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TITLE:

Visitor Experience at Archaeological Museum: The Importance of Different On-Site Factors

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ABSTRACT

The global phenomenon of tourism and heritage tourism is one of the most researched subjects in tourism studies and there are plenty of researches focusing on visitor experience and visitor satisfaction at the tourist attractions. However, only a few of them investigated the difference between visitors' perceived importance of on-site factors, for instance, the recent study by Jensen, Li, and Uysal (2017) which was conducted at four different museums in Northern Norway. This current research is a replication and extension of Jensen et al. (2017) and examines and distinguishes the underlying factors or sub-categories of visitors' perception of the importance of on-site attributes (presentation platform and support service platform) and whether these factors affect overall visitor satisfaction, while taking into consideration the impact of visitors' interest and visitor type.

The findings from a survey among 86 visitors at a single attraction in Southern Norway shows that there are sub-categories in visitors' perception of presentation platform, but there is no sub-category found in support service platform. The findings also suggest that visitors' perception of those factors do not differ significantly by visitors' interest and the type of visitor. Besides, visitor's perceived importance on both platforms is significantly associated with overall visitor satisfaction. The results partly confirm the findings from the original study and give different perspectives on the role of different attributes in museum attraction. Some managerial implications are also presented in this study, for attraction operators to increase visitor satisfaction.

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FOREWORD

This master thesis has been the highest academic achievement in my life. So much time and effort have been put into conducting and finishing this research and it would not have been possible without help and support from various parties.

First of all, I would like to thank Olga Gjerald as my supervisor for providing me with guidance and feedback during the whole process of finishing this master thesis. I would like to thank Øystein Jensen for helping me find the topic of this master thesis, for letting me replicate the original study and for providing me details of the original study. Thank you to the University of Stavanger for giving me the opportunity to get my master degree in Norway.

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Finally, I would like to thank my family for the endless support and motivation. And last but not least, thank you to my best of friends here in Norway, who came from every corner of the world with different backgrounds and cultures, yet we instantly became a family. This master has been one of the most wonderful experiences in my life and I am glad that I got to share it with you.

INTRODUCTION

Background

Tourism in Norway has grown rapidly in the past decade. Based on Innovation Norway's report (2019) "fjords, mountains and natural phenomena top the list of what many people associate with Norway", however aside of that, people agreed that Norway has a lot more to offer, such as interesting city life, culture, and history (p. 67). Based on the same report, 75% of the tourists can be defined as the active cultural tourist, the overlapping between all-active tourist and all-cultural tourist, which means they want to experience the fjords and mountains, but at the same time want to visit the historical building and places. Stavanger is one of the cities in Norway which offers both nature and culture.

As the oil capital and the third largest city in Norway, Stavanger is located in the south-west part of the country and the gate to some of the most popular attractions in Norway, such as Preikestolen (Pulpit Rock), Kjeragbolten, and Lysefjord, which makes the city a popular stop, especially for cruise passengers. The data shows that in 2017, there were 340.220 passengers docked at the Port of Stavanger, which ranked it as the third among Norway's top ten ports in 2017 (Innovation Norway, 2019). This gave such an effect in overall Stavanger tourism since cruise visitors gave a significant contribution to many attractions in Stavanger. However, in the low-season period, many attractions also depend on their local visitors. Therefore, both visitors play roles in maintaining the survival of the attraction in the hospitality industry.

This study is focusing on heritage museum as an attraction, as well as its visitor experience. Based on Timothy and Boyd (2006), the global phenomenon of tourism and heritage tourism is one of the most researched subjects in tourism studies and "there is a need to delve deeper into understanding human experiences at places of historical importance" (p. 2). Plenty of studies has observed visitors' experience in tourism site such as a museum.

However, not many of them identified the various factors and parts of the museums and capture the visitor's perception of the importance of different on-site factors and their overall satisfaction. A study has been conducted recently by Jensen, Li, and Uysal (2017) which shows that visitors' perception of presentation platform is differed significantly with support services platform, depending on the type of the site and the type of visitors' visit. However, the objects of that study focused on various museums in the north of Norway.

This proposed research is intended to be a replication and extension of the original quantitative study by Jensen et al. (2017), focusing on one specific site in the southwest of Norway, Stavanger Archaeological Museum (Arkeologisk Museum), which is an internal partner of the University of Stavanger. Archaeological Museum is located in two separate locations. The first one is a museum building located in the city centre, which is a typical archaeological museum with a wide range of exhibitions. The second one is called the Iron Age Farm which is located in Ullandhaug area and became the object of this current study. This museum is chosen because of its uniqueness, it has a different approach with typical traditional museums and it is the only one of its kind in Norway. Therefore, a different result from the original study is expected. The Iron Age Farm is an outdoor experience-based exhibition which was built from the original remains and ruins of a farm from the Iron Age period and it allows for visitors to experience life during that time, approximately 1500 years ago (Arkeologisk Museum Official Website, 2019).

There are two main on-site factors in this museum, the outdoor exhibition (the main presentation platform) and the indoor visitor centre (the supporting services platform). The outdoor exhibition includes three long-houses, which was the type of house in which people during the Iron Age period lived in (see Appendix 3). One of the long-houses, which is happened to be the biggest, has just been renewed and opened in February 2019. There are several activities that visitors can perform such as fire-making, dough-making, knitting, etc.

The visitor centre, which was just opened in January 2018, consist of a reception desk, a small exhibition of the objects found in the farm, a café, and a museum shop. These new facilities of Iron Age Farm completed this attraction to its full form. Therefore, a new research, especially focusing on visitor's perception of the importance of these two different but complementary platforms, is deemed important for the museum, in order to have a better understanding on visitor experience and their perception and evaluation on the attraction, and for a bigger scope, to better manage the museum.

Research design

There are several objectives for this research. The first one is to identify sub-categories in on-site factors (presentation platform and supporting service platform), and whether these discriminating effects on visitor's perception and their evaluation associate with overall visitor satisfaction. The second one is to know whether and to what extent the visitors' interest and visitor type influenced their evaluation on these two on-site factors.
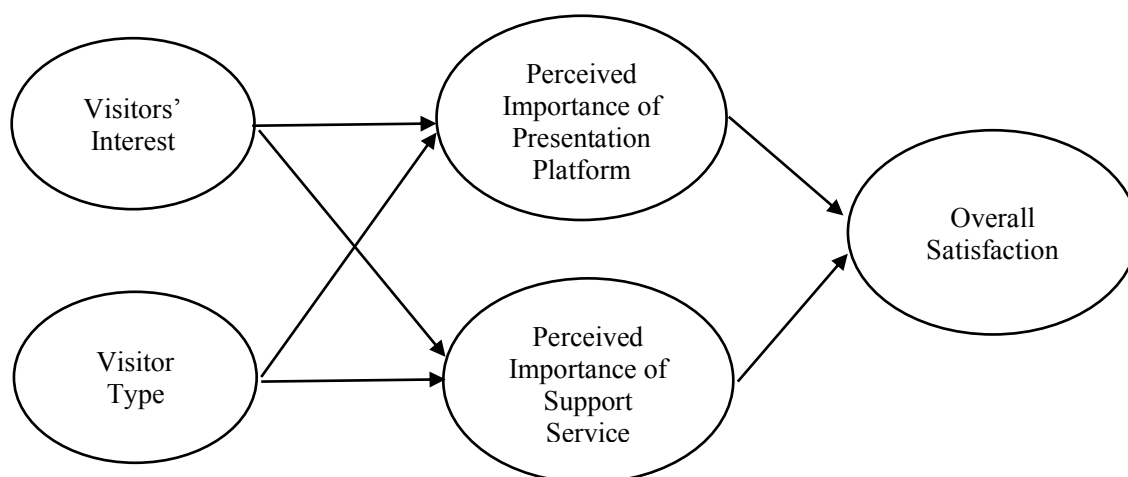
Figure 1. Research model.

To achieve these objectives, the research questions are then formulated. The main research questions are: 1) *Does the visitor's perception of the importance of presentation platform and supporting platform differ significantly?* 2) *Do visitors' perceived importance of both on-site platforms affect overall visitor satisfaction?* 3) *Does visitor interest affect their*

evaluation on these two on-site factors? 4) *Does visitor type affect their evaluation on these two on-site factors?*

The suggested hypotheses are:

H1: There are underlying factors that distinguish visitors' perceived importance of presentation platform factors and support service factors.

H2: Visitors' perceived importance of presentation platform and support service platform affect overall visitor satisfaction.

H3: Visitor's interest affects visitors' perceived importance of presentation platform and support services platform.

H4: Visitor type affects visitors' perceived importance of presentation platform and support service platform.

The primary result of this research is intended to give a contribution in managing this specific tourism site especially in managing both presentation platform and support services platform. Besides, to provide insight and updated knowledge on visitors' demographics and their preferences, which could also be important for marketing purposes.

Research Structure

The first chapter explains the background of this study, also the research purposes, research model, research questions, and hypotheses. The second chapter presents a conceptual and theoretical background based on the literature review on previous researches and existing theories to support this research. The last chapter consists of three main parts. Firstly, it explains the method used in this study including design, sample, data collection and measurement. The second part includes the data analysis and the result. The instrument which is used for analysis is IBM SPSS Statistic Data Editor. The third part contains discussion which includes research implication and managerial implication, also the conclusion of the study.

LITERATURE REVIEW

Tourism and Museum

Tourism and tourist attraction

Goeldner and Ritchie (2012) defined tourism as "the process, activities, and outcomes arising from the relationship and the interactions among tourists, tourism suppliers, host governments, host communities, and surrounding environments that are involved in attracting and hosting visitors" (p. 4). Furthermore, all the activities, services, and industries in tourism are meant to provide a travel experience (Goeldner & Ritchie, 2012). Based on the definition above, there are four key players in tourism, each has its role and intention on why they choose to participate in the tourism industry:

1. *The tourist:* seek various experiences and satisfaction.

2. *The business providing goods and services*: see tourism as a chance to make profit by providing supply to meet tourist's demands

3. *The host government:* play a role in policy, development, promotion, and implementation

4. *The host community:* see tourism as cultural and employment factors.

   (Goeldner & Ritchie, 2012, p.4)

All the players in the tourism industry have their intentions, they interact and participate in this industry and affected by it. However, not only it is affecting those groups, tourism as one form of human activity can generally have a major impact on our society. Based on Mason (2003) those impacts can be categorized into three forms: economic, socio-cultural, and environmental. Like any other things, tourism can have positive and beneficial impacts. Examples of those impacts are economic contributions to local (economy impact), tradition or handicraft activity revival as a result tourist demand (socio-cultural impact), and revenue

utilization for attraction maintenance or restoration (environmental impact) (Mason, 2003). In the other hand, tourism can also cause negative and detrimental impacts such as price increase in the tourist destinations, loss of cultural identity due to overflowing foreign tourists, and environmental consequences such as pollution, litter, disturbance (Mason, 2003). Therefore, tourism planning and management are important to balance out both of the positive and negative impacts on tourism sites.

A place can be exposed to tourism when it has the object that is called 'tourist attraction'. Leiper (1990) sees tourist attraction as a system and stated that "tourist attraction systems are subsystems in all whole tourism system" (p. 381). The article by Leiper (1990) tried to review the whole tourist attraction phenomena and proposed a model of attraction. The word 'attraction' has a significant impact when it comes to tourist attraction definition, that many researchers associated it with the key term 'draw', 'attract', 'magnetism', 'gravitational influence' and 'pull factor' (Leiper, 1990, p. 369), which implicate that some places, sites or specific building, just attract the tourist as it is and has the power to influence behaviour. Leiper (1990) found it insufficient to define tourist attraction as it fails to indicate how it operates. However, MacCannell (1976) defined tourist attraction as "an empirical relationship between a tourist, a sight, and a marker—a piece of information about a sight" (p.41) (as cited in Leiper, 1990, p. 370). The 'marker' in the definition above is important because it explained why a certain place could be called as a tourist attraction. Furthermore, "many cultural assets are ideally suited to become attractions, for they encompass the unique features of a place that reflect its history, lifestyles, or environment" (McKercher & du Cros, 2004, p. 393).

Heritage tourism

Heritage tourism is "one of the largest, most pervasive, and fastest growing sectors of tourism industry" (Timothy & Nyaupane, 2009, p. 3) and "most notable and widespread types

of tourism and is among the very oldest forms of travel" (Timothy & Boyd, 2006, p. 1). Based on Timothy and Nyaupane (2009), heritage tourism uses the element of culture, both tangible and in intangible past, as a tourism resource. These resources include sites that have historical importance such as ancient monuments, rural and agricultural landscape, and various locations when interesting, significant, and historic event occurred (Timothy & Boyd, 2006). Jun, Nicholls, and Vogt (2004) categorized heritage tourism into three: natural (landforms, rural scenery, flora, and fauna), cultural (festivals, arts/crafts, and traditional practices/products), and built (historical building, monuments, and industrial sites).

Nuryati (1996) stated that Heritage's role is to carry historical values from the past and the word itself has an association with *inheritance* which means "something transferred from one generation to another" and overall is viewed as cultural tradition of a society (p. 249). On the other hand, tourism as a form of modern consciousness is dynamic and the interaction with heritage often resulting in debate between tradition and modernity in the society culture, (Nuryanti,1996). The study by Nuryanti (1996) showed there are four issues in linking heritage and tourism: "interpretation, marketing-built heritage, planning for heritage, and the interdependencies between heritage tourism and the local community" (p. 249); these issues indicate, that in some country, especially developing countries, "they are fundamentally the problems of development" (p. 249). Most of the definitions regarding heritage mention the keyword the 'past', while tourism is strongly associated with the modern lifestyle. Therefore, the intersection between these two aspects can be contradicting. Hanna, Potter, Modlin, and Butler (2015) argued that while heritage tourism sites promote the uniqueness and the importance of the heritage sites, it might also give an implication that such sites and heritage are a loss, not only for particular heritage group that once own it but for a larger cultural loss.

There are some trends in heritage tourism research, both existing/emerging trends and recent/future trends. Based on Timothy and Boyd (2006) some of the existing and emerging

trends are heritage politics, conservation concerns, heritage economics, and authenticity, while some of recent and future trends are thanatourism, religious tourism, and heritage trails and routes. Sustainable heritage tourism is also one of the trends in tourism research. Based on Perera (2013) sustainable heritage tourism is an act to ensure that heritage sites are not altered and destroyed but protected. Based on Nebraska Heritage Tourism Plan, there are some principles to achieve heritage tourism that is sustainable, which are to" collaborate, find the fit between community and tourism, make sites and programs come alive, focus on quality and authenticity, and preserve and protect irreplaceable resources" (as cited in Perera, 2013, p. 4).

Museum

The products and experiences regarding heritage tourism play a big role in international tourism and museum plays part in building and developing heritage activities for tourist. As a product from heritage tourism, museum is defined by the International Council of Museum (ICOM) (2019) as "non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment". There are many types of museums that exist, most of the main categories are history museum, art museum, science and technology museum, national history museum, and archaeology museum. The main role of a museum is to educate visitors about the history, cultural, and natural heritage of a specific place or specific subject of interest while preserving the place (Perera, 2013). Furthermore, Falk and Dierking (2016) refer to the museum as a various informal educational institution, including visitor centers and various exhibition.

Jolliffe and Smith (2001) argued that there are some difference and contradiction between tourism and museum, in term of mission, mandates, and motives; tourism as a part of

economic activity tends to have profit-making goal, while museum is a non-profit institution and its involvement in heritage tourism is usually not the main purpose. The study from Joliffe and Smith (2001) illustrated that the relationship between heritage tourism and museum is somehow mutual; the participation of museum is necessary for heritage tourism, and the participation of heritage tourism has benefits for the museum, in terms of providing heritage product for both locals and tourist.

Museum attributes

Tourist attraction typically consists of two main attributes, the main experience/presentation platform and the supporting service platform. The experience platform refers to the main attraction, for instance, the exhibition part in the museum, while supporting service platform refers to addition in museum facility to support and complete visitor's experience, such as cafeteria, museum shop, and other facilities. Based on Jensen et al. (2017) study, the result shows that the attributes of the presentation platform can be categorized by four:

1. *Dramaturgical game orientation*

   This orientation includes three of presentation platform attributes which are the opportunity to play roles in the dramatized performance, participating in 'task solving games', and organized thrilling events (Jensen et al., 2017, p. 281).

2. *Technological orientation*

   There are four attributes attached under this category: Use of high technology to create an intriguing experience, information accessed by interactive technology at the site, portable audio-guides, and dramatized storytelling (Jensen et al., 2017, p. 281).

