td>
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<td>Repeat visitation X Satisfaction with site-specific attributes</td>
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<td></td>
<td>.235</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>-.014</td>
<td>-.021</td>
<td>.265</td>
<td>.277</td>
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</tr>
<tr>
<td>∆ R²</td>
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<td>.001</td>
<td>.291</td>
<td>.033</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
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<td>.109</td>
<td>10.535</td>
<td>6.623</td>
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<td></td>
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<tr>
<td>p</td>
<td>.900</td>
<td>.955</td>
<td>.000</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a: binary variable where male=0, female=1
b: binary variable where first time visitation=0, repeat visitation=1
The results of the first step of the hierarchical multiple regression revealed that age and gender do not explain a significant amount of variation in the overall satisfaction of visitors to Port Royal National Historic Site ($R^2 = -.014, p = .900$). This is not surprising given that previous statistical analyses revealed that age and gender have no significant relationship to visitors’ overall satisfaction with their experiences at Port Royal. Similarly, even when the variable of repeat visitation is added in the step two of the hierarchical multiple regression, no significant amount of total variance is explain ($R^2 = -.021, p = .955$), with no significant independent contributions made by each of the variables (age, gender and repeat visitation) to the explained variance.

It is only in the third step of the multiple regression, with the addition of the constructs related to the perceived importance of interpretation to learning and satisfaction with the site attributes, that a significant amount of variation is explained ($F=10.535, p < .001$). Specifically, and additional 29% ($\Delta R^2 = .291$) more variance in visitors’ overall satisfaction with their experiences at Port Royal is explained by the addition of the two construct, for a total of 26.5% ($R^2 = .265$) variance being explained by the constructs entered in model three on visitors’ overall satisfaction with their experiences at Port Royal. While the age, gender, repeat visitation and perceived importance of interpretation to learning do not significantly affect levels of overall satisfaction ($\beta = .049, p = .521$), ($\beta = .011, p = .889$), ($\beta = .011, p = .889$), ($\beta = .104, p = .250$) respectively; one unit increase in respondents’ satisfaction with the site-specific attributes results in an increase of .478 in their overall satisfaction with their visit to Port Royal ($\beta = .478, p < .001$).
When the interaction effects were further added into the fourth model, the constructs accounted for 28% of the variance in visitors’ overall satisfaction with their experiences ($R^2 = .277$). However, only one interaction effect was found to be statistically significant. Repeat visitation was found to moderate the relationship between visitors’ satisfaction with the specific site attributes and their overall satisfaction with their experiences at Port Royal ($\beta = .235$, $p < .001$). By plotting the standardized values of the independent variable and the unstandardized value of the binary moderator (Aiken & West, 1991) (Figure 7), it was revealed that for those who are repeat visitors to Port Royal, there is a positive relationship between satisfaction with site attributes and overall satisfaction with their experiences. Thus, satisfaction with site attributes increases levels of overall satisfaction with experiences at Port Royal more for those who are on a repeat visitation than for those who are visiting for the first time. On the other hand, for those who are visiting Port Royal for the first time, there is no relationship between their satisfaction with the site attributes and overall satisfaction with the experience.
Figure 7: The moderating effect of repeat visitation on the relationship between satisfaction with site attributes and overall satisfaction with the experience (Port Royal National Historic Site)

Next, the simple slopes of X and Y were examined, thus the regression of the outcome Y (visitors’ overall satisfaction with their site experience) on the predictor X (visitors’ satisfaction with the site-specific elements) for those who are visiting Port Royal for the first time and for those who are on a repeat visitation (Preacher, Curran & Bauer, 2006). However, analysis results revealed that while the effect of those on a repeat visitation on the relationship between their satisfaction with the site attributes and overall satisfaction with the experience is about ten times larger than the effect of first visitation on the this relationship (b=0.314), (b=0.03) respectively, the independent moderating effects of repeat visitation and first time visitation on the relationship between satisfaction with the site attributes and overall satisfaction with experiences
at Port Royal National Historic Site were both not statistically significant (SE=0.27, p=0.23), 
(SE=0.27, t=0.91) respectively). Thus, while “first visitation to the site” and “repeat visitation to 
the site” are not independently significant moderators on the relationship between visitors’ 
satisfaction with the site attributes and their overall satisfaction with experiences at Port Royal, 
the composite measure of “repeat visitation” looking at visitation pattern moderates the 
relationship above-mentioned.

To conclude, the analysis of the Port Royal National Historic Site data revealed that the 
majority of site visitors were female and first-time visitors, with an average age of 53 years old. 
In terms of their perceived importance of interpretation to learning, respondents perceived the 
tour provided by the guides to be the most important interpretation service providing them with 
learning opportunities about the site. Visitors rated the cleanliness of the washroom to be the 
highest satisfactory site attributes, reinforcing the importance of washroom facilities in 
influencing visitors’ perceptions of their satisfaction with the site attributes. Lastly, Port Royal 
visitors’ satisfaction with their experiences is mostly influenced by the perceived quality of the 
services provided. This reinforces previous arguments related to the relationship between service 
quality and visitors’ satisfaction, in which customers’ satisfaction is believed to be a function of 
consumer perceptions of quality of services (Crompton & MacKay, 1989; Crompton & Love, 
1995). It is interesting to note that age, gender nor repeat visitation was correlated to, or had an 
effect on visitors’ perceived importance of interpretation to learning, their satisfaction with the 
site attributes, or their overall satisfaction with their experience. The only variable explaining 
significant variations in visitors’ overall satisfaction with their experiences at Port Royal is 
satisfaction with the site attributes. Moreover, the visitation pattern of respondents, while not 
having a significant effect when differentiating between those who were visiting for the first time
compared to those who were on a repeat visitation, was found to moderate the relationship between visitors’ satisfaction with the site elements and their overall satisfaction with experiences at Port Royal National Historic Site.

**Kejimkujik National Park and National Historic Site**

*Treatment of Data*

At Kejimkujik National Park and National Historic Site, 1464 people were approached and asked to fill in the VIP survey. Of these, 797 people returned the completed questionnaires, resulting in approximately a 74% response rate. Just like the previous data set from Port Royal National Historic Site, the responses from Kejimkujik were also examined in terms of the normality of score distribution. This resulted in the elimination of five items that had values of skewness falling above 2 and below -2. The specific items and their respective composite measures are discussed in the next section. Moreover, an analysis of the frequency of the variable “age” revealed that four respondents were under the age of 17. Thus, eight questionnaires have been removed from the total sample, resulting in 789 questionnaires being kept for analysis.

*Description of Sample*

96% of the respondents indicated their year of birth. Based on this information, the “age” variable has been computed by subtracting the respondents’ indicated year of birth from the year the data was collected (2011). Descriptive statistics revealed that the youngest respondent was 17 years old (0.1%), while the oldest respondent was 85 years old (0.1%). The average age of visitors to this site was 48 years old. The majority respondents from the Kejimkujik National Park and National Historic Site were women (56%, n=425). A large percentage (81%) of the respondents have visited the Kejimkujik National Park and National Historic Site in the past.
(n=619), while only 19% have never visited before (n=145). Again, repeat visitation has been examined in terms of respondents being first-time visitors, or repeat visitors (based on them visiting this year, in the past years, or this year and past years).

Table 10: Demographic and Behavioral Characteristics of Visitors to Kejimkujik National Park and National Historic Site

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Gender</th>
<th>Repeat Visitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>754</td>
<td>Male</td>
<td>First Time</td>
</tr>
<tr>
<td>%</td>
<td>96%</td>
<td>Female</td>
<td>Repeat</td>
</tr>
<tr>
<td>Mean</td>
<td>47.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>13.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max</td>
<td>85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Description of Model Variables

The following section examines the characteristics of each composite measure and respective items based on the responses received at Kejimkujik National Park and National Historic Site. Descriptive statistics: mean, standard deviation, and skewness, are examined to reveal those items that are not normally distributed, and that might impact the relationships between the model variables. Finally, the reliability coefficient β is noted for ensuring the internal consistency of the composite measures scales.

Importance of Interpretation to Learning

Similar to the scale used in the VIP survey for the Port Royal National Historic Site, the Kejimkujik survey asked respondents to rate their perceived importance of ten different
interpretation items to their learning. These items were: “walk/tour delivered by staff”, “presentation/talk”, “interaction with visitor centre/kiosk staff”, “pamphlets/brochures”, “interpretive panels”, “exhibits”, “self-guided tours”, “interpretive programs”. The results of descriptive statistics revealed scores from all items were normally distributed; thus, all were kept and included in the composite measure of “importance of interpretation to learning”.

Table 11 illustrates the results of descriptive statistics related to “importance of interpretation to learning” and respective scale items. Respondents perceived the “pamphlets/brochures” as being the most important contributor to what they have learned about the site ($\bar{X}=4.24$, SD=0.92, n=632), followed by “interpretive panels” ($\bar{X}=4.16$, SD=0.95). Respondents seemed to be relatively neutral in their perception of the importance of “musical concerts” as contributing to their learning of the site ($\bar{X}=3.39$, SD=1.53, n=198) and of “festivals and events” as contributors to learning ($\bar{X}=3.59$, SD=1.48). In terms of the composite measure “importance of interpretation to learning”, 202 respondents (26%) answered at least seven of the ten items. These respondents perceived interpretation items as somewhat important to their learning of the site ($\bar{X}=3.75$, SD=1.03). Cronbach alpha for the scale items of the composite measure is $\beta=0.94$ showing high internal consistency.
Table 11: Descriptive Statistics for Importance of Interpretation to Learning

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Skewness</th>
<th>Reliability coefficient (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk/tour delivery by staff</td>
<td>231</td>
<td>4.00</td>
<td>1.33</td>
<td>-1.26</td>
<td></td>
</tr>
<tr>
<td>Presentation/talk</td>
<td>275</td>
<td>4.01</td>
<td>1.32</td>
<td>-1.25</td>
<td></td>
</tr>
<tr>
<td>Interaction with visitor centre/kiosk staff</td>
<td>528</td>
<td>3.96</td>
<td>1.11</td>
<td>-1.00</td>
<td></td>
</tr>
<tr>
<td>Pamphlets/brochures</td>
<td>632</td>
<td>4.24</td>
<td>0.92</td>
<td>-1.27</td>
<td></td>
</tr>
<tr>
<td>Interpretive panels</td>
<td>554</td>
<td>4.16</td>
<td>0.95</td>
<td>-1.22</td>
<td></td>
</tr>
<tr>
<td>Exhibits</td>
<td>415</td>
<td>3.94</td>
<td>1.10</td>
<td>-1.00</td>
<td></td>
</tr>
<tr>
<td>Self-guided tours</td>
<td>453</td>
<td>4.11</td>
<td>1.04</td>
<td>-1.20</td>
<td></td>
</tr>
<tr>
<td>Interpretive programs</td>
<td>253</td>
<td>3.96</td>
<td>1.27</td>
<td>-1.20</td>
<td></td>
</tr>
<tr>
<td>Musical concerts</td>
<td>198</td>
<td>3.39</td>
<td>1.53</td>
<td>-0.50</td>
<td></td>
</tr>
<tr>
<td>Festivals and events</td>
<td>197</td>
<td>3.59</td>
<td>1.48</td>
<td>-0.80</td>
<td></td>
</tr>
<tr>
<td>Importance of interpretation to learning</td>
<td>202</td>
<td>3.75</td>
<td>1.03</td>
<td>-1.07</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Satisfaction with Site-specific Attributes

Visitors’ satisfaction with site-specific attributes at Kejimkujik National Park and National Historic Site has been measured using 16 items: “visit information prior to arrival”, “visitor centre”, “washroom cleanliness”, “learning activities”, “recreational activities”, “family activities”, “wi-fi service”, “information kiosks”, “staff welcome at arrival”, “staff conveying their knowledge of Kejimkujik”, “staff being courteous”, “staff providing services in your official language of choice”, “staff meeting your needs and expectations”, “staff offering
personalized service”, “staff demonstrating their passion for Kejimkujik”, “staff responding to comments and complaints”. Descriptive statistics revealed that three items of the 16 did not present a normal distribution of scores. These items are: “staff welcome at arrival” ($\bar{X}=4.62$, $SD=.71$), “staff being courteous” ($\bar{X}=4.70$, $SD=.65$), and “staff providing services in your official language of choice” ($\bar{X}=4.83$, $SD=.47$). All items presented skewness values higher than 2 and lower than -2.

Following the elimination of the three aforementioned items, the composite measure of “satisfaction with site-specific attributes” is based on 13 items: “visit information prior to arrival”, “visitor centre”, “washroom cleanliness”, “learning activities”, “recreational activities”, “family activities”, “wi-fi service”, “information kiosks”, “staff conveying their knowledge of Kejimkujik”, “staff meeting your needs and expectations”, “staff offering personalized service”, “staff demonstrating their passion for Kejimkujik” and “staff responding to comments or complaints (Table 12). Visitors to Kejimkujik reported the highest levels of satisfaction with the “staff meeting your needs and expectations” ($\bar{X}=4.56$, $SD=0.73$, $n=749$), followed by “recreational activities” ($\bar{X}=4.51$, $SD=0.71$), “staff conveying their knowledge of Kejimkujik” ($\bar{X}=4.50$, $SD=0.73$, $n=649$), and “visitor centre” ($\bar{X}=4.50$, $SD=0.70$, $n=586$). Visitors were less satisfied with “learning activities” ($\bar{X}=4.24$, $SD=0.84$, $n=331$) and with “washroom cleanliness” ($\bar{X}=4.05$, $SD=0.99$, $n=750$). Lastly, visitor were neutral in their satisfaction with the “wi-fi services” provided at the site ($\bar{X}=3.59$, $SD=1.43$, $n=249$).
### Table 12: Descriptive Statistics for Satisfaction with Site-specific Attributes

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Skewness</th>
<th>Reliability coefficient (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit information prior to arrival</td>
<td>485</td>
<td>4.36</td>
<td>0.82</td>
<td>-1.24</td>
<td></td>
</tr>
<tr>
<td>Visitor Centre(s)</td>
<td>586</td>
<td>4.50</td>
<td>0.70</td>
<td>-1.34</td>
<td></td>
</tr>
<tr>
<td>Washroom Cleanliness</td>
<td>750</td>
<td>4.05</td>
<td>0.99</td>
<td>-0.95</td>
<td></td>
</tr>
<tr>
<td>Learning activities</td>
<td>331</td>
<td>4.24</td>
<td>0.84</td>
<td>-1.00</td>
<td></td>
</tr>
<tr>
<td>Recreational activities</td>
<td>545</td>
<td>4.51</td>
<td>0.71</td>
<td>-1.26</td>
<td></td>
</tr>
<tr>
<td>Family activities</td>
<td>388</td>
<td>4.43</td>
<td>0.78</td>
<td>-1.43</td>
<td></td>
</tr>
<tr>
<td>Wi-Fi services</td>
<td>249</td>
<td>3.59</td>
<td>1.43</td>
<td>-0.58</td>
<td></td>
</tr>
<tr>
<td>Information Kiosks</td>
<td>528</td>
<td>4.32</td>
<td>0.78</td>
<td>-1.05</td>
<td></td>
</tr>
<tr>
<td>Staff conveying their knowledge of Kejimkujik</td>
<td>649</td>
<td>4.50</td>
<td>0.73</td>
<td>-1.60</td>
<td></td>
</tr>
<tr>
<td>Staff meeting your needs and expectations</td>
<td>749</td>
<td>4.56</td>
<td>0.73</td>
<td>-1.93</td>
<td></td>
</tr>
<tr>
<td>Staff offering personalized service</td>
<td>523</td>
<td>4.39</td>
<td>0.87</td>
<td>-1.50</td>
<td></td>
</tr>
<tr>
<td>Staff demonstrating their passion for Kejimkujik</td>
<td>639</td>
<td>4.36</td>
<td>0.88</td>
<td>-1.37</td>
<td></td>
</tr>
<tr>
<td>Staff responding to comments or complaints</td>
<td>430</td>
<td>4.40</td>
<td>0.91</td>
<td>-1.73</td>
<td></td>
</tr>
<tr>
<td><strong>Satisfaction with site-specific attributes</strong></td>
<td>333</td>
<td>4.34</td>
<td>0.55</td>
<td>-1.01</td>
<td>0.91</td>
</tr>
</tbody>
</table>
Overall, the composite measure of “satisfaction with site-specific attributes” reveals that visitors to Kejimkujik National Park and National Historic Site are relatively satisfied with the site-specific attributes provided (\( \bar{X}=4.32, \ SD=0.53 \)). The data is representative of the 34% of the total sample \( (n=267) \), which includes those respondents who answered to at least nine of the 11 items making up the composite measure of “satisfaction with site-specific attributes”. The reliability test Cronbach alpha revealed that high internal consistency \( (\beta=0.87) \), indicating the extent to which the items measure what they are intended to measure.

**Overall Satisfaction with the Site Experience**

Respondents’ overall satisfaction with their experience at Kejimkujik National Park and National Historic Site is being measured by the composite measure entitled “overall satisfaction”. Eight items were used to measure overall satisfaction: “availability of services”, “availability of activities”, “quality of activities”, “quality of services”, “condition of facilities you used”, “value for the entry fee”, “value for the camping fee” and “your overall satisfaction” (\textit{Table 13}). All these items present normally distributed scores, with satisfaction levels being the highest for “your overall visit” (\( \bar{X}=4.52, \ SD=0.64, \ n=734 \)) indicating that 93% of respondents to the VIP survey were satisfied with their overall visit at Kejimkujik. This was followed by visitors’ satisfaction with the “quality of activities” (\( \bar{X}=4.43, \ SD=0.74, \ n=553 \)), and “quality of services” (\( \bar{X}=4.41, \ SD=0.74, \ n=677 \)).

Regarding the composite measure of “overall satisfaction”, only those respondents who answered to at least six of the eight items were included in the analysis. Thus, based on 709 respondents (89%) of respondents, it is evident that visitors were generally satisfied with their
visit to Kejimkujik National Park and National Historic Site ($\bar{X}=4.32$, SD=0.62). Lastly, the Cronbach alpha coefficient beta shows high internal consistency of the scale items $\beta=0.86$.

**Table 13: Descriptive Statistics for Overall Satisfaction with the Site Experience**

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Skewness</th>
<th>Reliability coefficient ($\alpha$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of activities</td>
<td>598</td>
<td>4.38</td>
<td>0.84</td>
<td>-1.50</td>
<td></td>
</tr>
<tr>
<td>Availability of services</td>
<td>689</td>
<td>4.36</td>
<td>0.80</td>
<td>-1.30</td>
<td></td>
</tr>
<tr>
<td>Quality of activities</td>
<td>553</td>
<td>4.43</td>
<td>0.74</td>
<td>-1.40</td>
<td></td>
</tr>
<tr>
<td>Quality of services</td>
<td>677</td>
<td>4.41</td>
<td>0.74</td>
<td>-1.25</td>
<td></td>
</tr>
<tr>
<td>Condition of site facilities</td>
<td>746</td>
<td>4.28</td>
<td>0.84</td>
<td>-1.15</td>
<td></td>
</tr>
<tr>
<td>you used</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value for entry fee</td>
<td>748</td>
<td>3.95</td>
<td>1.14</td>
<td>-0.97</td>
<td></td>
</tr>
<tr>
<td>Value for the camping fee</td>
<td>669</td>
<td>4.12</td>
<td>0.98</td>
<td>-1.02</td>
<td></td>
</tr>
<tr>
<td>Your overall visit</td>
<td>734</td>
<td>4.52</td>
<td>0.64</td>
<td>-1.30</td>
<td></td>
</tr>
<tr>
<td>Overall Satisfaction with the</td>
<td>709</td>
<td>4.31</td>
<td>0.62</td>
<td>-0.92</td>
<td>0.86</td>
</tr>
<tr>
<td>Site Experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Relationships amongst Model Variables

Inter-construct Correlation

A comparison of the relationships between the study’s variables of interest for Kejimkujik National Park and National Historic Site revealed a number of significant relationships (Table 14). First, “age” is significantly related to “gender” ($r = -0.166, p \leq 0.01$), to “importance of interpretation to learning” ($r = 0.255, p \leq 0.01$), to “satisfaction with site-specific attributes” ($r = 0.168, p \leq 0.01$), and to “overall satisfaction” ($r = 0.102, p \leq 0.01$). These relationships indicate first, that as age increases, there are more female than male respondents. It is also evident that older respondents place a higher importance on the role of interpretation programs to their learning about the site, have higher levels of satisfaction with the site attributes, and present higher levels of overall satisfaction with their experiences at the site. However, this latter relationship is not as strong as the first two.