3. *Oral/traditional orientation*

This category includes three attributes: oral presentation by guides, traditional theme specific displays, and the opportunity to discuss with experts on-site (Jensen et al., 2017, p. 281).

4. *Independency orientation*

This last category consists of three attributes of presentation platform which are the opportunity to enjoy a relaxed/pleasant environment, the opportunity to carry out self-initiated activities, and the opportunity to use all senses. (Jensen et al., 2017, p. 281).

As mentioned above, participating in **task solving game** is one of the attributes of dramaturgical game orientation at the presentation platform in the museum. Mortara, Catalano, Bellotti, Fiucci, Houry-Panchetti, and Petridis (2014) investigate the relations between genre, the context of use, technological solutions, and learning effectiveness of games in learning cultural heritage. As stated in Mortara et al. (2014), games are used as a tool for learning because it engages the user and offers an entertaining and compelling experience which resulting in enduring and long-lasting sessions and engagement. These type of games, which the goal is to "achieve learning targets through fun experience", is called 'Serious Games' (Mortara et al., 2014, p. 318). Furthermore, Serious Games, as a tool to learn cultural content engagingly, has several factors in it: storyboard, graphics, usability, collaboration/competition mechanism, and interaction devices (Mortara et al., 2014).

Some forms of Serious Games ranging from trivia, puzzles and mini-games, which can be played in a museum exhibition, to mobile application for the museum with the reward system and simulates past events (Mortara, 2014). Research has been done by Sung, Hou, Liu, and Chang (2010) to observe and analyze the learning behavior of 65 elementary-school students who are put in three groups, distinctively used: a mobile guide with problem-solving strategy, an audio-visual mobile guide, and paper-based learning-sheet guide (p. 106). The result of this result shows that "the students in the problem-solving mobile guide group showed

a higher level of two-way interactions with their peers and the exhibits, as well as more learning-related discussions" (p. 106). That means that using technology as a learning tool is effective to get higher engagement. Furthermore, the study by Sánchez and Olivares (2011) also revealed that learning activities which are based on Mobile Serious Games (MSG) may contribute to learning improvement.

One of the attributes in technological orientation is **dramatized storytelling**. Nielsen (2017) defined storytelling as "the concept that combines the articulation of understanding that defines museum communication and the engaging narrative that forms the story" (p. 445). The story is a fundamental way to learn since it allows personal interpretation and perspectives; "they allow a listener to imagine another time and place, to find the universal in the particular, and to feel empathy for others" (p. 33). Nielsen (2017) stated that the functions of stories are to illustrate points, remember things, create meaning, and engage the audience. Furthermore, based on Bedford (2001), while several aspects in the museum, such as mission and content, will be changed, evaluated, or revised over time, one aspect that will always be "the real thing" in the museum is storytelling (p. 27),

Based on Bruner (1990), storytelling has two characteristics that can directly be related to a museum (as cited in Bedford, 2001). First is about how people learn, since "human being are natural storytellers; they make sense of the world and themselves through narrative, a form shared both by storytelling and history" (Bedford, 2001, p. 28). The second characteristic is that a story has a point of view, which helps people to figure out their basic values and beliefs (as cited in Bedford, 2001). It is important for a museum to manage their storytelling skills. Base on Bedford (2001), "storytelling skills ensure our place within human society, and probably imply that information which is not structured as a narrative is more likely to be forgotten (p. 28). Therefore, combining well-structured and informative narrative with some entertaining aspects and theatrical touch (such as costumes, accessories, and makeup) will

result in better, more dramatized storytelling, that most likely will be perceived interesting and entertaining, therefore most likely will be better remembered by visitors.

Most of the attributes in the presentation platform, such as Serious Games and dramatized storytelling, aiming for more engagement and interaction with visitors. The outline is that these attributes in the museum are combining two factors, educational factor and entertainment factors, and this term is known as **'edutainment'** among researchers. Hertzman, Anderson, and Rowley (2008) defined edutainment as "a hybrid form of attraction that seeks to create a synergy between the educational value and the entertainment value of their heritage contents by using multimedia technologies" (p. 155). Hertzman et al. (2008) emphasized that edutainment is not specifically restricted to the tourism industry, in fact, it is growingly used in education, media, and entertainment industry. Furthermore, since edutainment is widely used nowadays, it is hard to distinguished tourism, leisure, and cultural attraction and those sectors become more and more akin (Hertzman et al., 2008).

For instance, based on MacDonal and Alsford (1995), it is the developing affinity between public museums and private heritage tourist attractions (as cited in Hertzman et al., 2008). Based on various researchers, the tendency of public museum to promote entertainment value is increasing in order to support economic competitiveness in tourism industry, while the private tourism sites shifting from promoting the educational value aside of entertainment value in order to attract diverse audience and revive its identity as educational place (as cited in Hertzman et al. 2008). The study by Hertzman et al. (2008) shows that edutainment heritage tourist attraction may be the important sources of information about the history and that tourists showed the active and critical engagement with heritage image of the attraction. Furthermore, the finding from Addis (2005) shows that "the use of new technologies that stimulate all the senses of the individual allows the re-creation of the content of the message, both in terms of education and entertainment" (p. 729).

Managed tourist attraction

There has been a shift in how to manage tourist sites such as museums. Based on the main function of a museum which is generally to gather and preserve objects, the role of the museum management back in the day was mainly as the "custodial role for the cultural capital of the institution", however, nowadays the role of the management is also to attract visitors, for instance with marketing effort (Gilmore & Rentschler, 2002, p. 745). Furthermore, Harrison and Shaw (2004) suggested that there is a shift in the way management does museum marketing, from traditional promotion tools such as advertisement to the power of communication such as the word-of-mouth. As stated in Harrison and Shaw (2001) that museum management, especially the museum marketers, are interested in the influence of visitor's satisfaction to repeat visiting and recommending decision (as cited in Harrison & Shaw, 2004). That is one of the reasons why understanding and maintaining visitor's satisfaction is very important in managing tourism sites, the word-of-mouth can give a positive impact only when visitors satisfied with their experience.

Other common terms in the tourism industry are peak-season and low-season. As a tourist attraction, to constantly attract visitors, museum management should also pay attention to local visitors as they are around throughout the whole year. Chang (1999) highlighted the importance of local factors in developing a tourist attraction, where most of the time at the formulation stage, the destination is designed by foreign tourists' needs and interests. Jansen-Verbeke and Rekom (1996) stated that "museums are part of a cultural heritage and are important heritage destinations as well as a primary tourist attraction to both local and foreign tourist in many destinations" (as cited in Chan & Yeoh, 2010, p. 21).

Furthermore, another factor to well manage a museum as one of the tourist destination is to maintain the service quality of the destination. A study Žabkar, Brenčič, and Dmitrović (2010) identified six attributes that influence the perceived quality of tourist site: "accessibility,

amenities, attraction, available packages, activities, and ancillary services" (p. 544). Furthermore, Žabkar, Brenčič, and Dmitrović (2010) suggested on "delivering quality not only through technical but also through functional perspectives of service dimensions by taking into consideration different destination attributes, and thereby creating differentiated offers" (p. 544).

Another approach to manage an attraction is by understanding 'interpretation' as one important component of the visitor experience. Based on Moscardo and Ballantyne (2008) several forms of interpretation are "guided tour, information signs, self-guided walks and guide books (p. 237). There are two important roles of interpretation in attraction: creating visitor experience and supporting the sustainability of the attraction (Moscardo & Ballantyne, 2008). Furthermore, interpretation can be seen as a tool to incorporate many ways for attraction management to communicate with the visitors, therefore to well managed an attraction, the effectiveness of interpretation, which depends on the quality of the design and implementation, is hugely important (Moscardo & Ballantyne, 2008). The effective interpretation based on Moscardo and Ballantyne (2008) research and evidence are:

- Organized around themes

- Allow the visitor to find and build a personal connection

- Offer a variety of experimental dimensions

- Interactive and multi-sensory

- Give visitor choices and control over their experience

- Offer new and/or several perspectives on the topics

- Part of comfortable setting where it is easy for the visitor to find their way
  (p. 250)

Jensen (2013) presented a framework for the analysis of visitor attraction. The framework explains visitor experience as visitors interact with the main elements of managed attraction as presented phenomenon/theme within the environmental context.
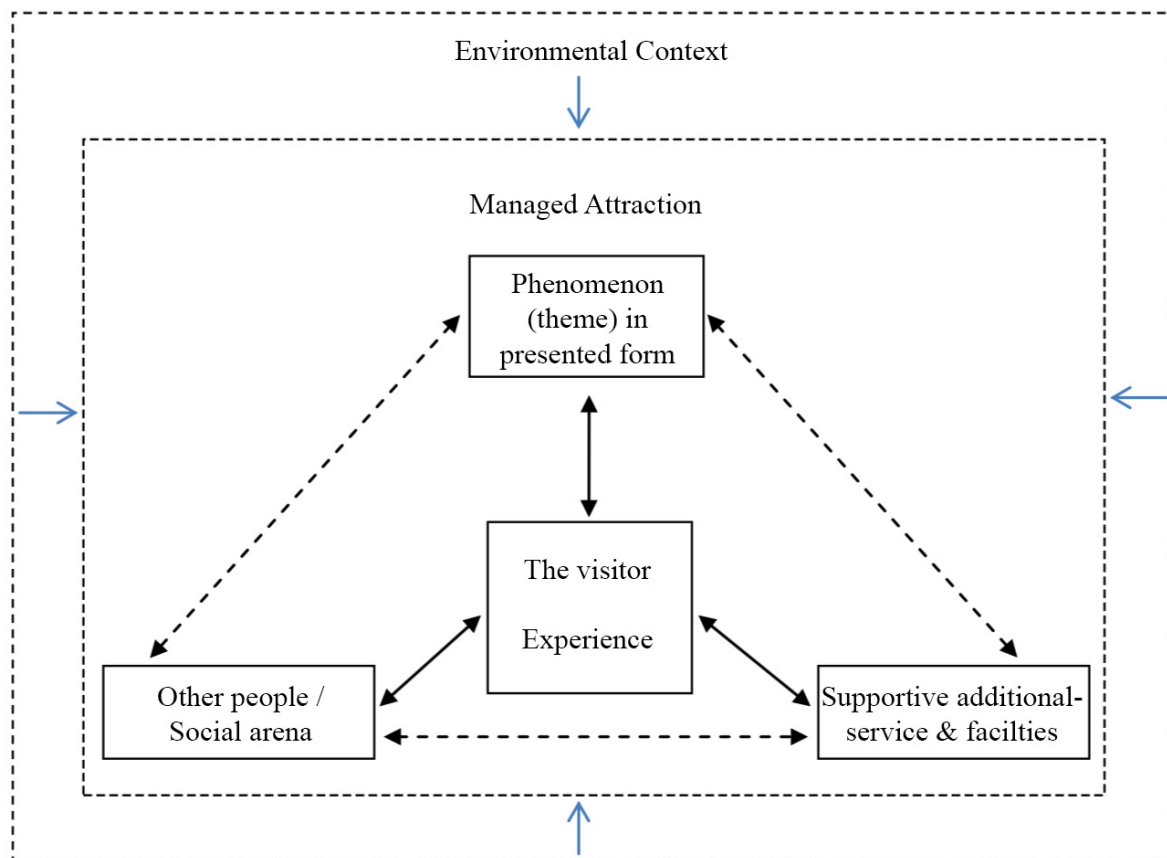
Figure 2. Framework of visitor experience at managed attraction (Source: Jensen, 2013, p. 32).

Museum Visitor Experience

Falk (2016) defined museum experience as "not something tangible and immutable; it is an ephemeral and constructed relationship that uniquely occurs each time a visitor interacts with a museum" (p. 158). This intangibility contexts on experience are often intense and involving and can have a long-lasting impact on consumer, in this case, the museum visitors (Jensen, Lindberg, & Østergaard, 2015). Museum experience not only refers to the moment when somebody visits the museum but also including overall visitor's experience even from before the visit and after the visit. Falk and Dierking (2016) defined that as the "totality of the

experience" and started from the time the thoughts appear to someone to visit the museum, during the visit, and the memory from the museum visit that could last long after (p. 23). Larsen (2003) strengthen that by defining tourist experience as "a past personal travel-related event strong enough to have entered long-term memory" (as cited in Larsen, 2007, p. 15).

Falk and Dierking (2016) conceptualized museum experience in three overlapping contexts, the personal context, the sociocultural context, and the physical context. The personal context is regarding visitor's prior knowledge, experience, and interest; physical context is about the visitor's encounter with a specific exhibition, program, or objects; socio-cultural context is referring to within and between groups interaction that occurs during the museum visit (Falk, 2016).
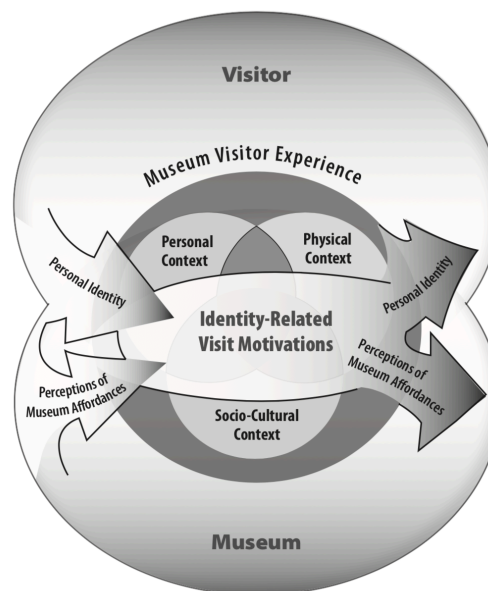
Figure 3. The museum visitor experience model (Source: Falk, 2016, p. 161).

Visitor type

Falk (2016) has a different way to categorized museum visitors; it's based on visitors' needs and it falls into five categories: explorer, facilitator, experience seeker, professional/hobbyist, recharger. For example, explorers come to the museum to fulfil the need of satisfying their curiosity and interest, experience seekers need to fulfil their aspiration and

experience new things and ideas, while rechargers need a refreshing environment for recharging their physical, emotional, and intellectuality (Falk, 2016).

Many people visit heritage sites such as museums but not all of them can be categorized as heritage tourists or cultural tourists. Staiff, Bushell, and Watson (2013) identified cultural tourist as a "minority segment that normally accounts for a very small proportion of the total number of visitors to cultural destination" (p. 294). Furthermore, Gali and Donaire (2006) stated some of the differences that heritage tourist has such as, a higher level of previous knowledge and a specific level of interest in heritage or cultural factors of the sites or destination (as cited in Staiff, Bushell, & Watson, 2013).

Visitor interest

Museum experience can be different for each visitor depending on their interest and what they want to find out and experience by visiting a museum. Dahl, Entner, Johansen, and Vittersø (2013) stated that "every museum hosts visitors who vary widely in how interested they are" in the content of the museum (p. 160). Dahl et al. (2013) studied the nature of fascination, the relation between the cognitive and affective side of fascination, and give an insight about how a museum should manage their content presentation "to better arouse, maintain, and sustain visitor interest deliberately" (p. 160). The study shows some variables that matter for museum display experience: (1) relevant display with prior knowledge and interest, (2) cognitive accessibility and emotional pleasure of museum display, and (3) cognitive and affective interest outcomes (Dahl et al., 2013).

Regarding interest, there is a common phenomenon in visitor behaviour that shows that there is a change in visitor interest level during a museum visit. Davey (2005) stated that researches as early as in the 1920s and 1930s showed that visitor interest in museum exhibitions decreased during visits, and this concept is known as 'museum fatigue'. Falk, Koran, Dierking,

and Dreblow (1985) did a study to find out about museum fatigue and the research shows that visitor interest is initially high at the beginning of the visit (showed by slow movement around the exhibit) and remained constant for about 30 minutes, then decreased to a low level of interest (showed by more fast movement and selective stopping) (as mentioned in Davey, 2005). Bitgood (2016) offered some explanation behind this phenomenon of museum fatigue and the reasons why it happens, which are: (1) Fatigue, (2) Satiation, (3) Stress, (4) Information overload, (5) Competition, (6) Limited cognitive capacity, (7) Decision making (p. 95). The further explanation about each phenomenon can be seen in Table 1.

Phenomenon	Presumed causes
Fatigue (tiredness, exhaustion)	Prolonged physical and/or mental exertion; stress
Satiation	Exposure to homogenous objects with little emotional or intellectual stimulation; boredom
Stress	Physical and mental pressure associated with distracting or unwanted frustrations, etc.
Information overload	Inability to process inputs because too many are presented at once or inputs are presented too quickly over time
Competition	Presentation of multiple objects simultaneously resulting in either distraction or more selective attention to fewer objects
Limited cognitive capacity	Depletion of cognitive energy from mental exertion; assumes finite amount of the resource, much like a gasoline tank
Decision making	Visitors choose to attend less because the value (utility/costs) are decreased or because visitors choose to avoid state of exhaustion or because time pressure results in greater selectivity as the visit progresses

Table 1. Phenomena associated with "museum fatigue" (Bitgood, 2016, p. 95).

Visitor motivation

Based on Schofield and Thompson (2007), generally, visitor motivation can be divided into two types, 'push' and 'pull'. The first one refers to one's desire to get out from daily life and the later one is regarding something from outside which attracts them to visit a place. Lee, O'Leary, Lee, and Morrison (2002) stated that there are six push dimensions: escape/getaway, seek novelty, relax, brag about the trip, hedonism, and family togetherness; and seven pull

dimensions: environment, nature/ecological, ease and vale, culture and shopping, climate, unique people or activity for family (as cited in Schofield &Thompson, 2007, p.330).

To understand visitor motivation in a visiting tourist attraction, Leiper (1990) introduced the concept of 'nuclei'. Tourism attraction as a system has a 'nucleus' which can be defined as any feature or characteristic which attract visitor to visit the sites (Leiper,1990). The needs and motivations of visitors are widely varied, making the nuclear elements varied as well, and therefore different nuclei have different degrees of significance, due to visitors' perspectives on the importance of the attractions (Leiper, 1990). However, Leiper (1990) categorized the nuclei in a hierarchy:

- Primary nucleus → an attribute of a place which stimulates somebody's motivation to consider or decide to visit a place.

- Secondary nucleus → an attribute that is known to a person but doesn't significantly contribute to decision making.

- Tertiary nucleus → an attribute which is unknown and discovered by a person after arriving in a destination area. (Leiper, 1990)

There are some motives behind the reasons why people visit and experience museums. Falk and Dierking (2018) stated: "it is the expectation of novelty, the prediction that curiosity will be piqued and satisfied, that motivates most, if not at all, free-choice learning" (p. 123). Rounds (2004) identified two types of museum visits, one which is extrinsically motivated (essential for visitors' occupation, hobby, etc.) and the other which is intrinsically motivated (curiosity-driven and for no known use). The 'curiosity-driven visitor' is not a personality type, but rather referring to people who visit the museum mainly to satisfy their curiosity (Rounds, 2004). It is possible that the type of museum visit motivation will affect the level of visitor's satisfaction and evaluation on different platforms in museums.

Poria, Butler, and Airey (2004) stated that the main reasons of people a visiting site, especially heritage sites, such as museum can be divided into two groups, for education reasons or recreational reasons. Furthermore, they added the third reason that suggests that people visiting the museum due to their identity, as their desire to be exposed to their heritage (Poria, Butler, & Airey, 2004). Therefore, based on Poria, Butler, and Airey (2004) three tourist motivations on visiting heritage sites can be concluded as "heritage/emotional experience", "recreational experience", and "cultural/educational experience" (p. 24). Some of the items that are included in the 'heritage experience' are the sense of belonging to the site, the site is a part of tourist's heritage, wanted to feel emotionally involved and felt obliged to visit the site, etc. (Poria, Butler, & Airey, 2004). 'Recreational experience' includes other reasons besides the site's materials such as the desire for a day out, relax, to be entertained, etc. (as cited in Staiff, Bushell, & Watson, 2013). The last category is 'cultural/educational experience' and includes visitors' intention to learn about the site, its historical background, and the physical nature of the site (Poria, Butler, & Airey, 2004). Another study by Prentice and Andersen (2007) categorized some motives behind visiting heritage museum, such as:

- To visit while being in the area

- To better understand how people used to live

- To understand a place/country's heritage better

- To be taken back in time

- To find visitor's family history

- To understand how is it to be from a place/country/region

Visitor expectation and visitor satisfaction

One important factor in managing museum is to make sure that the museum fulfils its visitor expectation. Based on Nowack (2005) visitor expectation is based on "verbal

information, personal needs, experience and commercial information (p. 237). Furthermore, Sheng and Chen (2012) investigated visitor's experience expectation and the result showed that museum visitor expects five factors on their visit to a museum:

1. Easiness and fun, such as positive feeling, interesting contrast and change, relaxed, exposed to exotic cultures.

2. Cultural entertainment, such as experience physical objects, experience familiar culture or entertainment, reminded of experience related to themselves, having fun, food, and shopping, and see strange people and things.

3. Personal identification, such as collect souvenirs and keep memories, have a companion with similar interest, consistent experience, and close to characters related to the subject.

4. Historical reminiscences, such as see legendary character, experience historic feeling, have mournful even pitiful experience.

5. Escapism, such as have a dreamy experience, have hope or vision.

Visitor satisfaction is one of the important aspects of managing a tourism site. Tian-Cole and Cromption (2003) stated that visitor satisfaction will lead to visitor loyalty, which can be shown by returning visitor and visitor recommendation. Visitor satisfaction is strongly related to visitor expectation and site's performance. Oliver (1980) introduced the expectancy-disconfirmation paradigm which contents two processes: expectation development of service outcomes and disconfirmation judgement, and when visitor comparing expectation and outcomes (as cited in Cole & Cromption, 2003). "When the actual performance matches initial expectation, confirmation result. When the actual performance exceeds or falls short of expectation, then positive or negative disconfirmation occurs. Positive disconfirmation leads

to satisfaction, while negative disconfirmation leads to dissatisfaction" (Cole & Crompion, 2003).

Furthermore, Tian-Cole and Crompion (2003) suggest that visitor satisfaction is closely related to visitor motivation, where satisfaction comes from the needs and motives being achieved. The study by Devesa, Laguna, and Palacios (2010), which is aimed to investigate the relationship between visitor motivation and visitor satisfaction, found that certain satisfactory elements linked directly to visitor motivation. For example, the 'cultural visitor', who showed a high level of satisfaction, reported significantly higher evaluation on specific items related to their cultural motivation, such as museum opening hours, guided tours, and conservation of monumental heritage; while visitors who look for tranquility, rest and contact with nature, showed reported higher evaluation on access, tranquility, and conservation of natural heritage (Devesa, Laguna, & Palacios, 2010).

On-site attributes of visitor satisfaction

Jensen, Li, and Uysal (2017) mentioned that site attractions have duality and complementary roles, which are expressive and instrumental roles that might be resulting in visitor satisfaction. Based on Uysal (2003) expressive roles represent the major intent of the act, for example sightseeing, camping, hiking, touring, etc.; while instrumental roles "serve as actions or behaviours toward facilitating that desired end", for examples, parking, restrooms, and other services (Uysal, 2003, p. 36). These two roles can be seen in most of the tourist attractions. However, the finding from Uysal (2003) shows "a pattern of expressive attributes takes the lead in providing satisfaction ratings while instrumental attributes seem to take the lead in providing corresponding dissatisfaction ratings" (p. 36).

Jensen at al. (2017) stated that visitor satisfaction is created complementarily by both on-site attributes, expressive and instrumental. Even though Noe (1987) discovered that the

expressive attribute creates 'the core recreational experience' and give more prominent effect in overall visitor satisfaction, however later on, Noe and Uysal (1996) stated that both expressive and instrumental factors are strong predictors of overall satisfaction (as cited in Neal, Sirgy, & Uysal, 1999).

Review on Jensen et al. (2017) study

Jensen et al. (2017) examined different sub-categories of on-site factors which resulting in different visitors' perceptions and their evaluation of the site while considering the attraction type and visitor type. The study was conducted at four different tourist attractions in Northern Norway: North Cape, Lofoten Viking Museum, Polaria Museum, and Svalbard Museum. Data collection from the first three attraction was collected in two weeks during peak summer season 2011, while data collection from Svalbard Museum was collected in winter and summer season 2011 and 2012. The data collection has been done by paper and pencil type of survey, available in four languages (English, Norwegian, German, and French) and 632 questionnaires were collected from all four places. The research measured three aspects: Presentation Platform, Support Service, and Overall Satisfaction.

Jensen et al. (2017) conducted four steps through data analysis: generating a demographic and descriptive profile of respondents, exploratory factor analysis, MANOVA, and regression. The first analysis showed that 51.2% of the respondents are female and 48.8% are male. The majority of visitors are between 26-44 years old, visit the sites with family and/or friends without children, and work in the private sector. The result from factor analysis on Presentation Platform which consist of 13 items showed that there are four major factors: dramaturgical game orientation, technological orientation, oral/traditional orientation, and independency orientation. While the result on Support Service which includes 8 items showed that there are two major factors: service-logistic orientation, and souvenir orientation. The

study also conducted the correlation matrix to show some proof that there are relationships between both the presentation platform and support services and visitor satisfaction.

The result from MANOVA showed that there are significant differences in visitor perception of both presentation platform and service platform due to attraction and visit type. The visitor who has the attraction as their main goal of travel showed higher perceived importance scores both to presentation platform and service platform, in comparison to the visitor who visits the site as a recreational extension of their travel. The result also showed that visitor perception of the importance of these two platforms differ by attraction site, where visitors at North Cape showed the lowest perceived importance of presentation platform and visitors at Polaria museum reported the least perceived importance of service platform.

The last analysis in this study was multiple regression, which is conducted to investigate the relationship between attraction attributes and overall visitor satisfaction in all four sites while keeping in mind the effect of visit type. The analysis showed that the type of visit insignificantly affects the visitor's evaluation and service-logistic orientation (Support Service) is highly associated with visitor satisfaction, while independency orientation (Presentation Platform) also had some association with visitor satisfaction. The result also found that the effect of most of the presentation platform and service platform on satisfaction does not vary between four attractions.

METHODOLOGY

Research Design

Leavy (2017) defined research design as the process of building a structure for research project and that primary structure is called approaches to research design which includes quantitative, qualitative, mixed method research, art-based research, and community-based participatory research. Quantitative research is a deductive approach to prove, disprove, or embellish existing theory and involves measuring variables and testing relationships, while qualitative research is explorative, focusing on building new knowledge, and investigates about social phenomena (Leavy, 2017). The art-based research combines both quantitative and qualitative data, whether community-based participatory research is collaboration work between academic (researcher) and non-academic community (Leavy, 2017).

This current research could be classified as quantitative research with the intention is to replicate and extend the previous study by Jensen, Li, and Uysal (2017) "Visitors' satisfaction at managed tourist attraction in Northern Norway: Do on-site factors matter?". Makel and Plucker (2014) defined replication studies as "the purposeful repetition of previous research to corroborate or disconfirm the previous result" (as mentioned in Leavy, 2017). Furthermore, Schmidt (2009) categorized replication research into two types, direct replication and conceptual replication (as mentioned in Leavy, 2017). This research can be considered as direct replication research with extension. It is still categorized as a direct replication because according to Schmidt (2009) direct replication uses the same method as the previous study, while conceptual replication uses a different method to study the hypothesis and theory (as mentioned in Leavy, 2017). There are not many replication studies in the hospitality field. Skeiseid (2018) argued that despite the negative connotations regarding the replication study, including the perceived lack of creativity and as an attack on original work, replication has

some roles to build a stable knowledge foundation. "Researchers should be honoured if one's work is being replicated. It should be a sign of importance, and diverging result should be seen as an opportunity to build understanding around why these differences may have occurred" (Skeiseid, 2018, p. 9).

Based on Neuman (2014) there are four types of social research: exploratory research, descriptive research, explanatory research, and evaluation research. Explanatory research investigates new areas that has never been studied before. Explanatory research attempt to find an explanation about activities, events, or relation, and answer to the question "why" is that happen, while evaluating research is done to find out whether something (program, product, policy) is effective and working properly as what it is claimed (Neuman, 2014). This current study is considered as descriptive research, which aims to "present a picture of the specific details of a situation, social setting, or relationship" (Neuman, 2014).

Sample

One of the objectives in quantitative research is to gather the samples which can represent the population with highly accurate generalization. Neuman (2014) classified two types of sampling, random sampling and non-random sampling. Random sampling includes simple random sampling, systematic sampling, stratified sampling, and cluster sampling; while non-random sampling contains convenience sampling, quota sampling, purposive/judgmental sampling, and snowball sampling (Neuman, 2014). Random sampling has a high probability to generate sample which represents the population, however, the process is complicated, therefore non-random sampling is chosen if there is no possibility of using random sampling and if the research has difficult goals (Neuman, 2014), for example for this study. The sample on the current research was collected with convenience and purposive sampling methods. Based on Neuman (2014) the advantage of using convenience sampling is that this method is

easy, cheap, and fast. Convenience sampling is not the best to use in a qualitative method since it is lacking in depth and context. Since the current research is a quantitative research and due to some limitations and time constraint, when the random sampling cannot be conducted, the convenience sampling is chosen. However, the biggest problem in convenience sampling is that it can produce unrepresentative sample (Neuman, 2014). To overcome this problem, the other sampling method is chosen, the purposive sampling method.

During the peak season (summer), the Iron Age Museum opens every day of the week and many foreign visitors visit the museum due to many cruise ships docking in Stavanger port. Meanwhile, during the low season period, which is also the period when most of the data collection was conducted, the museum only opens on Sundays and mainly had local visitors. Therefore, the sample is most likely locals and cannot be generalized to the whole population. To balance out the local visitors, the purposive sampling is chosen, which targeted foreign visitor coming from cruise ships. The researcher collected data from the Iron Age Farm's management with the list of schedules of incoming cruise ships' visitors and conducted the second part of data collection targeting cruise passengers based on the list.

There are many arguments on how to decide on sample size. Based on Tabachnick and Fidell, 300 samples are considered as comforting to run analysis such as factor analysis, while 150 samples are considered enough for research with a smaller sample size (as cited in Pallant, 2013). Some other researchers considered using the ratio of participants to items as the method in deciding sample size, which also comes in different perspectives about the ratio, for example, 10 to 1 ratio or 5 to 1 ratio (Pallant, 2013). Since this current research was done in off-peak season and only conducted in one specific attraction, which means fewer visitors were expected, the study used the 5 to 1 ratio, which means 5 respondents per one item to run in factor analysis as the base of deciding targeted sample size. There were 12 items included in the measurement of visitors' perceived importance of presentation platform and 9 items in the

evaluation of support service platform. Therefore, the total items were 21 and the formulation for sample size was 21 x 5 which means the number of targeted sample size is equal to 105 samples.

Data Collection

Neuman (2014) stated that there are two forms of evidence in research which are qualitative data and quantitative data. Quantitative data collection can be divided into four which is experiments, survey, content analysis, and existing statistic (Neuman, 2014). On the other hand, the qualitative data collection includes interview, field research, and unobtrusive methods (Leavy, 2017). This study is mainly using quantitative data with a survey as the main tool to collect the data. As mentioned in Fowler (2013), a survey is created to generate statistic data and describe the characteristic of the target population. The basic assumptions in doing a survey are that the description of the sample can be used to obtain the description of population and the answers that people give explains the characteristic of the respondents accurately (Fowler, 2013). Those assumptions lead to some issues in research which are how closely the sample mirrors the population and how well answers measure the described characteristics. Those things are the potential sources of errors; therefore, the design of a survey and the data collection method are important in research. Neuman (2014) stated that sampling error is affected by two factors, the sample size and the diversity of cases in the sample: "the larger the sample size, the smaller the sampling error" and "the less the diversity, the smaller its sampling error".

The data on this present study were collected during winter and spring 2019. While the quantitative method is mainly used in this study, some of the qualitative methods such as interview and field research (observation) have been conducted to gather the primary data to build a relevant questionnaire as the main tool in this study. The observation is done by the

researcher by visiting the Iron Age Farm on an occasion to defined some on-site factors in the museum, as well as observed the visitors. It is then followed by approaching to museum management and interviewed with the museum's manager. The interview was conducted at the Iron Age Farm in February 2019. Based on the observation and interview, some informations were gathered. Due to the winter/low season, the museum only opens on Sundays during the length of this study, while the visitors are mainly the locals with foreign tourists occasionally, with the exception of group bookings when the museum is opened exclusively for the group, mainly for cruise passenger groups. The quantitative data collection is gathered through questionnaires. The period of this process lasted for more than 6 weeks, started from the last two weeks of March 2019 until the second week of May 2019, which included the first four Sundays which targeted mainly local visitor and two other sessions targeted for foreign visitors from the cruise ships.