Respondents’ gender does not seem to have any significant relationships with any other constructs except for “overall satisfaction” ($r = 0.084, p \leq 0.05$). Thus, female respondents are more likely to have higher levels of “overall satisfaction” with their visit experience at Kejimkujik. On the other hand, repeat visitation is not significantly correlated to any variable investigated in this study.
Table 14: Correlation among Model Variables – Kejimkujik National Park and National Historic Site

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Gender</th>
<th>Repeat visitation</th>
<th>Importance of interpretation to learning</th>
<th>Satisfaction with site-specific attributes</th>
<th>Overall satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong> a</td>
<td>.166**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Repeat visitation</strong> b</td>
<td>.035</td>
<td>-.008</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Importance of interpretation to learning</strong></td>
<td>.255**</td>
<td>-.027</td>
<td>.060</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Satisfaction with site-specific attributes</strong></td>
<td>.168**</td>
<td>.100</td>
<td>.054</td>
<td>.539**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Overall satisfaction</strong></td>
<td>.102**</td>
<td>.084*</td>
<td>.058</td>
<td>.329**</td>
<td>.691**</td>
<td>1</td>
</tr>
</tbody>
</table>

a: binary variable where male=0, female=1
b: binary variable where first time visitation=0, repeat visitation=1
*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

Other significant relationships are noted between the three different composite measures of the study’s conceptual framework “importance of interpretation to learning”, “satisfaction with site-specific attributes”, and “overall satisfaction”. Specifically, the strongest significant relationship is between “satisfaction with site and service elements” and “overall satisfaction” (r=.691, p≤0.01). This relationship indicates that higher levels of satisfaction with site-specific attributes lead to higher levels of overall satisfaction with experiences at Kejimkujik. The second significant relationship is that between “importance of interpretation to learning” and “satisfaction with site-specific attributes” (r = .539, p≤0.01). Thus, as respondents’ perception of the importance of interpretive programs to their learning increase, their satisfaction with the site-specific attributes will also increase. This relationship is stronger than that between “importance
of interpretation to learning” and “overall satisfaction” (r = .329, p≤0.01). Thus, respondents’ levels of perceived importance of interpretation to learning is more strongly related to, and will result in higher levels of satisfaction with the site-specific attributes, than with overall satisfaction with experiences at Kejimkujik National Park and National Historic Site.

To summarize, the results of the correlation analyses looking at the relationships between the demographic and behavioral variables used in this study and the composite measures of interest, revealed that gender was significantly related only to visitors’ overall satisfaction with their experiences, and “repeat visitation” showed no correlation with any of the variables in the study. Again, due to the nature of the dataset and measurement scale oftentimes used in satisfaction studies, the strong correlations between the composite measures examined in this study could be erroneous, as high numbers of answers at the end of the 5-point satisfaction scale could influence the strength and significance of correlations.

Factorial Analyses of Variance (ANOVA)

Similar to the previous analysis of the Port Royal dataset, a series of ANOVAs were run to further investigate the possible main and interaction effects of age, gender, and repeat visitation on visitors’ perceived importance of interpretation to learning, their satisfaction with the Kejimkujik site attributes, and their overall satisfaction with experiences at Kejimkujik National Park and National Historic Site. The newly formed age categories (17 to 29, 30-39, 40-49, 50-59, and 60+) revealed additional age characteristics of those visiting. Specifically, the majority of visitors to Kejimkujik were between the ages of 40 to 49 years old (31.6%, n=239), followed by
those between the ages of 50 to 59 years old (22.2%, n=168), and by those 60 years old and older (19.7%, n=149).

Previous correlation analysis revealed that age is significantly correlated with all model variables except repeat visitation. Also, it was shown that gender is significantly correlated with overall satisfaction. To further understand the extent to which each of these two factors combined effects significantly influence the other independent variables and the dependent variable, a series of factorial analyses of variance were run. The first ANOVA analyses run are investigating the combined effects of age and gender on the other independent variables of importance of interpretation to learning, and satisfaction with the site attributes, and also on the dependent variable of visitors’ satisfaction with their experiences at Kejimkujik. The results of the analyses are presented in Tables 15a, 15b, and 15c.

Table 15a : Two-way ANOVA test on importance of interpretation to learning by gender and age

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.825</td>
<td>.808</td>
<td>.370</td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>2.808</td>
<td>2.753</td>
<td>.029</td>
</tr>
<tr>
<td>Interaction Effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(gender X age)</td>
<td>4</td>
<td>1.084</td>
<td>1.063</td>
<td>.376</td>
</tr>
</tbody>
</table>

When looking at the combined effect of age and gender on Kejimkujik visitors’ perceived importance of interpretation to learning, only age shows significant main effects. Differences between the age categories in their perception of importance of interpretation to learning were
significant (F=2.753, p=0.29). Specifically, Post Hoc analyses using Scheffe criterion reveals that the difference in the perceived importance of interpretation to learning between those 60 years old and older (X̄=4.08) and those 30 and 39 years old (X̄=3.22) is statistically significant (p=0.032). Gender does not have a main effect on visitors’ perceived importance of interpretation to learning (F=.808, p=.370), and there is no interaction effect between gender and age (F=1.063, p=.376).

A further analysis of the main and interaction effects of age and gender of visitors’ satisfaction with the Kejimkujik site attributes (Table 15b), revealed that again, age has a significant main effect (F=2.699, p=.031). Post Hoc analyses using Scheffe criterion revealed that there are no significant differences between visitors of different age categories on their satisfaction with the site attributes. Gender does not have a significant effect on visitors’ satisfaction with the site attributes (F=2.685, p=.103), and there is no significant interaction effect between age and gender on visitors’ satisfaction with the site attributes at Kejimkujik (F=.680, p=.607).

Table 15b: Two-way ANOVA test on satisfaction with the site-specific attributes by gender and age

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.722</td>
<td>2.685</td>
<td>.103</td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>.726</td>
<td><strong>2.699</strong></td>
<td><strong>.031</strong></td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>4</td>
<td>.183</td>
<td>.680</td>
<td>.607</td>
</tr>
</tbody>
</table>

88
Table 15c presents the results of the factorial analysis of variance looking at the main and interaction effects of age and gender on visitors’ overall satisfaction with their experiences at Kejimkujik National Park and National Historic Site. Results of the analysis reveals that both gender and age have a significant main effect on visitors’ satisfaction with their experiences (F=4.447, p=.035), (F=3.379 p=.009). Post Hoc analyses using Scheffe criterion revealed again that there are no significant differences between visitors of different age categories in their overall satisfaction. Lastly, there is no significant interaction effect of age and gender on visitor’s satisfaction with experiences at Kejimkujik (F=1.545, p=.188).

Table 15c: Two-way ANOVA test on overall satisfaction with the site experience by gender and age

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>1.365</td>
<td>4.447</td>
<td>.035</td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>1.243</td>
<td>3.379</td>
<td>.009</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>4</td>
<td>.568</td>
<td>1.545</td>
<td>.188</td>
</tr>
<tr>
<td>(gender X age)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following three ANOVA analyses are looking at the possible main and interaction effects of repeat visitation and age on visitors’ perceived importance of interpretation to learning, their satisfaction with Kejimkujik site attributes, and also on their overall satisfaction with their experiences at Kejimkujik. These results are presented in Tables 16a, 16b, and 16c respectively.
Table 16a: Two-way ANOVA test on importance of interpretation to learning by repeat visitation and age

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>1</td>
<td>.088</td>
<td>.088</td>
<td>.767</td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>3.240</td>
<td>3.261</td>
<td>.013</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Repeat visitation X age)</td>
<td>4</td>
<td>2.076</td>
<td>2.090</td>
<td>.084</td>
</tr>
</tbody>
</table>

When investigating the main and interaction effects of age and repeat visitation on visitors’ perceived importance of interpretation to learning, it was revealed that repeat visitation has no main effect on visitors’ perceived importance of interpretation to learning (F=.088, p=.767), however age once again had a significant main effect (F=3.261, p=.013). Post Hoc analyses using Scheffe criterion reveals that the difference in the perceived importance of interpretation to learning between those 60 years old and older (X̄=4.08) and those 30 and 39 years old (X̄=3.22) is statistically significant (p=0.033). The interaction effect of age and repeat visitation was found to be not significant (F=2.090, p=.084). Moreover, when looking at the main and interaction effects of age and repeat visitation on visitors’ satisfaction with the site attributes, no significant effects were found (Table 16b).

Table 16b: Two-way ANOVA test on satisfaction with site-specific attributes by repeat visitation and age

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>1</td>
<td>.003</td>
<td>.011</td>
<td>.918</td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>.416</td>
<td>1.503</td>
<td>.202</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Repeat visitation X age)</td>
<td>4</td>
<td>.176</td>
<td>.641</td>
<td>.633</td>
</tr>
</tbody>
</table>
The last ANOVA examined the combined effects of repeat visitation and age on visitors’ overall satisfaction with their experiences at Kejimkujik (Table 16c). Age and repeat visitation were not found to have a significant effect on visitors’ overall satisfaction with their experiences (F=1.882, p=.171), (F=2.340, F=.054). Also, the interaction effect between age and gender on visitor’s overall satisfaction with their site experience is not statistically significant (F=.325, p=.862).