The general flow of visitor experience is started when visitors entering the visitor centre building (VC) and come to the reception desk for ticketing. The visitors who wished to have a guided tour need to buy the ticket, while the visitors who prefer to explore alone at the farm and long houses, do not need to buy the tickets. There was normally no queue at the reception desk since it was low season. After that, the visitors proceed outside the visitor centre building to the experience platform outside and the long houses. There are three available guided tours on regular Sundays: at 12 p.m. (in Norwegian), 1 p.m. (in English), and 2 p.m. (in Norwegian), and for the cruise groups, the tour is available as per booking. There are some activities that visitors can participate while in the guided tour such as making fire, knitting, making dough and bread (which can be eaten after cooked in the fire). After participating in a guided tour in a long house and/or exploring by themselves, the visitors returned to visitor centre building, to visit the museum shops and/or the café, and this was the time when the researcher approached them and asked for their willingness to fill in the questionnaire.

Figure 4. Visitor flow at the Iron Age Farm.

The questionnaire is designed based on the questionnaire used in the original study by Jensen et al. (2017) which was intended mainly for foreign visitors visiting Northern Norway during peak summer 2011. The questionnaire consists of four parts: visitors' profile, the importance of experience platform, the importance of service platform, and overall satisfaction.

Some adjustments had been made to the questionnaire due to a different situation and condition between the previous study and the current study. The questionnaire has been made into two types, for local visitors and foreign visitors, coded with [L] for local visitors (see Appendix 1) and [F] for foreign visitors (see Appendix 2). Some items and questions which are irrelevant for local visitors have been deleted in the questionnaire for the locals. Since there are two types of questionnaires, for local visitors and foreign visitors, the researcher gave judgement by the language the visitor was speaking (Norwegian for locals and any other language for foreigners) and if there was any doubt whether the visitor local or foreigner, researcher asked personally for confirmation. At the data collection sessions targeting local visitors, the researcher was present in mainly every session of data collection and actively asking visitors to answer the questionnaire. However, this method was not working effectively for the visitor who came from cruise groups since they did not have much time at the museum. Therefore, the researcher approached museum management and asked for their collaboration and the museum agreed to help and insert brief information about this current research to the visitors at the end of the guided tour and ask for their participation in this research. This step was very helpful since the visitors were aware of this research and the researcher did not need

to ask visitors one by one. The details of the data collection process, the target of each data collection session and achieved samples are presented in the table below.

Date	Target	Achieved samples
Sunday, 24th March 2019	Mainly local visitors	21
Sunday, 31st March 2019	Mainly local visitors	25
Sunday, 7th April 2019	Mainly local visitors	8
Sunday, 14th April 2019	Mainly local visitors	8
Sunday, 28th April 2019	Mainly foreign visitors (cruise passengers' group)	20
Thursday, 5th May 2019	Mainly foreign visitors (cruise passengers' group)	4
	Total	86

Table 2. Data collection process and samples achieved.

As seen on the table above, the total achieved samples number is 86, which was not reached the targeted samples number 105. This is due to some obstacles which were not expected. The first major obstacle in data collection happened from the third and fourth session of data collection, when the museum started to have an event called 'Påske på Jernaldergården' (Easter at Iron Age Farm), where visitor could rent a picnic basket and did barbeque at the farm with bonfire, and there was trivia game for the kids which let them found answers around the farm with small gifts as the reward. The visitors were unexpectedly excited about this event, therefore gave little attention and had less desire to fill up the questionnaire, many had rejected to participate in the survey to contribute to this study.

Furthermore, the researcher faced some major problem in collecting the data mainly from cruise visitors, for the most part, it was regarding time constraints. Cruise visitor groups generally have a very short amount of time in the museum, approximately 45 minutes to 1 hour, and they mainly rushed from the bus to the long houses, back to the visitor centre and the museum shop, and rushed back to the bus. Most respondents who agreed to fill in the questionnaire could not finish it and the other refused to help and preferred to spend the little

time in the museum shop. For instance, at the last session of data collection, on the 5th of May 2019, the museum expected around 250 foreign visitors coming from the cruise ships. The visitors came in 8 groups with average of 30 people in each group. Only 4 visitors completed the questionnaire from approximately 250 visitors. This showed the difficulty level in data collection of this current study. Therefore, unfortunately, the data collection was far from perfect and the researcher decided to work with the data available.

Measurement

In a quantitative study, there are four levels of measurements: nominal, ordinal, interval, and ratio. This study is measuring the importance of two on-site factors in a museum, as well as visitors' satisfaction. These variables measure opinion and can vary between visitors; therefore, they are inside ordinal measurement. Based on Neuman (2014) the commonly used scale at the ordinal level is Likert scale where there is a set of statements or questions which participants answer from a set of choices, for example strongly agree, agree, disagree, and strongly disagree. There are four variables in this study: presentation platform, support service platform, overall satisfaction and type of visit. The Likert scale was used to measured three out of four variables in this study.

Presentation platform. The presentation platform in the current research was evaluated by a set of 12 attributes/items with a Likert scale ranging from 1 to 5 (1 = not at all important to 5 = extremely important). The items included in this list are: (1) oral presentation by guides, (2) "traditional theme specific displays at the attraction, (3) dramatized storytelling, (4) used of modern high-technology for the purpose of creating a visually intriguing experience, (5) opportunity of playing roles yourself in dramatized performance, (6) participating in task-solving games, (7) opportunity to discuss with skilled/educated experts, (8) information accessed by interactive technology at the site, (9) portable audio guides, (10) opportunity to

use all senses, (11) opportunity to carry self-initiated activities, and (12) opportunity to enjoy a relaxed and pleasant environment. There was one item from the original study by Jensen et al. (2017) which was deleted from the list, which is "organizing thrilling event". It was being removed due to relevancy and an expert's suggestion.

Support service platform. The support service platform was assessed by visitor evaluation on 9 items which are included in the list of support service variable and measured by 5-point Likert scale (1 = not at all important to 5 = extremely important). The items which are on this scale are: (1) Information boards, signs and direction, (2) The handling of queueing, (3) Having sufficient time in hand for the tour of the site, (4) The maintenance of the site, (5) The physical layout of the attraction, (6) The service of the staff, (7) The collection in the souvenir shop, (8) The location of visitor centre, (9) The food in museum café.

The original study included 8 items. The questionnaire for this current study kept item number 1-7 which were the same as the original study, while item number 8 was changed from "the location of museum shop" into "the location of visitor centre". Item number 9 was added due to relevancy with the Iron Age Farm's facility.

Overall visitor satisfaction. This variable is measured by a single item "As a visitor, how satisfied were you with overall experience at this site?" with a 5-point Likert scale ranging from 1 = not at all important to 5 = extremely important.

Visitors' Interest. This variable is measured by a single time "How interested were you in the theme or topic associated with this attraction before the visit" with a 5-point Likert scale (1 = not at all interested to 5 = very interested).

Visitor Type. The visitor type was measured in three different ways. The first way was to categorized the visitors by the type of questionnaire they filled in, which were local or foreign. The second way was to categorize them by visitor's perceived importance of the attraction, which came with three options: main goal, important stop, or just recreational

experience. The third way was to categized them whom they were visiting the attraction with. This item came in three options as well: single visitor, with family/friends with children, or with family/friends without children.

Data Analysis

The data analysis process in this current research used IBM SPSS Statistic Data Editor software. There are three main steps in the data analysis: exploratory factor analysis, multivariate analysis of variance (MANOVA), and regression. However, descriptive analysis was conducted first to find out about the respondents' profile. Based on Pallant (2013) there are three uses of descriptive analysis includes describing the characteristic of the achieved sample, checking variables for any violation of assumptions underlying the statistical technique, and address the specific research questions. The descriptive analysis used in this study presented the descriptive information about the visitors, such as age, gender, nationality, occupation, type of visitor, and other visiting characteristics. This step provides information about the demographics of the Iron Age Farm which might be helpful for the museum to manage the system which currently exists with improvements based on visitor characteristic.
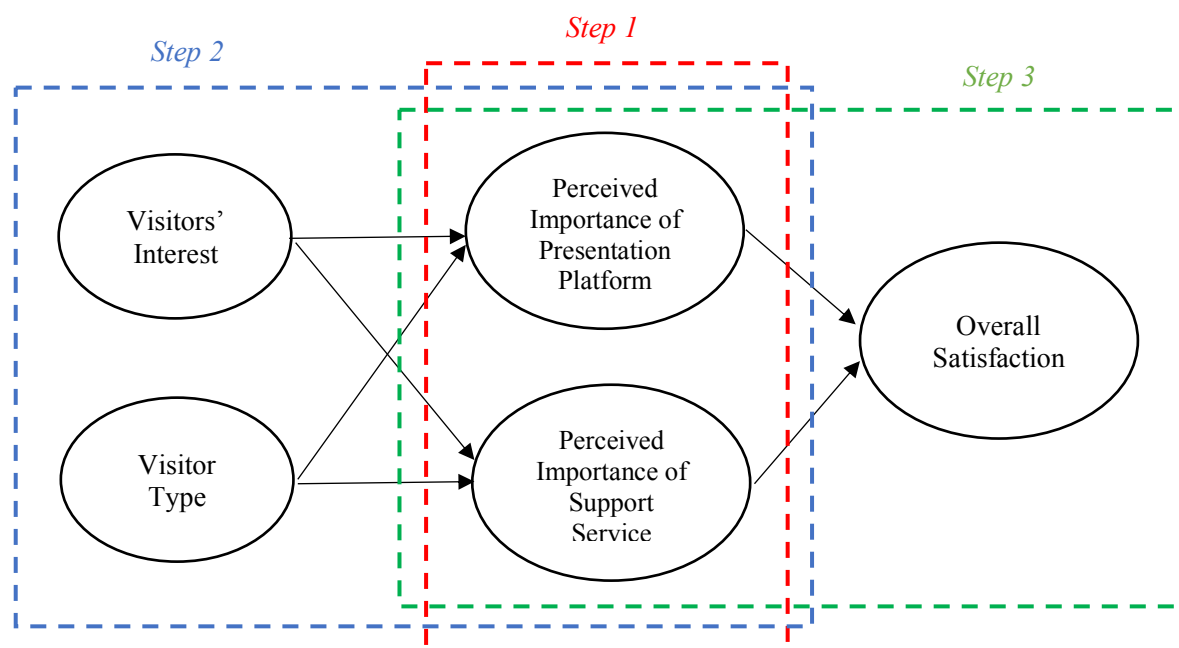
Figure 5. Steps in data analysis.

The first step in the main analysis is factor analysis. Based on Pallant (2013), there are two main approaches to factor analysis, exploratory and confirmatory. Explanatory factor analysis is usually used in the early stages of research to explore the interrelation between set variables, while confirmatory is used for a more complex set of techniques and used later research process to test the hypothesis or theories about some sets of variables (Pallant, 2013). The factor analysis used on this second step in the current research is the exploratory factor analysis since the objective of conducting factor analysis is to explore the interrelation of two sets of variables, which are the variables that existed in experience platform and the variables in support service platform. As a part of factor analysis, the study explored the correlations between all of these factors that were found.

The second analysis step was the analysis of variance. Pallant (2013) stated that there are two ways to analyse variance, the first being a one-way analysis of variance which is designed to analyse the variance in a single dependent variable. However, the current research uses multivariate analysis of variance (MANOVA) because based on Pallant (2013), MANOVA is used when there is more than one dependent variable. This current study has five dependent variables which consist of four experience platform factors and one support service factor with visitors' interest and visitor type as the independent variables. Therefore, MANOVA is compatible and used to find out whether visitors' interest and visitor type have a significant effect on visitors' perceived importance of two on-site factors.

The last step of data analysis is running the regression to find out the correlation between the variables. Based on Pallant (2013) there are some techniques to discover relationships, such as correlation, partial correlation, multiple regression, and logistic regression. This study, in particular, used multiple regression, which is used when there is a single dependent variable and multiple independent variables (Pallant, 2013), in this case, overall satisfaction as dependent variables with two on-site factors as independent variables.

Result

Profile of respondents

The descriptive analysis shows that 52.6% of the respondents are female and 47.4% were males with the age ranged from under 20 to over 60 years old. The majority, representing approximately 43% were between 20-39 years old, while 32% were between 40-59 years old, 24% were over 60 years old, and the rest were under 20 years old. The majority of respondents (59%) were reported Norwegian as their nationality, followed by 17% from other countries in Europe including Austrian, British, Danish, Dutch, French, German, Russian, and Spanish.

	Total (N = 86)	
	N	Percentage (%)
Gender		
Male	37	47,4
Female	41	52,6
Age		
Less than 20	1	1,2
20-39	36	42,9
40-59	27	32,1
more than 60	20	23,8
Nationality		
Norwegian	45	59,0
European	13	17,0
American	10	13,0
Others	8	11,0
Main Occupation		
Student	11	13,1
Working in public sector	14	16,7
Working in private sector	28	33,3
Other	31	36,9
Type of visitor		
Single	7	8,2
Family and/or friends with children	44	51,8
Family and/or friends without children	34	40,0
Questionnaire Type		
Local	64	74,4
Foreign	22	25,6

Table 3. Demographics of respondents.

The rest of the respondents were 13% American, and the rest 11% were from other countries such as Argentina, Australia, Canada, and Peru. The majority of the respondent registered their occupation as 'other' (37%), mainly did not specify the occupation, however, some reported as retired or unemployed. The rest of the majority (33%) is working in the private sector, and the others are working in the public sector (17%) and studying (13%). The Iron Age Farm's visitors were mainly visiting the site with friends and/or family, 52% with children and 40% without children. The rest 8% visited the farm as a single visitor. Based on the questionnaire type, 74% of the respondents were local visitors, representing 64 visitors, whereas 26% were foreign visitors, representing 22 visitors, which mainly cruise ship passengers.

The other descriptive analysis was conducted to find out about visiting characteristic of the respondents. The data shows that 76% of foreign visitors came to the Iron Age Farm because it was included in their travel package, where 38% stated that the attraction is optional alternative and the other 38% intentionally chose the attraction. Regarding the local visitors, 58% of the local respondents were returning visitors who have been visited this attraction before, while the rest is first-time visitors. From all respondents, both local and foreigners, 21.5% visited the Iron Age Farm with the 'group tour package' and 78.5% visited the site without the group package. This result was in line with the visitor type, whether they were local visitors or foreign visitors, which means that local visitors were mostly visited the site without the 'group tour package', where the foreign visitors, who mainly came from the cruise, visited the farm with the package. The majority of the respondents reported that they used the guide assistance (65%), whereas the rest were exploring the farm by themselves. This mainly explains the nature of the attraction itself, since Iron Age Farm's main attraction is an outdoor farm with several long houses, there is no sign nor information board around the farm, and the only way the visitor could gather the information and history about the Iron Age is through a

guided tour. However, the majority of the respondents (56.5%) reported that they preferred both to have guide assistance and to have the ability to enjoy and explore the attraction by themselves as well.

	Foreigners (N = 22)	Both (N = 86)	Locals (N = 64)
Visit Type			
Part of travel package in which the attraction is included	38%		
Part of travel package in which you chose the attraction	38%		
Part of self-organized tour	19%		
Part of a longer stay at this destination	4.8%		
Group Tour Package			
Visited with 'group tour package'		21.5%	
Visited without 'group tour package'		78.5%	
Guide Assistance			
Visited with guide assistance		64.9%	
Visited without guide assistance		35.1%	
Visit Preference			
Using guide at the site		25.9%	
Walking alone at the site without a guide		17.6%	
Both		56.5%	
Returning Visitor			
Have visited the site before			57.8%
Have not visited the site before			42.2%

Table 4. Visit characteristic of respondents.

Dimension of presentation platform and support service attributes

Exploratory factor analysis with Varimax Rotation is conducted to find out the underlying dimension of the scales in both presentation platform and support services platform attributes. This procedure extracted factors that emerged from both the platform's scale with the eigenvalue greater than one. The result showed that from 12 items under presentation platform attributes, 4 factors were extracted. The first factor explained 28% of the variance

with eigenvalue 3.415, which contains three items including the use of technology to create a visual experience, portable audio guides, and interactive technology to access information. These items emphasized the importance of technology in the museum experience, therefore the first factor was labelled as 'Technological Orientation'. The reliability alpha among these three items = 0.803 which based on Ponterotto and Ruckdeschel (2007), with sample size N < 100 and items per subscale < 6, is rated as 'excellent' (see table 5).

The second factor found in the presentation platform scale was labelled as 'Dramaturgical Game Orientation' since it includes three items stressing in the opportunity to play roles in a dramatized performance, participating in task solving games, and dramatized storytelling. This second factor explained approximately 16% of the variance with eigenvalue 1.869 and reliability alpha 0.712 which considered as 'good' reliability. The third factor was found with eigenvalue 1.474 and explained 12% of the variance with 'good' reliability alpha of 0.711. This factor included three items regarding independency in visitor experience, which includes items such as the opportunity to carry out self-initiated activities, enjoy a relaxed/pleasant environment, and to be able to use all senses. Based on those characteristics of this factor, it was labelled as 'Independency Orientation'.

The last factor found on this analysis with eigenvalue more than 1 was the factor which was labelled as 'Oral/Traditional Orientation' because the items accentuate the importance of guide assistance and traditional layout in the attraction. This last factor of the presentation platform explained almost 11% of the variance with an eigenvalue of 1.301 and reliability alpha 0.612 which is not considered as good reliability but based on Ponterotto and Ruckdeschel (2007) is still acceptable and rated as 'fair'. Three items found in this factor are oral presentation by guides, traditional theme specific displays at the attraction, and the opportunity to discuss with skilled/educated experts. All four factors which were extracted from the factor analysis in the presentation platform explained the total variance of approximately 68%.

Table 5. Part of the matrix for estimating adequacy of internal consistency coefficients (Source: Ponterotto and Ruckdeschel, 2007, p. 1003).

Items per Subscale	Rating	Sample Size (N < 100)
≤ 6	Excellent	0.75
	Good	0.70
	Moderate	0.65
	Fair	0.60

Note. An internal consistency coefficient falling below 'Fair' rating for its particular cell would be deemed 'Unsatisfactory'.

Table 6. Result of exploratory factor analysis (presentation platform attributes).

Perceived Importance of Presentation Platform Attributes	Factor Loading	Eigenvalue	Value Explained
Presentation Platform 1: Technological Orientation			
Use of modern high-technology for the purpose of creating a visually intriguing experience	0.851	3.415	28.461
Portable audio-guides	0.842		
Information accessed by interactive technology at the site	0.793		
Reliability alpha = 0.803			
Presentation Platform 2: Dramaturgical Game Orientation			
Opportunity of playing roles yourself in dramatized performance	0.825	1.869	15.577
Participating in task-solving games	0.776		
Dramatized storytelling	0.664		
Reliability alpha = 0.712			
Presentation Platform 3: Independency Orientation			
Opportunity to carry out self-initiated activities	0.810	1.474	12.283
Opportunity to enjoy a relaxed and pleasant environment	0.763		
Opportunity to use all senses	0.722		
Reliability alpha = 0.711			
Presentation Platform 4: Oral/Traditional Orientation			
Oral presentation by guides	0.858	1.301	10.843
"Traditional" theme specific displays at the attraction	0.677		
Opportunity to discuss with skilled/educated experts	0.636		
Reliability alpha = 0.612			
Total Variance			67.615

Note. KMO = 0.594, Bartlett's Test of Sphericity = 299.394, $df = 78$, $p < 0.001$

Different from the factor analysis result in Jensen et al. (2017) study when two factors were found in support service platform, this current study only found one factor with eigenvalue greater than 1 in support service platform, which labelled as 'Overall Support Service'. This factor contains all 9 items from the visitors' evaluation on support service attributes at Iron Age Farm which including the location of visitor centre, the maintenance and layout of the attraction, the staffs and queue handling, the signs and information boards, the collection in souvenir shop and food in the café, and the sufficient time for tour at the attraction. All of these items were extracted into one factor which explained 56% of the variance with eigenvalue of 5.040 and reliability alpha 0.903 which is considered as high and 'excellent'. The table below shows all items in this factor from the highest to the lowest factor loading.

Table 7. Result of exploratory factor analysis (support service attributes).

Evaluation of Support Services Attributes	Factor Loading	Eigenvalue	Value Explained
Support Services 1: Overall Support Services			
The location of the visitor center	0.847	5.040	56.000
The maintenance of the site	0.827		
The physical layout of the attraction	0.819		
The service of the staffs	0.770		
Information boards, sign, and directions	0.754		
Collection in souvenir shop	0.703		
Having sufficient time in hand for the tour of the site	0.670		
The handling of queueing	0.667		
Food in the café	0.647		
Reliability alpha = 0.903			
Total variance			56.000

Note. KMO = 0.877, Bartlett's Test of Sphericity = 312.803, df = 35, $p < 0.001$

After conducting the factor analysis, a correlation analysis should be done to know the relationship between the factors and overall visitor satisfaction. The first set of results revealed the mean (M) and standard deviation (SD) of all variables. It is shown that the Iron Age Farm's visitors were generally satisfied with the attraction, which can be found in high mean number 4.25 (SD = 0.771) which can be interpreted as the majority of respondents rated their

satisfaction as 4 out of 5 scales. Furthermore, the result showed that the respondents were also rated their evaluation of overall support service in Iron Age Farm as high (M = 4.04, SD = 0.706). Among all factors in presentation platform, 'Oral/Traditional Orientation' scored the highest average number (M = 3.80, SD = 0.834) which showed that the majority of respondents perceived presentation platform 4 (Oral/Traditional Orientation) as the most important aspect among all presentation platforms, while presentation platform 2 (Dramaturgical Games Orientation) were perceived as the least important (M = 2.73, SD = 0.945). However, the perceived importance of all of the factors in the presentation platform were still above average, considering the scales were measured by 5-points Likert scale, which generally shows that the average score is 2.50. Presentation platform 3 'Independency Orientation' was rated as the second most important factor (M = 3.77, SD = 0.768) and presentation platform 1 'Technological Orientation' came as the second least important factor (M = 2.90, SD = 1.039).

Table 8. Means, standard deviation, and correlation among constructs (N = 86).

Variables	M	SD	1	2	3	4	5
1. Presentation Platform 1	2.90	1.039	-				
2. Presentation Platform 2	2.73	0.945	0.345**	-			
3. Presentation Platform 3	3.77	0.768	0.175	0.290*	-		
4. Presentation Platform 4	3.80	0.834	0.200	0.290*	0.228*	-	
5. Overall Support Service	4.04	0.706	0.224	0.218	0.474**	0.473**	-
6. Overall Satisfaction	4.25	0.771	0.184	0.214	0.208	0.460**	0.706**

Note. $*p < 0.05$, $**p < 0.01$

Comparing with the result from the original study by Jensen et al. (2017), there is a major difference, especially regarding the correlations between overall satisfaction and perceived importance of both presentation platform and support service platform. While the original study found significant relationships between overall satisfaction and all factors both in presentation and support service platform, the result from this current study only found two significant factors that correlated with overall satisfaction. The first one was the correlation between oral/traditional orientation (PP 4) and visitors' satisfaction ($r = 0.460$, $p < 0.01$) and

the second one, showing the strongest relationship found in the matrix, was between overall support service and overall satisfaction ($r = 0.706$, $p < 0.01$). It implicates that the greater visitor's evaluation of support service at Iron Age Farm, the more likely they were reported to be overall satisfied with the attraction.

The other significant correlations were found among these variables. The other relationships that were found in this study which were statistically highly significant ($p < 0.01$) were between overall support service and two presentation platform factors, which are presentation platform 3 'independency orientation' ($r = 0.474$, $p < 0.01$) and presentation platform 4 'oral/traditional orientation' ($r = 0.473$, $p < 0.01$). The other findings which were highly significant was the correlation between the presentation platform 'technological orientation' and 'dramaturgical game orientation ($r = 0.345$, $p = 0.01$). There were three more correlations which were found statistically significant between variables, they were between presentation platform 2 and 3 ($r = 0.290$, $p = 0.05$); between presentation platform 2 and 4 ($r = 0.290$, $p = 0.05$), and between presentation platform 3 and 4 ($r = 228$, $p = 0.05$).
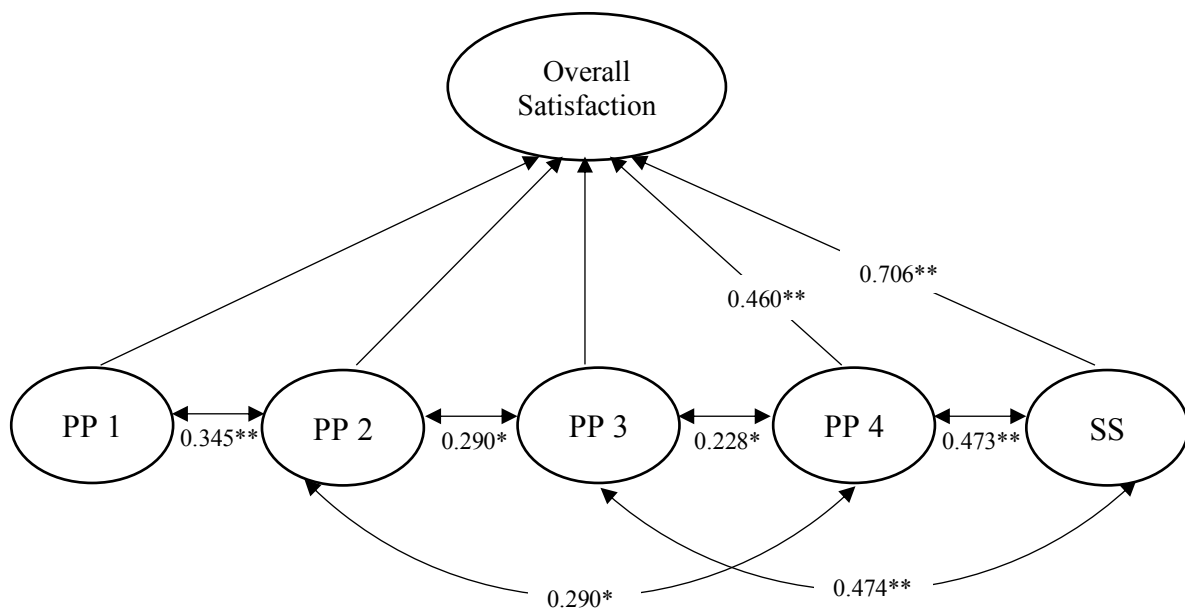
Figure 6. Significant correlations found between constructs. (Note. PP = presentation platform, SS = support service, *$p < 0.05$, **$p < 0.01$).

Perception of factors by visitors' interest and visitor type

The current study conducted MANOVA analysis to find out whether visitors' interest and visitor type have a significant effect on visitors' perceived importance of presentation platform and support service platform attributes. Visitors' interest was registered as the independent variable, which hypothetically may affect the dependent variables, in this case being all factors in presentation platform and support service platforms. However, the finding revealed that there was no significant effect, which means that visitors' interest in the attraction did not affect their perception of the importance of both presentation and service platform.

The second variable which was tested is the type of visitors. Jensen et al. (2017) original study found that visitor type had a significant effect on visitors' perceived importance of all four presentation platform factors and two support service factors. However, the visitor type in original study only includes one type of categorizing the visitors, which was based on whether visitor visited the attraction as their main/important goal of the visit or as a recreational extension of the stay.

Table 9. MANOVA result for presentation platform and support service platform factors.

Source (Independent Variables)	PP1 (F)	PP2 (F)	PP3 (F)	PP4 (F)	SS (F)	Wilks' λ (F)
Visitor' Interest	0.805	0.961	2.074	2.733	1.247	0.953
Visitor Type						
Main goal/important stop/recreational	2.462	1.801	0.100	1.974	0.115	1.233
Locals/foreigners	0.009	0.385	0.003	0.350	1.071	0.679
Single visitor/group with kids/group without kids	0.219	0.305	0.022	0.064	0.341	0.206
Gender	0.222	0.241	1.449	1.960	3.818	2.111
Guide Assistance						
Visited with/without guide	0.001	0.398	1.039	5.816*	2.780	1.991
Preferred with guide/explore independently/both	0.535	1.078	0.297	5.736**	2.330	1.988*

Note. PP = presentation platform, SS = support service, *$p < 0.05$, **$p < 0.01$

However, this current study did not find the same result in the way the original study was done. Whether visitors visited the attraction as main/important goal or recreational, it has not affected how visitors scored their perceived importance of both on-site factors. Both

variables were suspected to give an effect on visitors' perceived importance of on-site factor, however this was not statically proven in this study, therefore some other variables were tested to find which factors affect the perceived importance of on-site factors. This study tested another category of visitor type, which was based on questionnaire type (locals/foreigners). No significant effect found from this test, therefore there was no evidence that whether the visitor was local or foreigners affected their perceived importance of the on-site factors. Another way in defining visitor type is based on whom they were visiting the attraction with, either as a single visitor, with family/friends with kids or with family/friends without kids. The result also showed that this version of visitor type did not affect their perception of the importance of the factors significantly.

The other MANOVA analysis was tested to find if gender affected visitor's perception of the importance of both presentation platform and support service platform factors. The result showed that gender did not give such the effect significantly. However, the significant effects were found in the analysis regarding 'Guide Assistance'. The result revealed that visitors' Guide Assistance Preference had a main significant effect on overall visitor's perception on importance, Wilks' $\lambda = 0.709$, $F(10, 106) = 1.988$, $p < 0.05$, partial $\eta^2 = 0.158$. Furthermore, the guide assistance preference had a significant effect on perceived importance of presentation platform 4 (Oral/Traditional Orientation), $F(2, 57) = 5.736$, $p < 0.01$). This translated to whether visitor preferred to use a guide or explore by themselves or both, it significantly affected their perception on how important was 'Oral/Traditional' aspects of presentation platform (guide presentation, traditional theme specific display, and the opportunity to discuss with expert on-site) at the attraction. The last finding on this analysis was the significant effect of the actual usage of guide on visitor perceived importance of the same presentation platform 4 (Oral/Traditional Orientation) $F(1, 52) = 5.816$, $p < 0.05$), which means whether they actually

visited the Iron Age Farm with guide assistance or not, it significantly affected their perceived importance of oral/traditional aspect of the presentation platform on-site.

The effects of attraction attributes on overall satisfaction

Since the result from MANOVA analysis showed that there was no significant effect of visitor's interest on visitor's perceived importance of on-site factors, a standard multiple regression analysis was conducted to investigate the relationship between attraction attributes and overall satisfaction, without controlling the effect of visitors' interest and visitor type. All attributes in the presentation platform and support service were registered as the independent variables and overall satisfaction was registered as the dependent variable.

Table 10. Result of regression model.

Independent Variable	Std. β	Std. error	Adj. R^2	F
Presentation Platform 1	0.004	0.074	0.502	12.873***
Presentation Platform 2	0.069	0.084		
Presentation Platform 3	-0.181**	0.107		
Presentation Platform 4	0.146	0.099		
Overall Support Service	0.707***	0.127		

Note. **$p < 0.01$, ***$p < 0.001$

The regression model showed that there was a significant effect of on-site factors on visitor satisfaction $F = 12.873$, $p < 0.001$, explained approximately 50% of the variance in overall visitor satisfaction ($R^2 = 0.502$). Furthermore, the regression analysis revealed that the overall support service factor had the highest association with visitor satisfaction ($\beta = 0.707$, $p < 0.001$). In addition, a significant result found in this analysis was regarding presentation platform 3 'Independency Orientation' which include the items such as the opportunity to enjoy a relaxed environment, carry out self-initiated activities, and using all senses. The result showed presentation platform 3 had a negative association with overall visitor satisfaction ($\beta = -0.181$, $p < 0.01$).. This can be interpreted as the increase in visitors' perceived importance

of independency attributes could lead to lower visitor satisfaction. In addition, to checked if visitors' interest and visitor type have a direct association with overall satisfaction, the regression analyses were conducted and the result showed that both had no significant association.