*Table 16c: Two-way ANOVA test on overall satisfaction with the site experience by repeat visitation and age*

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>1</td>
<td>.698</td>
<td>1.882</td>
<td>.171</td>
</tr>
<tr>
<td>Age</td>
<td>4</td>
<td>.867</td>
<td>2.340</td>
<td>.054</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>4</td>
<td>.120</td>
<td>.325</td>
<td>.862</td>
</tr>
</tbody>
</table>

Lastly, *Tables 17a, 17b* and *17c* provide the results of the ANOVA analyses investigating the effects of repeat visitation and gender on visitors’ perceived importance of interpretation to learning, their satisfaction levels with the Kejimkujik site attributes, and also with their overall satisfaction with their experiences at Kejimkujik. The results of the analysis revealed that there are no significant main or interaction effects of repeat visitation and gender on the three variables of interest. Also, a test of homogeneity of variance (Lavene’s statistic)
yielded significant levels $>.05$ for all previous ANOVA analyses, indicating that variances can be regarded as homogeneous for all groups.

*Table 17a: Two-way ANOVA test on importance of interpretation to learning by gender and repeat visitation*

<table>
<thead>
<tr>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>1</td>
<td>1.220</td>
<td>1.136</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.743</td>
<td>.693</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>1</td>
<td>1.792</td>
<td>1.669</td>
</tr>
</tbody>
</table>

*Table 17b: Two-way ANOVA test on satisfaction with the site-specific attributes by gender and repeat visitation*

<table>
<thead>
<tr>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>1</td>
<td>.011</td>
<td>.040</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.932</td>
<td>3.298</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>1</td>
<td>.093</td>
<td>.328</td>
</tr>
</tbody>
</table>

*Table 17c: Two-way ANOVA test on overall satisfaction with the site experience by gender and repeat visitation*

<table>
<thead>
<tr>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat visitation</td>
<td>1</td>
<td>.728</td>
<td>1.961</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>.744</td>
<td>2.006</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td>1</td>
<td>.072</td>
<td>.194</td>
</tr>
</tbody>
</table>
Hierarchical Multiple Regression

Results of the hierarchical multiple regression are presented in Table 18. This analysis was conducted to determine the degree to which age, gender, repeat visitation, perceived importance of interpretation to learning and satisfaction with site-specific attributes explained variances in respondents’ overall satisfaction with their visits to Kejimkujik National Park and National Historic Site. The analysis did not control for age, gender or repeat visitation. A three-step analysis was performed where age and gender were entered in step one (block 1) because the nature of these variables would not be affected by the other independent variables. Repeat visitation was entered in step two (block 2), and perceived importance of interpretation to learning and satisfaction with site-specific attributes were entered in step three (block 3). Lastly, in the fourth step (block 4) the interaction terms were added to examine the moderating effects of age and repeat visitation. The tolerance and VIF values for all variables fell within the acceptable range (all values tolerance >.30, all VIF values <10). The tolerance values ranged from .656 to 1.000, while the VIF values ranged from 1.000 to 1.525.
### Table 18: Summary of Hierarchical Regression Analysis for Variables Predicting Overall Satisfaction – Kejimkujik National Park and National Historic Site (n=122)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
<th>Model 4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.071</td>
<td>.425</td>
<td>.065</td>
<td>.469</td>
<td>-.012</td>
<td>.858</td>
<td>.009</td>
<td>.898</td>
</tr>
<tr>
<td>Gender&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.222</td>
<td>.014</td>
<td>.226</td>
<td>.013</td>
<td>.153</td>
<td>.025</td>
<td>.163</td>
<td>.017</td>
</tr>
<tr>
<td>Repeat visitation&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.060</td>
<td>.508</td>
<td>-.013</td>
<td>.846</td>
<td>.056</td>
<td>.471</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance of interpretation to learning</td>
<td>-.051</td>
<td>.540</td>
<td>.673</td>
<td>.125</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction with site-specific attributes</td>
<td>.694</td>
<td>.000</td>
<td>-.069</td>
<td>.863</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age X Importance of interpretation to learning</td>
<td></td>
<td></td>
<td>-.056</td>
<td>.491</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age X Satisfaction with site-specific attributes</td>
<td>-.119</td>
<td>.151</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat visitation X Importance of interpretation to learning</td>
<td>-.695</td>
<td>.100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat visitation X Satisfaction with site-specific attributes</td>
<td>.724</td>
<td>.055</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R&lt;sup&gt;2&lt;/sup&gt;</td>
<td>.038</td>
<td>.033</td>
<td>.463</td>
<td>.477</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>∆ R&lt;sup&gt;2&lt;/sup&gt;</td>
<td>.054</td>
<td>.004</td>
<td>.428</td>
<td>.031</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>3.386</td>
<td>2.394</td>
<td>21.890</td>
<td>13.274</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>.037</td>
<td>.072</td>
<td>.000</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>: binary variable where male=0, female=1

<sup>b</sup>: binary variable where first time visitation=0, repeat visitation=1
Results of the first step of the hierarchical regression analysis revealed that age and gender account for 3.8% of the total variance in respondents overall satisfaction with their visit to Kejimkujik ($R^2 = .038$). This amount of variance is statistically significant amount of the total variance ($F = 3.386$, $p < .05$). While age is not a significant predictor of overall satisfaction ($β=.071$, $p = .425$), there was a significant effect of gender on overall satisfaction, with higher levels of overall satisfaction being associated with being a female (gender being a binary variable where males=0 and females=1) ($β=0.222$, $p<.05$).

In step two of the hierarchical multiple regression, repeat visitation was added as a variable influencing overall satisfaction. A total of 3.3% of total variance being explained by the three variables ($R^2 = .033$). However, this amount of variance is not statistically significant ($F= 2.394$, $p=.072$). Although being female still makes a significant independent contribution to overall satisfaction ($β = .226$, $p <0.05$), the inclusion of repeat visitation in the second model decreases the significance of the three variables combined in explaining variations in visitors’ overall satisfaction with their experiences at Kejimkujik.

However, in third step of the hierarchical multiple regression, with the inclusion of perceived importance of interpretation to learning and satisfaction with site-specific attributes, a total of 46.3% of the variance in overall satisfaction is being explained ($R^2 = .463$). The inclusion of these constructs explained an additional 43% of variance in visitors’ overall satisfaction with their experiences at Kejimkujik ($Δ R^2=.428$). A closer look at the results of step three reveals that only gender and satisfaction with site-specific attributes make an independent contribution to the variance in overall satisfaction ($β = .153$, $p ≤0.05$), ($β = .694$, $p ≤0.001$)
respectively. Satisfaction with site-specific attributes is more than four times as important as being female in increasing levels of overall satisfaction with visits to Kejimkujik National Park and National Historic Site. The results also suggest that one unit increase in respondents’ levels of satisfaction with the site-specific attributes results in an increase of overall satisfaction of .694. Moreover, age, repeat visitation and importance of interpretation to learning did not have significant effects in changes in overall satisfaction (β = -.012, p = .858), (β = -.013, p = .846), (β = -.051, p = .540) respectively.

Lastly, in the fourth step, the moderating effects of age and repeat visitation on the relationships between visitors’ perceived importance of interpretation to learning and their satisfaction with the site attributes on their overall satisfaction with their experiences at Kejimkujik were examined. Results of the analysis revealed that age and repeat visitation are not significant moderators of these relationships, with all probability values being above 0.05. However, with the significant effects of gender on visitors’ overall satisfaction (β = .163, p = .017), the fourth model explained a significant amount of variation in visitors’ overall satisfaction (F=13.274, p<.001). Specifically, all constructs in model four explained a total of 48% ($R^2 = .477$) of variation in visitors’ overall satisfaction with their experiences at Kejimkujik National Park and National Historic Site.

In conclusion, At Kejimkujik National Park and National Historic Site, there is a good balance between male and female visitors who on average are 47 years old. The vast majority of visitors are repeat visitors. These visitors perceive the pamphlets and brochure to be the most important interpretation service helping them to learn about the site. Regarding their satisfaction
with the site attributes, the respondents were the most satisfied with the staff’s ability to meeting visitors’ needs and expectations, while their overall visit was the most influential factor in their satisfaction with their experiences at Kejimkujik National Park and National Historic Site.

Analysis of the various relationships between the study’s variables revealed that visitors’ age was related to most of the other factors expect with repeat visitation. As a matter of fact, when visitors are grouped into age categories, age had multiple main effects on visitors’ perceived importance of interpretation to learning, their satisfaction with the site attributes, and their overall satisfaction. Moreover, hierarchical multiple regression revealed that at Kejimkujik, visitors’ gender (being female) explains a significant amount of variance in visitors’ overall satisfaction with their experiences. So did visitors’ satisfaction with the Kejimkujik site-specific attributes. Although visitors’ perceived importance of interpretation to learning was found to be statistically correlated to visitors’ overall satisfaction with their experiences, when the other variables were considered, no significant effects were found.
CHAPTER SIX: DISCUSSION

This study, while focused on the higher conceptual issues related to satisfaction measurement, examined visitors’ overall satisfaction in nature-based settings based on the analysis of secondary data. This chapter will focus on discussing the results of the data analyses, while the following chapter will focus on issues related to the conceptualization and measurement of satisfaction in light of the study findings. In the first section of this chapter, a summary and discussion of the sample characteristics is presented. In the second section, the relationships proposed in the conceptual framework of this study are discussed by addressing the research questions. The findings are presented in a comparative way to highlight the similarities and differences between the two types of nature-based settings for a better understanding of visitors’ experiences and how it may differ depending on the visited site. The chapter concludes with a discussion of the implications of the findings for practice and research, and also with directions for future research.

Visitors’ Characteristics

The three visitor characteristics of interest in this study were the age of the respondents, their gender, and whether they were visiting the sites for the first time or they were on a return visitation. When compared based on the visited site, it becomes evident that there are some differences between those who visited Port Royal National Historic Site and the respondents from Kejimkujik National Park and National Historic Site. These differences could be attributed to the nature of each site. Port Royal National Historic Site is a one-day visiting attraction, a re-enactment of the French settlement in the Annapolis Valley, Nova Scotia. On the other hand, Kejimkujik National Park and Historic Site offers visitors a larger variety of recreational and
educational activities in which visitors can engage during a longer period of time, such as camping and hiking.

As a National Historic Site, Port Royal seems to be visited by an older population, with the average age of visitors being 54 years old. Other researchers interested in the demographic characteristics of visitors to historic sites have also found that those visiting historic sites tend to be older than those visiting other recreational destinations. For example, Taylor, Fletcher and Clabaugh (1993) found that the average age of historic site visitors was 51 years old, while those visiting other recreational sites were younger, with an average age of 46 years old. This is confirmed in this study as well, as those visiting Kejimkujik National Park and National Historic sites, a destination which offers camping and other recreational activities besides the historical site, attracts visitors who, on average, are 47 years old.

Also, females are more inclined to visit Port Royal National Historic site than men are, with almost double the number of females visiting the site. This is not surprising based on previous research that suggests more women than men visit heritage sites (Chandler & Costello, 2002). Although the gap between men and women visiting is not as wide at Kejimkujik National Park and National Historic site there is a higher number of women visiting than men. However, the lower gap between visiting men and women at Kejimkujik could be explained by the fact that during the summer, a lot of families come to the park to engage in family activities such as swimming and camping.
Moreover, a larger number of visitors to Kejimkujik were repeat visitors compared to those visiting Port Royal, where most visitors were at the site for the first time. In a research done by Oppermann (1997) on the characteristics of first-time and repeat visitors to New Zealand, it was found that historic sites are mostly visited by first-time visitors. Moreover, the fact that historic sites are visited by a larger number of first-time visitors could be because of the experiential and tourist desire to learning more, versus visiting a national park for recreational activities such as camping and swimming, activities in which people are likely to engage more often during any given period of time. Robinson and Gammon (2004) argue that repeat tourists are different from first-time tourists in that those visiting a destination for the first time are looking to escape from an environment, while repeat visitors are looking to escape to an environment that they are familiar and comfortable with. Lastly, once visitors learn about the significance and importance of Port Royal National Historic site, the learning process occurred and there is thus a less chance of people going back. However, because Kejimkujik offers a number of recreational activities, it will attract more repeat visitors.

**Visitors’ Perceptions of Importance of Interpretation to Learning**

Regarding the interpretation services offered, there were differences between visitors to Port Royal and those to Kejimkujik in their perceived importance of interpretation to learning. While at Port Royal there was double the number of respondents who answered to the questions related to interpretation services as compared to respondents from Kejimkujik, they perceived the interpretation services to be important to their learning compared to respondents at Kejimkujik who perceived these services to be neutral in their learning about the site. These perceptions could be attributed again to the nature of each site. Port Royal is a historic site where the main
activity is to provide information about the early French inhabitants. On the other hand, at Kejimkujik, the interpretive activities meant to educate visitors about the Mi’kmaq people and the natural environment might not be visitors’ main reason to visit Kejimkujik National Park and National Historic Site.

At Port Royal, the tours delivered by staff were perceived by visitors to be the most important resource for their learning about the site. These were still perceived as important for those visiting Kejimkujik, however, the tours were not perceived, on average, to be the most important interpretive service. Guided interpretive tours have been previously found by researchers to have a significant effect on visitors’ learning of national parks, learning that can be retained for up to six months (Ryan & Dewar, 1995). This is because of the interactive communication between the tour guide and the visitor, interaction which allows participants to ask questions and be engaged in an active learning process, resulting in a better retention of the presentation content. It is interesting to note that the re-enactments and demonstrations at Port Royal were perceived to be the least important aspect to visitors’ learning. Previous research findings suggested that re-enactments, although sometimes criticized as focusing on entertainment, seem to be perceived by visitors to be educational experiences (Light, 1996). The fact that visitors to Port Royal National Historic site perceived the re-enactments and demonstrations to be the least important, although still an important element to their learning about the site, could be attributed to the low response rate compared to other items. Less than half of the respondents answered to the question regarding their perceived importance of re-enactments and demonstrations to their learning.
Also, the importance of more traditional and static learning tools such as brochures and interpretive panels was perceived by visitors from both sites to be equally important. Although at Port Royal National Historic Site the pamphlets and brochures seem to lose ground to the more interactive and self-guided learning opportunities, these interpretive tools were perceived to be the most important on average to visitors to Kejimkujik National Park and National Historic Site. The slight difference could be attributed to the nature of the sites. At the historic site, Port Royal, the audio and visual nature of the interpretive walks and tours provide visitors with a picture of the site, whereas written content can oftentimes leave visitors with a feeling of having to read too much text, which is oftentimes confusing (Light, 1996). On the other hand, the pamphlets and brochures might be perceived to be the most important to those visiting Kejimkujik because, in a national park, these interpretative items oftentimes include maps of the campsites, location of facilities, information about the sites, and other information necessary when visiting a large national park. Brochures and pamphlets were previously found by researchers to be important sources of information for park visitors (Uysal, McDonald, & Martin, 1994). Nevertheless, the results of this study highlight the equal importance of both attended and unattended interpretation (Hwang, et al, 2005) in national historic and park sites, where both the activities provided by an interpreter and the written and self-guided interpretation aids in developing visitors awareness and understanding of the natural and cultural values of the sites (Archer & Wearing, 2001). The difference in perceived importance of interpretation to learning between the two sites could be attributed to those visitors who perceived the musical concerts and the festivals and events offered at Kejimkujik National Park and National Historic Site as being neutrally important to their learning of the site. However, this finding should be interpreted with
care because only about one fourth of visitors to Kejimkujik answered to the question related to
the importance of musical concerts and festivals and events to their learning.

**Visitors’ Satisfaction with Site-specific Attributes**

In regards to levels of satisfaction with site-specific elements, visitors to both Port Royal
National Historic Site and Kejimkujik National Park and National Historic Site were on average
satisfied with the site-specific elements and services offered. Specifically, those visiting
Kejimkujik were the most satisfied with the staff’s ability to meet their needs and expectations.
Visitors were also satisfied with the staff’s ability to convey their knowledge and passion for the
site, but also to offer personalized service and respond to comments and complaints. These
results are contrary to the findings of other research in national parks. Naidoo et al. (2011) found
that staff in various nature-based sites in Mauritius were not able to help customers enough in
their requests and to respond to requested information. While addressing and responding to the
unique needs and expectations of Parks Canada visitors has been identified to be a challenge, it is
also recognized that the staff’s efforts will increase satisfaction with visitor experience (Jager &
Sanche, 2010). Parks Canada’s efforts are visible not only in the results of this study, but also in
previous research where visitors’ levels of satisfaction with the staff have surpassed established
agency targets (Parks Canada, 2008). In fact, at Port Royal, respondents’ were reaching
homogeneity in their scores of satisfaction with the site, which resulted in the elimination of the
staff related items from the analysis. While this could be positively interpreted, there is also a
cautionary note related to the discriminative nature of the measurement scales used to assess
visitor satisfaction. This topic will be further discussed in the section related to the implications
of this study.
Visitors’ levels of satisfaction with the activities provided at both sites were also examined. In both cases, respondents were on average satisfied with the recreational, family and the learning activities provided. Specifically, at Port Royal, visitors were the most satisfied with the learning activities, while at Kejimkujik, respondents satisfaction with the recreational activities was the highest amongst the three types of activities. Again, this is not surprising given the nature of each site. As a National Historic Site, Port Royal represents one of the many historical sites in Canada designed to be a place of learning, of information and of living history (Parks Canada, 2008), thus the focus would be on the learning activities provided. Packer and Ballantyne (2002) argue that the experience of learning at historic and cultural sites is directly related to visitor satisfaction. This is reflected in the findings of this study where satisfaction with learning activities surpassed visitors’ satisfaction with family and recreational activities. However, in the context of a national park, where visitors oftentimes are looking for a recreational experience, the focus shifts from the learning activities and more attention is given to the recreational opportunities. Noe and Uysal (1997) also found that in those sites designed for outdoor recreation, overall satisfaction was highly dependent on expressive elements such as camping and swimming. On the other hand, they found that at historical attractions, visitors’ satisfaction was more dependent on instrumental factors such as restrooms and shelters. This is also confirmed in this study where Port Royal visitors’ satisfaction was the highest with the washroom cleanliness amongst all site-specific attributes. Nevertheless, Crompton (2003) noted that in order for visitors to reach a high satisfaction level with their experiences, both maintenance (i.e. restrooms, visitor information) and motivator (activities, education programs) need to emerge as satisfiers.
Visitors’ Overall Satisfaction with the Site Experience

Regarding respondents’ experiences at both Port Royal and National Historic Site, visitors were generally satisfied. At Port Royal, visitors’ satisfaction with the quality and the availability of services provided were on average the most satisfactory elements contributing to visitors’ overall satisfaction with their experiences. As well, Kejimkujik visitors’ satisfaction with the quality of services, and the quality of activities provided were the top satisfactory elements related to their overall visit satisfaction. The quality of services provided in a park setting was also investigated by Akama and Kieti (2003) who similarly found that visitors’ satisfaction with their experiences at Tsavo West National Park was based on the perceived quality of park services provided. Thus, the close relationship between service quality and satisfaction is further strengthened in this study. Researchers have previously noted the close theoretical conceptualization of the two concepts (e.g., Crompton & Love, 1995), where quality is related more to the objective evaluation of a service or products, and satisfaction with the subjective evaluation after exposure to the service or product.

Addressing the Research Questions

Research Question 1: What is the relationship between visitors’ site-specific attribute satisfaction and their overall satisfaction with the experience?

The first research question addressed the relationship between visitors’ satisfaction with the various site-specific attributes and their satisfaction with experiences at the sites. At both sites, visitors’ satisfaction with the site attributes is significantly related to, and is a significant predictor of their overall satisfaction with the visit experiences. Visitors who report high levels of satisfaction with the site attributes also reported increased levels of overall satisfaction with their experiences. However, looking at the two sites, there were differences in the degree to
which satisfaction with site attributes was able to explain variations in overall satisfaction with the experience. At Port Royal National Historic Site, satisfaction with the site attributes had a smaller influence on satisfaction with the overall site experience, than it did for those respondents visiting Kejimkujik National Park and National Historic Site. This could be attributed to the site-specific model, where the composite measures of “satisfaction with the site attributes” and “overall satisfaction with the site experience” for Kejimkujik involved a larger number of items representing each composite measure, thus providing a more detailed and stronger support for the various items affecting visitors’ levels of satisfaction. Also, Herbert (2001) argues that at historic sites, visitors are not looking necessarily for the tangible things, but for the meanings, values, the more affective quality of the places visited. These attributes were not included in the model predicting overall satisfaction with site experiences, and thus could be the variables explaining the remaining variation in visitors’ overall satisfaction with their experiences at Port Royal. Inclusion of these factors in a future model of visitors’ satisfaction with their experiences would allow for a more insightful understanding of visitors’ satisfaction with their experiences at historic sites.