Discussion

Research implication

The current study was conducted to test the relationship among presentation platform, support service, overall satisfaction, visitors' interest and type of visitor in one specific attraction, The Iron Age Farm. The result suggested that visitors' perception of presentation platform and support services platform contribute to overall satisfaction, without any discriminating effect from visitor's interest and visitor type.
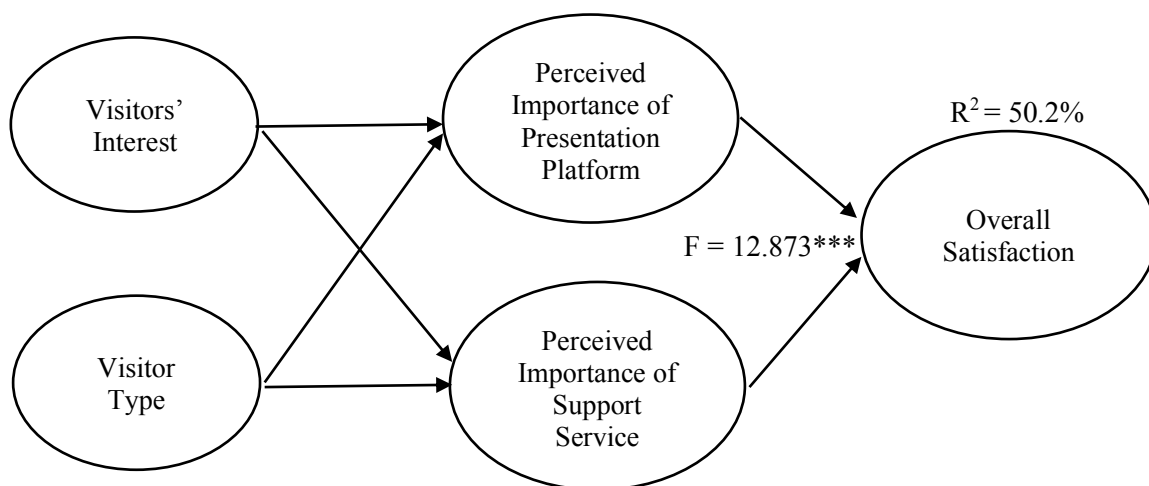
Figure 7. Research model with results.

The finding on the first step analysis revealed and confirmed the findings from the original study by Jensen et al. (2017) that in fact, there were underlying factors in the perceived importance of presentation platform, ranging from technological attributes, dramaturgical game attributes, independency attributes, and oral/traditional attributes. However, this current study showed that there was only one factor in the support service platform, which was a

different result from the original study, which found two factors. This might be the result of some changes that were wade in the questionnaire to make it more relevant with the visitor of Iron Age Farm during the period of this study. The other finding from this analysis showed the relationships between factors from presentation platform and support service platform. The correlations were significant between factor to factor, with relatively high reliability which generally means that the scales which were used to measure the perceived importance of on-site factors was valid to some extent.

The second step in the analysis was partly different from the original study, when the original study examined whether visitors' satisfaction was influenced by different attractions and the type of visitor. This current study was done only in one specific attraction; therefore, the attraction factors could not be included both in the model and the analyses. Thus, this study included visitors' interest as a researched variable as well as visitor type. The process of the analyses was conducted the same way as the original study which includes MANOVA as the main analysis. The result showed the major difference with the original study, while the original study found that both attractions and visitor type gave significant effects on visitor perceptions and evaluation of presentation platform and support service. A different result was found in this study, showing that both visitors' interest and visitor type did not give such a significant effect on visitors' perception about presentation platform and support service platform.

The only factor that is found gave an effect on such things are factors related to guide assistance, where the test showed a significant effect on visitor's perception of the importance of on-site factors. This can be explained with the argument that the Iron Age Farm relied the most on its guide assistance. This has something to do with the nature of the attraction itself, which is to explain to the visitors how the life in Iron Age was, therefore the attraction relying a lot on guide presentation and storytelling skills. The possible explanation on why only

oral/traditional orientation in presentation platform has a significant correlation with visitors' perception on the importance on the on-site factor (which at the end affected their satisfaction) at the Iron Age Farm was probably because it is the only stand-out aspect that the attraction has at the moment. Based on observation at the attraction, Iron Age Farm does not use advanced technology application in the museum, nor many dramaturgical game attributes.

The third step of the analyses showed that there was an association between visitors' perceived importance of on-site factors to overall satisfaction. In fact, visitors' perceived importance of on-site factors explained 50% or half of the variance in their overall satisfaction. One question that arose from this finding was what can be the rest of the 50% variance which contributed to visitor satisfaction. The comment section on the questionnaire could be the start on finding the answer to this question which can also be used for further research.

Some visitors who raised comments on Iron Age Farm were majority complained about parking facility, which was in fact, one of the items in the support service platform that was not included in the questionnaire. They stated that the parking facility was not sufficient and not helpful especially for families with small kids. Another respondent commented on ticket office which perceived as "a little bit confusing" and one respondent wrote that they were expecting more activities for smaller kids (4-10 years old) which was a relevant comment considering the descriptive data shows that approximately 52% of the respondents visited the attraction with children.

The rest of the comments were positive comments and showed that visitors were very much satisfied with the attraction. One positive comment was about a respondent who was very impressed and satisfied with Iron Age Farm but at the same time showed disappointment that she/he just discovered it lately and suggested the attraction to pay more attention to promoting the attraction itself. All of these aspects showed that there is more to explore visitor

satisfaction in an attraction and gave some suggestions for future research to explore more about aspects that matter to visitor satisfaction.

Jensen et al. (2017) argued that foreign tourist can be assumed to "have different needs, pre-knowledge, and behaviour from local residents, travellers visiting friends and relatives, tourists visiting attractions as part of a longer stay, and people from urban areas visiting nearby attractions" (p. 283). In contrast, this study found that there was no significant evidence that local visitors had a different perspective with foreign visitors when it comes to their perception about museum attributes' importance. For certain, this study cannot be generalized to the whole museum visitor's population. However, it also shows that the finding of Jensen et at. (2017) did not apply in this specific attraction.

The other variable that could not be proven affected visitor's perceived importance of museum attributes is visitors' interest. This might have resulted from the minimal operationalisation of the variable itself. The current study was not mainly focused on visitors' interest and was not designed to find the dimension of this variable, but merely only used it as the discriminating effect on visitors' perceived importance of museum attributes. However, Calver and Page (2013) explored this subject matter with a study in over 184 heritage attractions in England, Wales, and Northern Ireland. The study found that there are critical dimensions of heritage knowledge and interest, such as knowledge and interest in art and history and in the natural environment (Calver and Page, 2013). The other example in how to operationalized visitors' interest was shown in the study conducted by Moss and Esson (2010) about visitors' interest in zoo animal, where it assessed the level of visitor interest by measuring the proportion of visitors who stopped at animal viewing area and the time they spent there. This shows that there are other ways of measuring visitors' interest in an attraction other than the one which is used in this study.

The other result from the regression model which was interesting to be discussed is how presentation platform 3 'Independency Orientation' had a negative association with overall satisfaction. This result gave an implication that the increase in the perceived importance of the independency factor might result in lower visitor satisfaction. It has not been tested yet but one possible argument is the option of the independency to explore the farm freely gives a strong suggestion that visitor did not want to use the guide assistance, while the other results showed strong evidence that visitor satisfaction in Iron Age Farm very much depends on guide assistance. This could lead to overall dissatisfaction because of the lack of information boards provided in the main presentation platform. This argument is also backed up by one of the visitor's comment in the questionnaire which said that the attraction "need further development with information sign". Furthermore, it was statistically proven by the correlation result between on-site factors and overall satisfaction (Table 8) which showed that the only presentation platform that has a significant correlation with overall satisfaction was presentation platform 4, Oral/Traditional Orientation.

Limitation and future research

The limitation of this present study was mainly regarding sample size. The small sample size leads to insignificant results which made this study hard to be generalized and only applied for this specific attraction. The data collection also had some limitation which mainly regarding the timing of the data collection, which happened during the low-season period which technically made it harder to collect the sample efficiently. The future research is suggested to be done in the peak-season period and possibly lead to better significance level and better generalization.

Furthermore, the method of collecting the sample from the cruise ship visitor was possibly the reason why the sample size was very limited. Because the questionnaires were

collected with paper and pen method, the cruise visitors could not get enough time to do the survey and the current study could not reach the targeted number of samples. The possible better method to collect data from visitors who are short in time is collecting the data through an online questionnaire. Besides, the other factor which possibly contributed to the low level of significance was the number of attractions, which in this current study, only targeted in one specific attraction. The suggestion for future research is to compare the study at Iron Age Farm with another attraction, for instance, the Archaeological Museum in downtown Stavanger, which possibly leads to a better significant level.

The result also showed that there are more aspects which contribute to overall visitor satisfaction, which can be the idea for explorative study to find those aspects. The idea of Iron Age Farm as an attraction, which is an experience-based exhibition which allows the visitor to experience the life during the Iron Age also suggest that research regarding authenticity might be interesting to do at this attraction.

Managerial implication

As mention in the Introduction, the Iron Age Farm is not a typical museum attraction that one can find in Norway. The uniqueness of this attraction gives an implication that the attraction operators might need to manage it with a different approach as well. This current study explores both presentation platform and support service of the attraction, which can be helpful for museum management to understand which aspects are perceived as the more important than the others by the visitors. With more knowledge about these important factors, it will be more efficient for the attraction operator to decide on which attributes in the museum should be given more attention to, which one works well and need to be maintained as it is and which area to be improved. As the result shows, the oral and traditional presentation is perceived as the most important aspect in Iron Age Farm's presentation platform, which

suggest that museum operators should focus in the quality of guide assistance and the traditional layout of the museum, for instance by hiring more experienced guides and experts in the field, in order to deliver the best services that lead to better visitor satisfaction. In addition, more exhibit which displayed in a traditional theme-based manner may also help to increase visitor satisfaction.

However, the result also shows that overall visitor satisfaction, for the time being, is considerably high. Most of the respondents show that they were highly satisfied by the attraction, which shows that the efforts that have been put by museum management to satisfied its visitor has succeeded and this too, should be maintained, if not improved. The finding also shows that support service attributes are perceived as the most important aspect that contributes to visitor satisfaction. This means the improvement in all attributes in support service platform may be important to be focused on, for instance, the information boards, sign, maintenance and layout of the site, and overall services from the staff. Additional logistic such as parking space, which was not a part of support service factors empirically tested in this current study, may also be improved since it was mentioned in the comment section frequently as a complaint which may lead to dissatisfaction.

Based on the other finding, the visitors' interest and visitor type did not significantly contribute to overall visitor satisfaction, which means museum operators may focus on promoting the attraction in a general manner, attracting as many visitors as possible without focusing on the type of visitor nor visitors' interest. Instead, promoting to use guide assistance once the visitor is there may help to increase overall satisfaction. Based on the research, the two least important aspects of the attraction were the technological factor and dramaturgical games factor. To put in other words, investing in high technology may not significantly increase visitor satisfaction. However, visitor still perceived this aspect as averagely important,

therefore, those aspects may be maintained to the standard museum usage of technology and gamification, to be comparable to another attraction and to be able to compete in the industry.

Conclusion

The present research investigated some phenomena regarding visitor experience in one particular heritage tourist attraction, the Iron Age Farm Museum. The visitor experience is an important aspect for museum management to pay attention to. Generally, every attraction tries to provide the best services to make sure that visitors have a pleasant experience at the attraction. One way to measure their experience is by overall visitor evaluation and satisfaction. This research focused on finding the underlying factors in the perceived importance of on-site factors that contribute to overall satisfaction and whether any other aspects, such as visitors' interest and visitor type, contributed to those factors. A literature review has been presented to understand better about some constructs that are relevant for this study, such as visitors' satisfaction, visitors' interest, and on-site platforms. The study was conducted with a quantitative design using a questionnaire as the main tool for data collection and the answer to the research questions has been revealed.

The empirical findings answered the research questions and summarized whether the proposed hypotheses were confirmed or rejected.

The statements are:

1. There are underlying factors that distinguish visitors' perceived importance of presentation platform and support services factors. This hypothesis was partly confirmed.

2. Visitors' perceived importance of presentation platform and support service platform affect overall visitor satisfaction. This hypothesis was confirmed.

3. Visitor's interest affects visitors' perceived importance of presentation platform and support service platform. This hypothesis was rejected.

4. Visitor type affects visitor's perceived importance of presentation platform and support service platform. This hypothesis was rejected.

To conclude, based on the analysis in this present research and based on the result that has been tested, the findings suggest that there are underlying factors in the perceived importance of presentation platform, however not in support services platform. The regression model suggested that visitors' perceived importance of both on-site factors significantly associated with overall satisfaction. However, only two on-site factors had significant correlations with overall visitor satisfaction, which are the oral/traditional orientation of presentation platform and overall support service (which had the strongest correlation with satisfaction). There were some theories which could not be proven by this research, such as whether visitors' interest and visitor type affect visitors' perceived importance of presentation platform and support services factors. The result showed that the perceived importance of two on-site factors was not affected by both.

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Appendix 1

University of
Stavanger

QUESTIONNAIRE ON VISITOR EXPERIENCE AT IRON AGE FARM

Gender: M ☐ F ☐   **Nationality**…………….

What type of a visitor are you? (Tick only one option)

Single visitor   ☐

Family and/or friends with children   ☐

Family and/or friends without children   ☐

In which of the following age groups do you fit in?

Less than 20 years   ☐

between 20-39 years   ☐

between 40-59 years   ☐

60 years or more   ☐

Please tell us about your main occupation, are you…

A student   ☐

Working in public sector   ☐

Working in private sector   ☐

Other …   ☐

Are you travelling in a 'group tour package'?   Yes ☐ / No ☐

Did you take the assistance of a guide at the site? Yes ☐ / No ☐

Have you visited Iron Age Farm previously before?   Yes ☐ / No ☐

What do you prefer the most?

Using a guide at the site   ☐

Walking alone at the site without a guide   ☐

Both   ☐

<u>Please circle your desired options</u>

How interested were you in the theme or topic associated with this attraction before the visit?

Not at all Interested   1   2   3   4   5   Very interested

How important are the following elements to make your visit to this site attractive?

- *The site as such with its objects*

  Not at all Important   1   2   3   4   5   6   7   Extremely important

- *The main theme or topic of the attraction*

  Not at all Important   1   2   3   4   5   6   7   Extremely important

- *The way the themes are presented and arranged for you as a visitor*

  Not at all Important   1   2   3   4   5   6   7   Extremely important

- *The support-service and facilities at the site*

  Not at all Important   1   2   3   4   5   6   7   Extremely important

How much did the theme or topic of this attraction influence you in your current visit?

Not at all   1   2   3   4   5   Very much

Which of the following aspects are more important to you at the attraction to fulfil your visitor experience?

Learning and getting new insight	Not at all Important	1	2	3	4	5	Very important
Amusing myself	Not at all Important	1	2	3	4	5	Very important
Sharing the visit/trip experience with fellow visitor	Not at all Important	1	2	3	4	5	Very important
Obtaining a meaningful life experience	Not at all Important	1	2	3	4	5	Very important
Experiencing a moment of escape from ordinary life	Not at all Important	1	2	3	4	5	Very important
Confirmation of what I had known beforehand (knowledge of figures, facts issues, etc.)	Not at all Important	1	2	3	4	5	Very important

How would you define your visit to this site as a part of your travel? (Tick only one option)

A main goal of my travel ☐

An important stop on the way ☐

Just a recreational experience ☐

Which of the following platforms are important to make your visit to this type of attraction successful?

a. Oral presentations by guides

Not at all Important   1   2   3   4   5   Very important

b. "Traditional" theme specific displays at the attraction

Not at all Important   1   2   3   4   5   Very important

c. Dramatized storytelling

Not at all Important   1   2   3   4   5   Very important

d. Use of modern high-technology for the purpose of creating a visually intriguing experience

Not at all Important   1   2   3   4   5   Very important

e. Opportunity of playing roles yourself in dramatized performance

Not at all Important   1   2   3   4   5   Very important

f. Participating in task-solving games

Not at all Important   1   2   3   4   5   Very important

g. Opportunity to discuss with skilled/educated experts

Not at all Important   1   2   3   4   5   Very important

h. Information accessed by interactive technology at the site

Not at all Important   1   2   3   4   5   Very important

i. Portable audio-guides

Not at all Important   1   2   3   4   5   Very important

j. Opportunity to use all senses

Not at all Important   1   2   3   4   5   Very important

k. Opportunity to carry out self-initiated activities

Not at all Important   1   2   3   4   5   Very important

l. Opportunity to enjoy a relaxed and pleasant environment

Not at all Important   1   2   3   4   5   Very important

m. Any other option? ...

Which of the above platforms from page 4-5 (identified with letters), **contributed mostly to a positive visitor experience** for you at the site? (max 2 options)

a	b	c	d	e	f	g	h	i	j	k	l	m

Which of the above-mentioned platforms from page 4-5 (identified with letters) **did you miss the most or perceive as poorly executed**? (max 2 options)

a	b	c	d	e	f	g	h	i	j	k	l	m

How would you evaluate the following aspects of the site?

Information boards, signs, and direction

Negative   1   2   3   4   5   Positive

The handling of queueing

Negative   1   2   3   4   5   Positive

Having sufficient time in hand for the tour of the site

Negative   1   2   3   4   5   Positive

The maintenance of the site

Negative   1   2   3   4   5   Positive

The physical layout of the attraction	Negative	1 2 3 4 5 Positive
The location of the visitor centre	Negative	1 2 3 4 5 Positive
Collection in the souvenir shop	Negative	1 2 3 4 5 Positive
Food in the café	Negative	1 2 3 4 5 Positive
The service of the staff	Negative	1 2 3 4 5 Positive

Any other options? ...

As a visitor, how satisfied were you with overall experience at this site? Not at all satisfied 1 2 3 4 5 Very satisfied

How strong is your interest in the theme or topic associated with this attraction after your visit? Not at all interested 1 2 3 4 5 Very interested

Would you possibly recommend this attraction to friends and acquaintances? Not at all 1 2 3 4 5 Very much

Any other comments on your experience at the attraction?

Thank you very much for your participation!

Appendix 2

University of
Stavanger

QUESTIONNAIRE ON VISITOR EXPERIENCE AT IRON AGE FARM

Gender: M ☐   F ☐   **Nationality**…………….

What type of a visitor are you? (Tick only one option)

Single visitor   ☐

Family and/or friends with children   ☐

Family and/or friends without children   ☐

In which of the following age groups do you fit in?

Less than 20 years   ☐

between 20-39 years   ☐

between 40-59 years   ☐

60 years or more   ☐

Please tell us about your main occupation, are you…

A student   ☐

Working in public sector   ☐

Working in private sector   ☐

Other …   ☐

Please tell us about your travel to the attraction, was it… (Tick only one option)

Part of a travel package in which this attraction is included   ☐

Part of travel package in which you chose the attraction   ☐

Part of a self-organized tour   ☐

Part of a longer stay (more than three days) at this destination ☐

Are you travelling in a 'group tour package'?   Yes ☐ / No ☐

Did you take the assistance of a guide at the site?   Yes ☐ / No ☐

What do you prefer the most?

Using a guide at the site   ☐

Walking alone at the site without a guide   ☐

Both   ☐

Please circle your desired options

How interested were you in the theme or topic associated with this attraction before the visit?

Not at all Interested   1   2   3   4   5   Very interested

How important are the following elements to make your visit to this site attractive?

- *The site as such with its objects*

  Not at all Important   1   2   3   4   5   6   7   Extremely important

- *The main theme or topic of the attraction*

  Not at all Important   1   2   3   4   5   6   7   Extremely important

- *The way the themes are presented and arranged for you as a visitor*

  Not at all Important   1   2   3   4   5   6   7   Extremely important

- *The support-service and facilities at the site*

  Not at all Important   1   2   3   4   5   6   7   Extremely important

How much did the theme or topic of this attraction influence you in your current visit?

Not at all   1   2   3   4   5   Very much

Which of the following aspects are more important to you at the attraction to fulfil your visitor experience?

Learning and getting new insight	Not at all Important	1	2	3	4	5	Very important
Amusing myself	Not at all Important	1	2	3	4	5	Very important
Sharing the visit/trip experience with fellow visitor	Not at all Important	1	2	3	4	5	Very important
Obtaining a meaningful life experience	Not at all Important	1	2	3	4	5	Very important
Experiencing a moment of escape from ordinary life	Not at all Important	1	2	3	4	5	Very important
Confirmation of what I had known beforehand (knowledge of figures, facts issues, etc.)	Not at all Important	1	2	3	4	5	Very important

How would you define your visit to this site as a part of your travel? (Tick only one option)

A main goal of my travel ☐

An important stop on the way ☐

Just a recreational experience ☐

To what extend do you agree with the following perceptions about the attraction: (circle your opinion)

It blends with the image of the destination.

			Neutral			
Strongly agree	1	2	3	4	5	Strongly disagree

It matches the expectation created by tourism firms/organization.

			Neutral			
Strongly agree	1	2	3	4	5	Strongly disagree

It corresponds with my initial perceptions about the attraction (perception made before my visit).

			Neutral			
Strongly agree	1	2	3	4	5	Strongly disagree

Which of the following platforms are important to make your visit to this type of attraction successful?

a. Oral presentations by guides   Not at all Important   1   2   3   4   5   Very important

b. "Traditional" theme specific displays at the attraction   Not at all Important   1   2   3   4   5   Very important

c. Dramatized storytelling   Not at all Important   1   2   3   4   5   Very important

d. Use of modern high-technology for the purpose of creating a visually intriguing experience

Not at all Important   1   2   3   4   5   Very important

e. Opportunity of playing roles yourself in dramatized performance

Not at all Important   1   2   3   4   5   Very important

f. Participating in task-solving games

Not at all Important   1   2   3   4   5   Very important

g. Opportunity to discuss with skilled/educated experts

Not at all Important   1   2   3   4   5   Very important

h. Information accessed by interactive technology at the site

Not at all Important   1   2   3   4   5   Very important

i. Portable audio-guides

Not at all Important   1   2   3   4   5   Very important

j. Opportunity to use all senses

Not at all Important   1   2   3   4   5   Very important

k. Opportunity to carry out self-initiated activities

Not at all Important   1   2   3   4   5   Very important

l. Opportunity to enjoy a relaxed and pleasant environment

Not at all Important   1   2   3   4   5   Very important

m. Any other option? ...

Which of the above platforms from page 4-5 (identified with letters) contributed mostly to a positive visitor experience for you at the site? (max 2 options)

a	b	c	d	e	f	g	h	i	j	k	l	m

Which of the above-mentioned platforms from page 4-5 (identified with letters) did you miss the most or perceive as poorly executed? (max 2 options)

a	b	c	d	e	f	g	h	i	j	k	l	m

How would you evaluate the following aspects of the site?

Information boards, signs, and direction   Negative   1   2   3   4   5   Positive

The handling of queueing   Negative   1   2   3   4   5   Positive

Having sufficient time in hand for the tour of the site   Negative   1   2   3   4   5   Positive

The maintenance of the site   Negative   1   2   3   4   5   Positive

The physical layout of the attraction   Negative   1   2   3   4   5   Positive

The location of the visitor centre   Negative   1   2   3   4   5   Positive

Collection in the souvenir shop   Negative   1   2   3   4   5   Positive

Food in the café   Negative   1   2   3   4   5   Positive

The service of the staff   Negative   1   2   3   4   5   Positive

Any other options? ...

As a visitor, how satisfied were you with overall experience at this site?

Not at all satisfied   1   2   3   4   5   Very satisfied

How strong is your interest in the theme or topic associated with this attraction after your visit?

Not at all interested   1   2   3   4   5   Very interested

How important is it for you to have additional activities at this location for the extension of your stay?

Not at all important   1   2   3   4   5   Very important

Would you like to have follow-up contacts from the site after returning home?

Not at all   1   2   3   4   5   Very much

Would you possibly recommend this attraction to friends and acquaintances?

Not at all   1   2   3   4   5   Very much

Any other comments on your experience at the attraction?

Thank you very much for your participation!

Appendix 3

Iron Age Farm's long houses (Source: Iron Age Farm's Instagram @jernaldergarden)
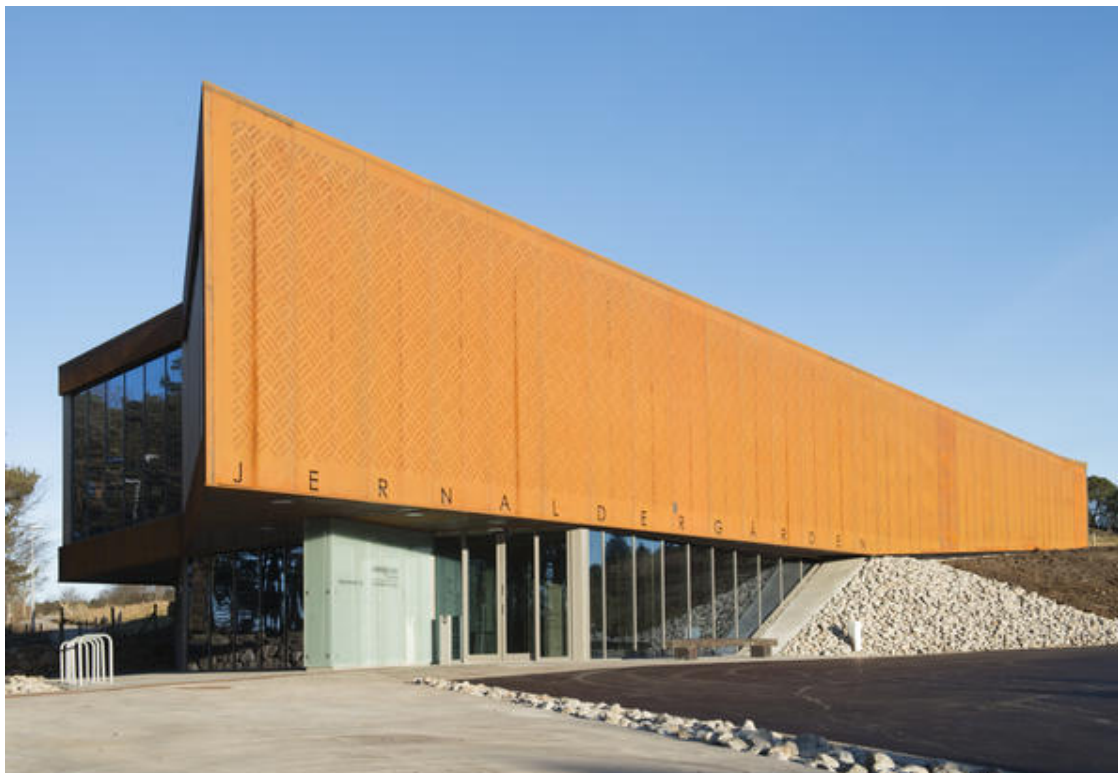
Exterior of Iron Age Farm's Visitor Centre (Source: Iron Age Farm's official website)

Inside the Long House (Source: Iron Age Farm's Instagram @jernaldergarden)

Bread-making activity. (Source: Iron Age Farm's official website)

Appendix 4

Relevant SPSS output

Demographic of respondents

Age Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 less than 20 yo	1	1.2	1.2	1.2
	2.00 20–39 yo	36	41.9	42.9	44.0
	3.00 40–59 yo	27	31.4	32.1	76.2
	4.00 60 yo or more	20	23.3	23.8	100.0
	Total	84	97.7	100.0	
Missing	System	2	2.3		
Total		86	100.0		

QT Questionnaire Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 Locals	64	74.4	74.4	74.4
	2.00 Foreigners	22	25.6	25.6	100.0
	Total	86	100.0	100.0	

Gender Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 Male	37	43.0	47.4	47.4
	2.00 Female	41	47.7	52.6	100.0
	Total	78	90.7	100.0	
Missing	System	8	9.3		
Total		86	100.0		

Occupation Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 Student	11	12.8	13.1	13.1
	2.00 Working in public sector	14	16.3	16.7	29.8
	3.00 Working in private sector	28	32.6	33.3	63.1
	4.00 Other	31	36.0	36.9	100.0
	Total	84	97.7	100.0	
Missing	System	2	2.3		
Total		86	100.0		

Nationality Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		10	11.6	11.6	11.6
	American	10	11.6	11.6	23.3
	Argentinian	2	2.3	2.3	25.6
	Australian	4	4.7	4.7	30.2
	Austrian	3	3.5	3.5	33.7
	British	1	1.2	1.2	34.9
	Canadian	1	1.2	1.2	36.0
	Danish	1	1.2	1.2	37.2
	Dutch	1	1.2	1.2	38.4
	French	1	1.2	1.2	39.5
	German	1	1.2	1.2	40.7
	Norwegian	45	52.3	52.3	93.0
	Peru	1	1.2	1.2	94.2
	Russian	2	2.3	2.3	96.5
	Spanish	3	3.5	3.5	100.0
	Total	86	100.0	100.0	

VT Visitor Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 Single Visitor	7	8.1	8.2	8.2
	2.00 Family and/or friends with children	44	51.2	51.8	60.0
	3.00 Family and/or friends without children	34	39.5	40.0	100.0
	Total	85	98.8	100.0	
Missing	System	1	1.2		
Total		86	100.0		

Visit characteristic of respondents

Visit Type   TT1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 Included in travel package	8	9.3	38.1	38.1
	2.00 Chosen travel package	8	9.3	38.1	76.2
	3.00 Self-organized	4	4.7	19.0	95.2
	4.00 Longer stay	1	1.2	4.8	100.0
	Total	21	24.4	100.0	
Missing	System	65	75.6		
Total		86	100.0		

Group Tour Package   TT2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 Yes	17	19.8	21.5	21.5
	2.00 No	62	72.1	78.5	100.0
	Total	79	91.9	100.0	
Missing	System	7	8.1		
Total		86	100.0		

Guide Assistance   TT3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 Yes	50	58.1	64.9	64.9
	2.00 No	27	31.4	35.1	100.0
	Total	77	89.5	100.0	
Missing	System	9	10.5		
Total		86	100.0		

Returning Visitor   RV

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 Yes	37	43.0	57.8	57.8
	2.00 No	27	31.4	42.2	100.0
	Total	64	74.4	100.0	
Missing	System	22	25.6		
Total		86	100.0		

Visit Preference   TP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 With guide	22	25.6	25.9	25.9
	2.00 Without guide	15	17.4	17.6	43.5
	3.00 Both	48	55.8	56.5	100.0
	Total	85	98.8	100.0	
Missing	System	1	1.2		
Total		86	100.0		

EFA result of presentation platform

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.415	28.461	28.461	3.415	28.461	28.461	2.274	18.948	18.948
2	1.869	15.577	44.038	1.869	15.577	44.038	2.013	16.776	35.725
3	1.474	12.283	56.321	1.474	12.283	56.321	1.993	16.608	52.333
4	1.301	10.843	67.165	1.301	10.843	67.165	1.780	14.832	67.165
5	.880	7.331	74.495						
6	.790	6.587	81.083						
7	.691	5.756	86.838						
8	.441	3.675	90.514						
9	.385	3.207	93.720						
10	.321	2.675	96.396						
11	.233	1.944	98.340						
12	.199	1.660	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component 1	Component 2	Component 3	Component 4
PI4	.851			
PI9	.842			
PI8	.793			
PI5		.825		
PI6		.776		
PI3		.664		.323
PI11		.320	.810	
PI12			.763	
PI10			.722	
PI1				.858
PI2				.677
PI7				.636

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 5 iterations.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.803	.807	3

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.712	.712	3

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.711	.711	3

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.612	.625	3

KMO and Bartlett's Test

Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.594
Bartlett's Test of Sphericity	Approx. Chi–Square	299.394
	df	66
	Sig.	.000

Scree Plot
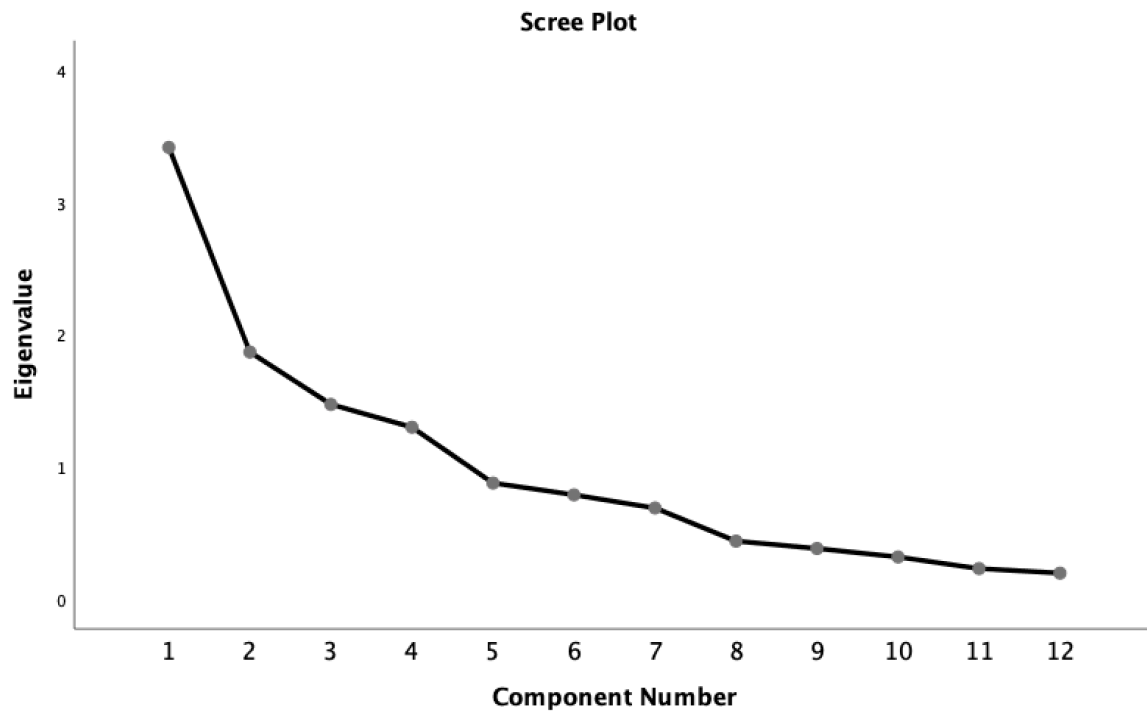
EFA result of support service platform