Nevertheless, the findings of this study support previous empirical studies looking at the effects of visitors’ satisfaction with site elements on their overall satisfaction with leisure and recreational experiences (Herrick & McDonald, 1992; Leiss, 1979), and with vacation and trip experiences (Alegre & Cladera, 2006, Neal et al., 1999). According to Herrick and McDonald (1992), visitors to nature-based setting use the site characteristics to evaluate their overall experience. The significant effect of visitors’ satisfaction with the site attributes on their overall satisfaction with their experience for both Port Royal National Historic Site and Kejimkujik
National Park and National Historic Site further provide further support to the argument that the setting attributes may be one of the most important sources of satisfaction for understanding overall satisfaction. Moreover, Sirgy and Uysal (1999) found that satisfaction with leisure experiences was significantly predicted by satisfaction with the leisure travel services. Although their study looked at the services tourists came into contact at different stages of their trip experience, those site elements visitors came into contact with during their visitation were included and thus influenced satisfaction with the leisure experience. Similarity, in this study it was found that visitors’ satisfaction with the site elements they come into contact with during their visit is strongly related and influences their overall satisfaction with their experiences.

**Research Question 2:** What is the relationship between visitors’ perceived importance of interpretation to learning and their overall satisfaction with the experience?

The second research question addressed the relationship between visitors’ perceived importance of interpretation to learning on their overall satisfaction with the site experience. The results of this study revealed that there is a significant positive relationship between these two variables, the strength of the relationship being very similar at both sites. Therefore, those visitors to both sites who perceived the interpretation services offered to be more important to their learning process also had higher levels of satisfaction with their experiences at the site. This supports previous findings by Packer and Ballntyne (2002) whose empirical research suggested that visitors to various historical, cultural and natural attractions who placed a higher importance on learning were more likely to report higher satisfaction. Thus, the strength of the relationship between the importance of interpretive programs to visitors’ learning process and their overall satisfaction with the site experience does not depend on the site itself. Regardless of tourists visiting a historic site or a national park, those who perceive interpretation services to be
important will also have a more satisfactory experience. Packer (2006) notes that in free-choice learning environments, even those visitors who do not have a learning agenda can be drawn to the interpretive programs that are enjoyable and transformative, changing visitors’ perspective and knowledge of the site. Thus, the opportunity to learn about the site is likely to enhance visitors’ overall satisfaction with their experiences at the site (Ballantyne, et al., 2007).

However, although there is a significant relationship between visitors’ perceived importance of interpretation to learning and their overall satisfaction with experiences at both sites, the explained variance caused is not significant when the other variables (age, gender, repeat visitation and satisfaction with site attributes) were taken into consideration. A possible explanation could be the effect of visitors’ satisfaction with the site attributes which might be stealing the strength of the explained variance of importance of interpretation to learning on visitors’ overall satisfaction with their experiences.

*Research Question 3: How do visitors’ age, gender and repeat visitation affect their levels of satisfaction with site-specific attributes, importance of interpretation to learning, and overall satisfaction with their experiences?*

Regarding the influence of visitors’ demographics on perceptions of interpretation to learning, the findings of this study revealed that only age had a significant relationship with Kejimkujik visitors’ perceived importance of interpretation to learning. This suggests that as the age of visitors to Kejimkujik increases, so does their perceived importance of interpretation to learning. This could be because, younger visitors to Kejimkujik might be more interested in the camping and other active outdoors activities provided at the park, rather than engaging in any
interpretation programs offered. Past visitation trends at Kejimkujik revealed that over 60% of visitors in 2006 camped at the site and were involved in active activities such as biking, canoeing and kayaking (Parks Canada, 2010). Moreover, when the respondents were categorized in different age categories based on their stage in life, it was further revealed that there are significant differences between various age groups and their perceptions of the importance of interpretation to learning while visiting Kejimkujik National Park and National Historic Site.

This was not the case at Port Royal National Historic site, where age did not have any significant relationship or effect on visitors’ perceived importance of interpretation to learning. This is surprising given that Port Royal National Historic Site is a destination based purely on learning about the French settlement and it attracts older visitors. The results can maybe be explained in the light of Prentice, Guerin & McGugan’s (1998) empirical study. In their research on visitors’ learning at a heritage attraction, Prentice et al. found that those aged in their 30s and 40s were more likely to have a higher number of new items they have learned while visiting a heritage site. At Port Royal, the average age of visitors was 54 years old, while at Kejimkujik, the visitors were on average 47 years old, therefore, it could be that younger visitors to a heritage site perceive the interpretive programs to be more important to their learning about the site. However, a closer look at the age categories at Kejimkujik, revealed that contrary to the findings of Prentice et al., those between the ages of 30 to 39 years perceived the interpretive programs to be the least important to their learning about the site, while those over 60 years old placed the highest importance of interpretation to learning. This is in accordance with previous research done by Light (1995) who found that those aged over 50 years old were more likely to be very interested in the exhibitions and panels displayed in a heritage site and to read the entire
information provided. On the other hand, similar to the findings in this research, Light found that those aged less than 30 had the opposite behaviour, and thus place less importance on the learning they could gain from the interpretive programs.

In terms of visitors’ satisfaction with the site attributes, age, gender and repeat visitation are not significant correlates at Port Royal National Historic Site, while at Kejimkujik National Park and National Historic Site, only the respondents’ age is significantly correlated to their levels of satisfaction with the site attributes. This implies that as the age of respondents from Kejimkujik increases so do their levels of satisfaction with the site attributes. Moreover, there are also significant differences between people in various age categories and their levels of satisfaction with the various elements at Kejimkujik National Park and National Historic Site. The findings support previous research in tourists’ satisfaction with tourism destination, where those in different age categories were found to be less or more satisfied with the various destination attributes (Kozak & Rimmington, 2000; Master & Prideaux, 2000; Ozturk & Hancer, 2009). However, unlike Kozak and Rimmington (2000) who found that those tourists between the ages of 15 and 24 years old were more likely to be satisfied with all attributes of the destination than other age categories, this study’s findings were opposite, indicating that visitors’ to Kejimkujik who were 60 years old and older were more satisfied with the site attributes than younger visitors. This is in accordance with those researchers who argue that as customers age, they are likely to have higher levels of satisfaction because they may have a comparison and be more realistic when evaluating a product or a service (Matzler et al. 2008).
Visitors’ overall satisfaction with experiences at Port Royal National Historic Site was not significantly influenced by their age, gender, or repeat visitation. Repeat visitation was also not found to be significantly related to visitors’ satisfaction with their experiences at Kejimkujik National Park and National Historic Site. This is surprising given that previous research looking at the relationships between repeat visitation and satisfaction with destination elements revealed that past experiences with a destination lead to higher levels of satisfaction with the destination (Alegre & Cladera, 2006; Baloglu et al., 2003; Kozak & Rimmington, 2000; Ozturk & Hancer, 2009). However, at Kejimkujik, visitors’ age and gender were significantly correlated with overall satisfaction with their experiences. Thus, older visitors to Kejimkujik had higher levels of satisfaction with their experiences at the site. Visitors were also significantly different in their levels of satisfaction with their experiences at Kejimkujik based on their age category. Specifically, those aged 60 and older had the highest levels of overall satisfaction with their experiences at Kejimkujik National Park and National Historic Site. The findings support previous empirical studies which showed that customer satisfaction levels were higher with older age (Bryant & Cha, 1996). This could be due to a number of factors such as whether they have visited the park before which could provide them with better knowledge and expectations as to what they will encounter at the site. Being that over 80% of visitors to Kejimkujik are repeat visitors, the older the visitors are it is likely they visited the site numerous times thus providing with plenty past experiences which would influence their current levels of satisfaction with their experiences at Kejimkujik.
Regarding the effects of gender, being a female is not only correlated with satisfaction with the experiences at the site, but it also has a significant effect and explains a significant amount of variation in a visitor’s overall satisfaction with experiences at Kejimkujik National Park and National Historic Site. This is not surprising given the nature of the site and the possible roles of women within the recreational site experience. These findings reinforce the literature focused on the gendered nature of the leisure and tourism experience. Wearing and Wearing (1996) note that gender is being seriously considered as a variable in tourism studies with interest related to how the tourists’ gender shapes the tourist experience. The findings of this study are contradicting previous research that suggests that males are more satisfied than females with their experiences at various tourism destinations (Ozturk & Hancer, 2009; Qu & Li, 1997). However, in this study, being female was related to higher levels of satisfaction with experiences, and this could be due to the context of the tourism experience. As such, it could be that in those tourism experiences in which involvement in the shaping of the experience outcome is not possible, women are less satisfied. For example, Kinnaird and Hall (1996) argue that a tourism experience is a gendered realm where women leisure experience is highly dependent on the fact that they often act as facilitators of others’ leisure. While the visitation experience at Port Royal does not require a lot of planning and time during the summer months, at Kejimkujik there are many families camping and spending a number of days in the national park. Thus, it could be that the satisfaction with the experience for women could also be related to the success of their plans, and their continuous involvement in shaping the leisure experiences of the group.
Research Question 4: Do visitors’ age and visitation pattern moderate the relationships between their perceived importance of interpretation to learning and overall satisfaction with their experiences, and that between their satisfaction with the site attributes and overall satisfaction with the site experience?

Visitors’ age was not found to moderate the relationship between their perceived importance of interpretation to learning and their overall satisfaction with the site experience, nor was it a significant moderator on the relationship between their satisfaction with the site attributes and their overall satisfaction with their experiences. This is contrary to previous arguments in the literature which suggested that age would moderate satisfaction related relationships because tourists of various age would have different needs and expectations (Matzler et al., 2008).