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.040	56.000	56.000	5.040	56.000	56.000
2	.805	8.946	64.946			
3	.753	8.362	73.308			
4	.597	6.637	79.945			
5	.571	6.350	86.294			
6	.443	4.919	91.213			
7	.353	3.926	95.140			
8	.286	3.175	98.314			
9	.152	1.686	100.000			

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.877
Bartlett's Test of Sphericity	Approx. Chi–Square	312.803
	df	36
	Sig.	.000

Component Matrix[a]

	Component 1
AE6	.847
AE4	.827
AE5	.819
AE9	.770
AE1	.754
AE7	.703
AE3	.670
AE2	.667
AE8	.647

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.903	.907	9

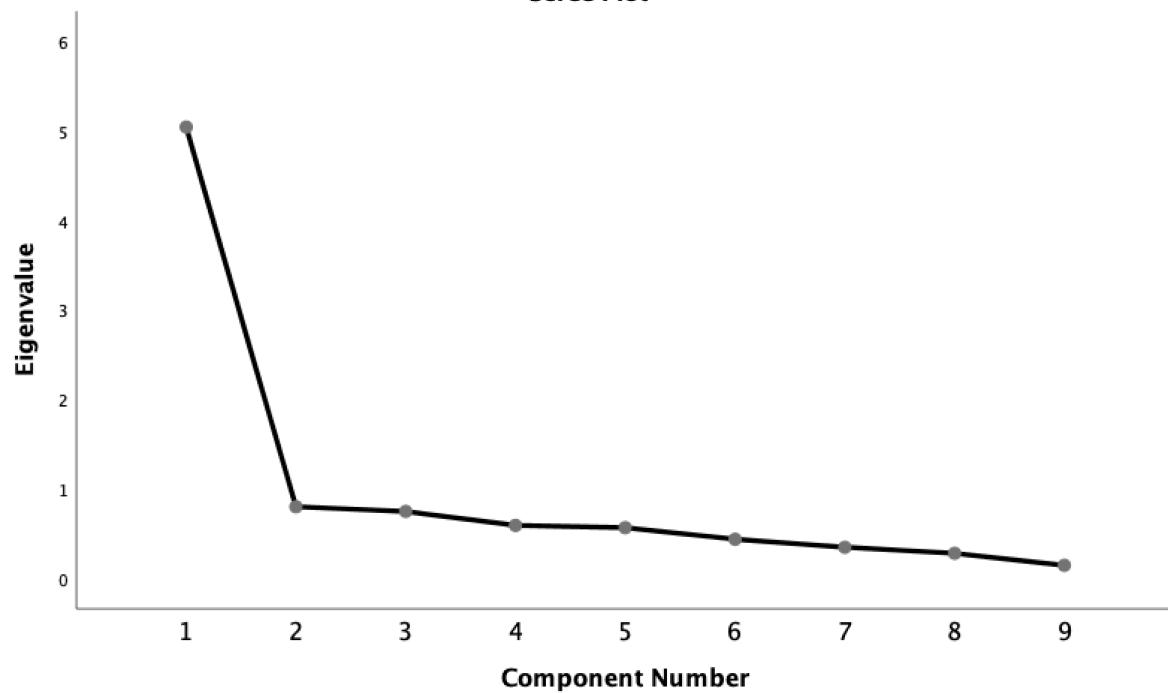### Scree Plot

Means, standard deviation, and correlation among constructs

Descriptive Statistics

		N	Minimum	Maximum	Mean	Std. Deviation
Total Presentation Platform 1 →	TPP1new TPP1 divided by 3	77	1.00	5.00	2.9004	1.03882
Total Presentation Platform 2 →	TPP2new TPP2 divided by 3	78	1.00	5.00	2.7265	.94547
Total Presentation Platform 3 →	TPP3new TPP3 divided by 3	78	2.00	5.00	3.7735	.76822
Total Presentation Platform 4 →	TPP4new TPP4 divided by 3	79	2.00	5.00	3.7975	.83447
Total Overall Support Service →	TSS1new TSS1 divided by 9	62	2.67	5.00	4.0394	.70620
Total Overall Satisfaction →	OS1	80	2.00	5.00	4.2500	.77132
	Valid N (listwise)	60				

Correlations

		TPP1new TPP1 divided by 3	TPP2new TPP2 divided by 3	TPP3new TPP3 divided by 3	TPP4new TPP4 divided by 3	TSS1new TSS1 divided by 9	OS1
TPP1new TPP1 divided by 3	Pearson Correlation	1	.345**	.175	.200	.224	.184
	Sig. (2-tailed)		.002	.130	.081	.085	.117
	N	77	76	76	77	60	74
TPP2new TPP2 divided by 3	Pearson Correlation	.345**	1	.290*	.290*	.218	.214
	Sig. (2-tailed)	.002		.011	.010	.088	.063
	N	76	78	77	78	62	76
TPP3new TPP3 divided by 3	Pearson Correlation	.175	.290*	1	.228*	.474**	.208
	Sig. (2-tailed)	.130	.011		.045	.000	.072
	N	76	77	78	78	62	76
TPP4new TPP4 divided by 3	Pearson Correlation	.200	.290*	.228*	1	.473**	.460**
	Sig. (2-tailed)	.081	.010	.045		.000	.000
	N	77	78	78	79	62	76
TSS1new TSS1 divided by 9	Pearson Correlation	.224	.218	.474**	.473**	1	.706**
	Sig. (2-tailed)	.085	.088	.000	.000		.000
	N	60	62	62	62	62	62
OS1	Pearson Correlation	.184	.214	.208	.460**	.706**	1
	Sig. (2-tailed)	.117	.063	.072	.000	.000	
	N	74	76	76	76	62	80

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

MANOVA output

Visitors' interest (from scale 1-5)

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.953	197.839[b]	5.000	49.000	.000	.953
	Wilks' Lambda	.047	197.839[b]	5.000	49.000	.000	.953
	Hotelling's Trace	20.188	197.839[b]	5.000	49.000	.000	.953
	Roy's Largest Root	20.188	197.839[b]	5.000	49.000	.000	.953
TInt	Pillai's Trace	.256	.950	15.000	153.000	.511	.085
	Wilks' Lambda	.758	.953	15.000	135.669	.508	.088
	Hotelling's Trace	.300	.955	15.000	143.000	.506	.091
	Roy's Largest Root	.226	2.308[c]	5.000	51.000	.058	.185

a. Design: Intercept + TInt

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	TPP1new TPP1 divided by 3	2.644[a]	3	.881	.805	.497	.044
	TPP2new TPP2 divided by 3	2.687[b]	3	.896	.961	.418	.052
	TPP3new TPP3 divided by 3	3.405[c]	3	1.135	2.074	.115	.105
	TPP4new TPP4 divided by 3	5.661[d]	3	1.887	2.733	.053	.134
	TSS1new TSS1 divided by 9	1.852[e]	3	.617	1.247	.302	.066

Visitor type (main goal/important stop/recreational)

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.970	348.514[b]	5.000	53.000	.000	.970
	Wilks' Lambda	.030	348.514[b]	5.000	53.000	.000	.970
	Hotelling's Trace	32.879	348.514[b]	5.000	53.000	.000	.970
	Roy's Largest Root	32.879	348.514[b]	5.000	53.000	.000	.970
VD	Pillai's Trace	.201	1.204	10.000	108.000	.296	.100
	Wilks' Lambda	.802	1.233[b]	10.000	106.000	.279	.104
	Hotelling's Trace	.242	1.260	10.000	104.000	.263	.108
	Roy's Largest Root	.225	2.435[c]	5.000	54.000	.046	.184

a. Design: Intercept + VD

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Tests of Between–Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	TPP1new TPP1 divided by 3	4.920[a]	2	2.460	2.462	.094	.080
	TPP2new TPP2 divided by 3	3.330[b]	2	1.665	1.801	.174	.059
	TPP3new TPP3 divided by 3	.119[c]	2	.059	.100	.905	.004
	TPP4new TPP4 divided by 3	2.871[d]	2	1.436	1.974	.148	.065
	TSS1new TSS1 divided by 9	.118[e]	2	.059	.115	.892	.004

Visitor type (locals/foreigners)

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.969	332.241[b]	5.000	54.000	.000	.969
	Wilks' Lambda	.031	332.241[b]	5.000	54.000	.000	.969
	Hotelling's Trace	30.763	332.241[b]	5.000	54.000	.000	.969
	Roy's Largest Root	30.763	332.241[b]	5.000	54.000	.000	.969
QT	Pillai's Trace	.059	.679[b]	5.000	54.000	.641	.059
	Wilks' Lambda	.941	.679[b]	5.000	54.000	.641	.059
	Hotelling's Trace	.063	.679[b]	5.000	54.000	.641	.059
	Roy's Largest Root	.063	.679[b]	5.000	54.000	.641	.059

a. Design: Intercept + QT

b. Exact statistic

Tests of Between–Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	TPP1new TPP1 divided by 3	.010[a]	1	.010	.009	.925	.000
	TPP2new TPP2 divided by 3	.369[b]	1	.369	.385	.538	.007
	TPP3new TPP3 divided by 3	.002[c]	1	.002	.003	.955	.000
	TPP4new TPP4 divided by 3	.266[d]	1	.266	.350	.557	.006
	TSS1new TSS1 divided by 9	.531[e]	1	.531	1.071	.305	.018

Visitor type (single/group with kids/group without kids)

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.962	271.593[b]	5.000	53.000	.000	.962
	Wilks' Lambda	.038	271.593[b]	5.000	53.000	.000	.962
	Hotelling's Trace	25.622	271.593[b]	5.000	53.000	.000	.962
	Roy's Largest Root	25.622	271.593[b]	5.000	53.000	.000	.962
VT	Pillai's Trace	.038	.209	10.000	108.000	.995	.019
	Wilks' Lambda	.962	.206[b]	10.000	106.000	.995	.019
	Hotelling's Trace	.039	.203	10.000	104.000	.996	.019
	Roy's Largest Root	.033	.353[c]	5.000	54.000	.878	.032

a. Design: Intercept + VT

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	TPP1new TPP1 divided by 3	.472[a]	2	.236	.219	.804	.008
	TPP2new TPP2 divided by 3	.593[b]	2	.297	.305	.738	.011
	TPP3new TPP3 divided by 3	.026[c]	2	.013	.022	.979	.001
	TPP4new TPP4 divided by 3	.099[d]	2	.050	.064	.938	.002
	TSS1new TSS1 divided by 9	.346[e]	2	.173	.341	.713	.012

Gender

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.982	525.299[b]	5.000	49.000	.000	.982
	Wilks' Lambda	.018	525.299[b]	5.000	49.000	.000	.982
	Hotelling's Trace	53.602	525.299[b]	5.000	49.000	.000	.982
	Roy's Largest Root	53.602	525.299[b]	5.000	49.000	.000	.982
Gender	Pillai's Trace	.177	2.111[b]	5.000	49.000	.080	.177
	Wilks' Lambda	.823	2.111[b]	5.000	49.000	.080	.177
	Hotelling's Trace	.215	2.111[b]	5.000	49.000	.080	.177
	Roy's Largest Root	.215	2.111[b]	5.000	49.000	.080	.177

a. Design: Intercept + Gender

b. Exact statistic

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	TPP1new TPP1 divided by 3	.207[a]	1	.207	.222	.639	.004
	TPP2new TPP2 divided by 3	.195[b]	1	.195	.241	.626	.005
	TPP3new TPP3 divided by 3	.789[c]	1	.789	1.449	.234	.027
	TPP4new TPP4 divided by 3	1.392[d]	1	1.392	1.960	.167	.036
	TSS1new TSS1 divided by 9	1.726[e]	1	1.726	3.818	.056	.067

Guide Assistance (with/without guide)

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.981	486.240[b]	5.000	48.000	.000	.981
	Wilks' Lambda	.019	486.240[b]	5.000	48.000	.000	.981
	Hotelling's Trace	50.650	486.240[b]	5.000	48.000	.000	.981
	Roy's Largest Root	50.650	486.240[b]	5.000	48.000	.000	.981
TT3	Pillai's Trace	.172	1.991[b]	5.000	48.000	.097	.172
	Wilks' Lambda	.828	1.991[b]	5.000	48.000	.097	.172
	Hotelling's Trace	.207	1.991[b]	5.000	48.000	.097	.172
	Roy's Largest Root	.207	1.991[b]	5.000	48.000	.097	.172

a. Design: Intercept + TT3

b. Exact statistic

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	TPP1new TPP1 divided by 3	.001[a]	1	.001	.001	.978	.000
	TPP2new TPP2 divided by 3	.346[b]	1	.346	.398	.531	.008
	TPP3new TPP3 divided by 3	.565[c]	1	.565	1.039	.313	.020
	TPP4new TPP4 divided by 3	3.946[d]	1	3.946	5.816	.019	.101
	TSS1new TSS1 divided by 9	1.229[e]	1	1.229	2.780	.101	.051

Guide Assistance (prefer with/without guide/both)

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.974	403.275[b]	5.000	53.000	.000	.974
	Wilks' Lambda	.026	403.275[b]	5.000	53.000	.000	.974
	Hotelling's Trace	38.045	403.275[b]	5.000	53.000	.000	.974
	Roy's Largest Root	38.045	403.275[b]	5.000	53.000	.000	.974
TP	Pillai's Trace	.311	1.988	10.000	108.000	.041	.155
	Wilks' Lambda	.709	1.988[b]	10.000	106.000	.042	.158
	Hotelling's Trace	.382	1.988	10.000	104.000	.042	.160
	Roy's Largest Root	.283	3.053[c]	5.000	54.000	.017	.220

a. Design: Intercept + TP

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	TPP1new TPP1 divided by 3	1.139[a]	2	.570	.535	.589	.018
	TPP2new TPP2 divided by 3	2.041[b]	2	1.021	1.078	.347	.036
	TPP3new TPP3 divided by 3	.348[c]	2	.174	.297	.745	.010
	TPP4new TPP4 divided by 3	7.427[d]	2	3.713	5.736	.005	.168
	TSS1new TSS1 divided by 9	2.214[e]	2	1.107	2.330	.107	.076

Regression Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.737[a]	.544	.502	.54457

a. Predictors: (Constant), TSS1new TSS1 divided by 9, TPP2new TPP2 divided by 3, TPP1new TPP1 divided by 3, TPP3new TPP3 divided by 3, TPP4new TPP4 divided by 3

b. Dependent Variable: OS1

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.087	5	3.817	12.873	.000[b]
	Residual	16.014	54	.297		
	Total	35.101	59			

a. Dependent Variable: OS1

b. Predictors: (Constant), TSS1new TSS1 divided by 9, TPP2new TPP2 divided by 3, TPP1new TPP1 divided by 3, TPP3new TPP3 divided by 3, TPP4new TPP4 divided by 3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.144	.479		2.386	.021	.183	2.105
	TPP1new TPP1 divided by 3	.003	.074	.004	.042	.967	−.145	.151
	TPP2new TPP2 divided by 3	.056	.084	.069	.667	.507	−.113	.225
	TPP3new TPP3 divided by 3	−.182	.107	−.181	−1.689	.097	−.397	.034
	TPP4new TPP4 divided by 3	.135	.099	.146	1.360	.180	−.064	.333
	TSS1new TSS1 divided by 9	.772	.127	.707	6.088	.000	.518	1.026

a. Dependent Variable: OS1