While repeat visitation was not found to moderate these relationships at Kejimkujik National Park or at National Historic Site, the visitation pattern was found to moderate the relationship between visitors’ satisfaction with site attributes and their overall satisfaction with experiences at Port Royal. This supports previous studies looking at the moderating effects of repeat visitation (e.g. Ryu & Han, 2011, Matzler, et al., 2008). Ryu and Han argue that past experience is used by visitors to evaluate the quality of services and products, and those visiting for the first time will be less familiar with the cues used by repeat visitors due to the lack of previous experience. In this study, it was found that the visitation pattern of those visiting Port Royal National Historic Site significantly influenced the effect of visitors’ satisfaction with the site attributes on their overall satisfaction with their experiences. Thus, for those who were on a repeat visitation to Port Royal, higher satisfaction with the site attributes led to higher levels of
satisfaction with the overall experience. However, while Matzler et al. (2008) found that there are significant differences between first and repeat visitors, this study found no significant differences between visitors to Port Royal who were on their first visit compared to those on a repeat visit in the effect it had on the relationship between their satisfaction with the site attributes and their overall satisfaction with experiences at Port Royal National Historic Site. A possible explanation of the insignificant moderating effect between the two groups of visitors could be again due to the scale used to measure their satisfaction with the site attributes and with their overall experiences at Port Royal. The plot of the moderating effects reveals that ratings for both variables have a small range between approximately 4.2 and 4.8 in satisfaction levels (on a scale from 1 to 5) for those who were repeat visitors, and about 4.5 for both variables for those visiting for the first time. Thus, the nature of the scale used allowed for little differences in the levels of satisfaction with the site attributes and overall experience between the two types of visitors. This issue related to the measurement of satisfaction is further discussed in the next section focusing on implications of this study for research and practice.
CHAPTER SEVEN: IMPLICATIONS

Implications of Study Findings

The results of this study have a number of implications for both research related to the assessment of tourists’ satisfaction, and also for practitioners and managers of national parks and national historic sites. First, this study proposed a new conceptual framework in which visitors’ satisfaction with their experiences at two nature-based sites was examined in relation to their satisfaction with the site attributes, their perceived importance of interpretation to learning, and also in relation to their age, gender and visitation pattern. While the relationship between tourists’ satisfaction with destination attributes and their overall satisfaction with experiences has been previously examined (e.g. Herrick & McDonald, 1992; Leiss, 1979; Neal et al., 1999), limited research has been conducted to investigate this relationship in a nature-based setting (Lee, et al., 2004). This study provides further understanding of how visitors’ satisfaction with the site attributes influences their levels of satisfaction with their experiences at two distinct Parks Canada National Sites.

Overall experience satisfaction in a national park is highly dependent on visitors’ satisfaction with the site-specific elements. Specifically, the services provided by the staff and the visitor centre at the national park seem to be the most important attributes increasing visitors’ levels of satisfaction with site attributes, while the quality of the activities provided at the site was the most important attribute influencing overall satisfaction with experiences at the national park. This is not surprising given the wide variety of activities provided at a national park, activities that could be the main reason of visitation. On the other hand, in an outdoors historic site, visitors’ satisfaction with the site attributes was also a significant predictor of their
satisfaction with their experiences. However, satisfaction with the site attributes at the historic site was determined largely by the cleanliness of the washrooms, and the learning activities available at the site; while their overall experience satisfaction was impacted more by their perceived satisfaction with the quality of services at the site. This further strengthens the theoretical understanding of the link between satisfaction and service quality. Lee et al. (2004) argue that quality refers to the judgements of services offered by tourists, such as evaluation of the toilet and campground facilities, which affects their satisfaction with the experience.

Moreover, little research has been conducted to investigate the relationship between visitors’ perceived importance of interpretation to learning and their overall satisfaction with site experiences, with only a handful of studies looking at the relationship satisfaction with interpretation services offered and overall satisfaction (e.g., Laws, 1999; Moscardo, 1996). The findings of this study revealed that those visitors who have perceived the interpretation services offered to by higher in importance in their learning process about the site, also had higher levels of overall satisfaction with their experiences. Also, this study provides further understanding of the effect of visitors’ age and gender on the various constructs of interest, while reinforcing previous empirical findings which suggested that as people age they are more likely to be interested in learning (e.g., Light, 1995), and that they are likely to have higher levels of satisfaction probably due to the past experience which aid in the adjustment of expectations and perceptions (Matzler et al., 2008). Moreover, the study’s findings also provide further support to the literature focused on the gendered nature of the leisure experience, showing that being a woman has a significant effect on overall satisfaction with the experiences in a national park.
Lastly, in terms of research implications, this study has also investigated the moderating effects of age and repeat visitation. While researchers argue that both these variables can lessen or strengthen various relationships related to tourists’ satisfaction (Petrick, 2004; Wakefield & Baker, 1998); this study revealed that only repeat visitation acts as a moderator on the relationship between visitors’ satisfaction with the site attributes and their overall satisfaction with experiences at a historic site. Specifically, it was found that for those who were repeat visitors, higher levels of satisfaction with site attributes lead to higher levels of overall satisfaction with their experiences.

In terms of the practical implications of this research, the study revealed that there are differences in the types of visitors at the two sites. Specifically, those visiting historic sites tend to be older (mid-50s) and the majority are first time visitors. On the other hand, in a national park context, visitors are generally younger (mid 40s) and the majority are repeat visitors. This can provide Parks Canada with a better understanding of who visits which site, and thus adjust marketing and promotional materials to better reflect the needs and wants of each market. While at Port Royal the programs might not need to be changed on a yearly basis because most visitors are first-time visitors, at Kejimkujik, the activities and programs offered might need to be changed to keep the large number of repeat visitors engaged and happy with their experiences at the site.

Regarding the site attributes, park managers might want to focus on those attributes which were deemed by respondents to be less than satisfactory. For example, at Port Royal National Historic Site the respondents were generally satisfied with the site attributes, their levels
of satisfaction with the recreational activities provided at the site was the lowest. Thus, a re-evaluation of the recreation activities provided to represent the needs and expectations of visitors who are on average in their mid-50s, females, and are first-time visitors, is suggested in order to increase visitors’ levels of satisfaction. On the other hand, at Kejimkujik National Park and National Historic Site, park managers and employees might want to pay more attention to the cleanliness of their washrooms, and the Wi-Fi services provided. Given that at this site people are likely to stay for a number of days camping, it is likely that this will impact the cleanliness of the washroom facilities.

The interpretive programs offered at the two sites investigated in this research are important in forwarding Parks Canada’s agenda related to providing visitors with learning opportunities at national sites (Jager & Sanche, 2010). The results of this study revealed that at Port Royal National Historic Site, visitors perceive the interpretive programs to be important to their learning about the site, however, the re-enactments and demonstrations were seen to be the least important in their learning. On the other hand, at Kejimkujik National Park and National Historic Site, visitors perceived the musical concerts, and the festivals and events at the site of neutral importance in their learning about Kejimkujik. Visitors’ perceptions of these interpretive programs being less important to their learning could be attributed to their impressions of them being more entertaining and providing learning opportunities. However, Packer and Ballantyne (2004) argue that in a free-choice learning environment, the educational and entertainment aspects are synergistic. It could be that at both sites, visitors are not buying into the “learning for fun” experience that combines education with entertainment. This could be related to the content of the re-enactments, and events. Thus, Parks Canada needs to pay careful attention to the
content of entertaining interpretive programs offered to ensure there are opportunities for learning.

**Implications Related to the Measurement of Satisfaction**

This research used secondary data gathered by Parks Canada Agency to test a conceptual framework predicting overall satisfaction in nature-based settings. The items in the VIP questionnaires measured three different components of satisfaction: satisfaction with site-specific elements, satisfaction with staff, and overall satisfaction with visit. Satisfaction with site-specific elements was measured using five items, satisfaction with the staff was measured using eight items, while overall satisfaction was measured using seven items. This study followed the perceived performance-only approach to measuring visitors’ satisfaction, approach which Yuksel and Rimmington (1998) argue that it is the most reliable and valid measure of satisfaction. Other researchers (e.g., Kozak, 2001; Tse & Wilton, 1988) have argued that there is no need to include the disconfirmation variable when calculating visitor satisfaction is not necessary because consumers will be satisfied with a service or product performs well regardless of any prior expectations. Moreover, it is argued that “performance bears a preeminent role in the formation of customer satisfaction because it is the main feature of the consumption experience” (Yuksel & Rimmington, 1998, p. 63). However, while there is confidence in the approach used to measure visitors’ satisfaction, it is the research instrument used to measure satisfaction which might cause problems assessing respondents’ overall satisfaction. Pizam and Ellis (1999) note that the attributes or components of satisfaction that the management measures through surveys and questionnaires might not be important or relevant to the customers’ needs and perception of what a satisfactory service or product might be. Therefore, it is suggested that the measurement
instrument should also include those items customers perceive to be important. This will provide researchers and managers with a more balanced understanding of consumer satisfaction, knowledge which would better address the needs of both management and customers. These items would then determine the satisfaction dimensions should be measured. Pizam and Ellis (1999) note that “the most satisfactory and least biased way to reduce the number of items in the questionnaire is through the use of factor analysis” (p. 334).

As such, the initial analysis of the data sets involved a number of different options which in the end were deemed unusable. Although Parks Canada has considered these items to measure three distinctive dimensions related to visitor satisfaction, an initial exploratory factor analysis with Varimax rotation was run. After items with low commonalities were dropped, exploratory factor analysis with Varimax rotation was run again to isolate each factor from others as much as possible. However, results of the analysis revealed that most items loaded on factor 1. Thus, conceptually, the three dimensions are not really distinguishable from one another, meaning, all three sections measure a singular dimension related to visitor satisfaction. By taking a look back at the results of the data analysis, at Port Royal National Historic Site, the top satisfactory items were related to the washroom cleanliness, learning activities, and the information provided prior to arrival. These items alone reveal that measurement and assessment of visitors’ satisfaction with the site components is heavily based on the tangible dimension.

In fact, existing literature suggests that satisfaction is a multidimensional construct. Going back to the adaptation of the SERVQUAL instrument in a park context, Hamilton, Crompton and More (1991) found that quality in parks, and therefore the dimensions influencing
visitors’ satisfaction were: tangibles, reliability, responsiveness and assurance. Moreover, as noted earlier, satisfaction with a leisure experience in park settings was found to be affected by the expressive elements that are the result of engaging in the experience, while in a historic site, visitors’ overall satisfaction is more dependent on the instrumental elements such as restrooms (Leiss, 1979; Noe & Uysal, 1997). Meng et al, (2008) found that tourists’ satisfaction was explained by four factors: friendliness and accessibility, food and location, natural scenery and activity, and lodging. Also, Crompton and Mackay (1989) further suggest that visitors’ satisfaction is based on an experience, and can thus be affected by the intangible conditions of their visitation related to the natural environment. McMullan and O’Neill (2010) note that measurement of satisfaction should be developed based on a multi-item scale that includes visitors’ emotions. Although researchers have somewhat agreed that satisfaction is a cognitive-affective state, the measurement instrument used by Parks Canada does not address visitors’ emotion. Although it has been argued that visitors’ feelings can result in a favourable or unfavourable attitude towards the product or service they are consuming (Oliver, 1999), existing customer satisfaction research often omits to incorporate the emotional component of satisfaction in the measurement instrument (Fallon & Schofield, 2003). These items have been developed in previous studies based on exploratory discussions with visitors to tourism and recreation sites about their emotions about the destination (i.e. McMullan & O’Neill, 2010). Thus, a redesign of the VIP survey to include visitors’ emotions towards the sites would provide a better insight into their overall satisfaction with their visits. This has been previously supported by the literature, showing that both positive and negative emotions experienced during the site visit have an important role in subsequent satisfaction (i.e. Oliver, 1993). Moreover, McMullan & Oliver (2010) noted that, along with the emotional scale, satisfaction instruments should also include a
cognitive product scale, and a cognitive service scale. While the VIP survey included the latter scales, there were issues related to the construct validity of the two scales, as the items used seemed to measure the same dimension. Therefore, there is a conceptual problem related to the how satisfaction has been measured using the Parks Canada VIP survey. It is likely that the items used to measure satisfaction were chosen based on practical goals related to site management.

To further examine possible issues related to the measurement instrument, the already formulated satisfaction scales in the VIP survey were kept for analysis. However, after all variables of interest were analyzed using descriptive statistics, it was revealed that those items related to respondents’ satisfaction with various staff related elements, presented high level of skewness, with a large number of respondents answering 5 “very satisfied”. This is not surprising in satisfaction studies, as Williams and Patterson (1991) found that less than 10% of respondents give a rating lower than 5 (very satisfied). Because these items failed to satisfy the assumption of normality, logarithmic and square root transformations were considered. New variables were computed in SPSS using log10 and square root functions. However, both transformations failed to adjust the negatively skewed distributions. Given that data transformation failed, the items related to respondents’ satisfaction with staff had to be removed from analysis. Thus, the solution to have similar measurement variables for both Port Royal and Kejimkujik sites, was to combine the items from the two different sections into one composite measure entitled “satisfaction with site-specific attributes”. The results of the descriptive analysis were not surprising given that previous researchers have shown that commonly used satisfaction rating scales resulted in highly skewed distributions, with most respondents rating the services they received at the higher end of the scale (Peterson & Wilson, 1992; Westerbook, 1980b). However, this poses issues related to
the level of understanding of visitor satisfaction. Specifically, those items that were supposed to address the responsiveness and assurance dimensions of SERVQUAL needed to be eliminated because of the high negative skewness. The elimination of these items therefore provides a conceptual issue related to the measurement of satisfaction as a multidimensional construct.

To address the negative skewness of satisfaction scales, Kozak (2001) suggests employing research with larger scales (seven-point or ten-point) that would more clearly show the difference between the scores. By taking a look at the skewness of the distribution of satisfaction scores, it was evident that the VIP survey 5-point satisfaction scale used was not discriminating enough. Moreover, having a middle point (3 = neutral) does not provide any understanding of visitors’ satisfaction. The scale used to measure customer’s satisfaction with different attributes at the destination does not have enough categories to provide respondents to make fine discriminations between their levels of satisfaction. Danaher and Haddrell (1996) argue that, while satisfaction may possess a different distribution than what is accepted as normal distribution, “good is not good enough”. In this regards, He and Song (2009) note that the HKCSI survey utilizes an 11-point scale, from 0 (worst) to 11 (best). The larger scale presents a higher discerning power, reducing the negative skewness commonly found in satisfaction-related surveys, and increasing reliability and validity. Thus, while the results of the VIP survey might suggest that the staff at Port Royal National Historic Site is doing a great job at providing various services to visitors, the true satisfaction of visitors might not be captured due to the limited scale used in the survey.
However, previous research has also shown that even a larger rating scale used to measure satisfaction still resulted in negatively skewed distributions (Westbrook, 1980b as cited in Peterson and Wilson, 1992). Thus, another possible explanation for the highly negatively skewed scores in satisfaction measurement could be attributed to respondents’ bias. First, it could be that those respondents who tend to be satisfied with their experiences at the park sites are the ones who are more inclined to respond to the VIP survey. However, this was dismissed by Peterson and Wilson whose empirical research on the correlation between response rates and satisfaction percentages found no correlation between the two. Therefore, it could be that the way the questions are asked could influence survey respondents to respond more positively. Earlier researchers (Tversky & Kahneman, 1981) demonstrated that when equivalent but reworded questions are provided, respondents’ answers and judgements change. This was further proved by Peterson and Wilson whose study on satisfaction levels in two different samples, one where participants were asked how “satisfied” they are and the other being asked how “dissatisfied” they are, revealed that there are significant differences between the two samples. In light of their findings, the researchers suggested the need for taking cautious decisions in the way questions are formulate and also the way answers to satisfaction scales are interpreted. As such, the VIP survey should be redesigned to address the positive wording of the question from “Please rate your level of satisfaction with…” to “Please rate your level of satisfaction/dissatisfaction with…”. This will allow respondents to make more discriminative decisions of their levels of satisfaction with the site elements, staff elements, and their overall visit.
In conclusion, the VIP Survey asks visitors to rate their “level of satisfaction” with different elements, on a 5-point scale which starts with “Very satisfied”. A redesigned scale providing a more discriminative assessment of the various services provided at the destination will provide park managers with a more detailed picture of where the service standards might need improvement. Also, the positive wording of the questions and the fact that the scale starts at the positive end could influence visitors to provide more favorable ratings. This should also be addressed by Parks Canada in their future examination and redesign of the VIP Survey. Parks Canada and site managers might be able to gain a deeper and more detailed understanding of visitors’ satisfaction with the various site elements, and with their experiences if the research instrument is redesigned to provide opportunities for more discriminative ratings or neutrally formulated questions.

Limitations and Future Research

Based on the above discussion, one of the main limitations of this study was the nature of the survey instrument used in collecting the data on visitors’ satisfaction to Parks Canada sites. A more theoretically driven survey instrument, with items representative of satisfaction dimensions used previously in a nature-based related research, and a larger measurement scale to examine visitors’ satisfaction might have produced more insightful results. This further brings forward the issue of generalizability of the results given that the respondent groups in this study were mostly satisfied and/or very satisfied with their experiences at the two Parks Canada sites. Also, the different nature of the two sites meant that the VIP Survey for each site presented slightly different items used to measure each dimension of satisfaction and perceived importance of interpretation to learning. The highly negative skewed nature of some of the scores led to the
elimination of a number of items. This resulted in the composite measures representative of each site to include more or less items, which could have impacted the strength of the relationships between the different model variables.

Another limitation of this study, and opportunity for future research, is the fact that this study did not investigate visitors’ motivations, and their length of stay at the sites, both being variables identified by researchers to be important variables affecting visitors’ satisfaction (Kozak, 2002; Meng, Tepanon & Uysal, 2008; Neal, 2004; Uysal, Fesenmaier & O’Leary, 1994). This was due to the fact that these variables have not been measured equally at the two sites, thus, they were not included in the conceptual model proposed in this study. While the sites researched in this study have similar characteristics (i.e both historic sites and nature-based), each site could provide quite different experiences for those visiting. Port Royal National Historic Site is a one-day visitation site, while Kejimkujik National Park and National Historic Site provides visitors with longer experiences. Thus, future research should focus on investigating the effects of the length of stay and motivation for visiting the sites on visitors’ satisfaction with their site experience.

In terms of the measurement instrument used to examine visitors’ satisfaction, researchers have noted that the practical tourism world oftentimes attempts to measure satisfaction in a very restrictive way, almost always towards the end, or after the experience was completed (Bowen & Clarke, 2002). With that being said, visitors’ satisfaction with their experiences at various sites is measured at a specific time period, however, satisfaction is a concept influenced by a number of factors coming in at different timed during the experience.
Thus, satisfaction can change, fluctuate; therefore, capturing it at only one point in time does not provide managers and researchers with a complete understanding of the nuances of visitor satisfaction. Moreover, the questions asked are oftentimes presented from a management perspective, and those items that consumers might consider to be part of a satisfactory experience are oftentimes muted. Therefore, satisfaction surveys are oftentimes inflexible and artificial, and do not provide data that reflects the significance visitors attach to satisfaction. Bowen and Clarke (2002) further argue that it might not even be necessary to measure attributes at all to gather information about tourists’ satisfaction. These attempts at the examination of satisfaction have remained the main approaches used, although interest in the components of satisfaction was ignited back in the 1950s (Bowen & Clarke, 2002). As such, a more qualitative approach to the examination of satisfaction has been adopted by some researchers who believe that satisfaction should be examined as it is experienced by the consumers, through their own voices (Fournier & Mick, 1999; Ryan, 1995). That is because the tourism experience should be “observed and evaluation with reference to a while experience and not merely with reference to attributes – a holistic view that is crucial to any service industry such as tourism – and it is also observed through its temporal entirety and not through any one or two snapshots” (Bowen & Clarke, 2002, p. 304).
REFERENCES


