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TITLE:

Exploring preferred learning styles and perceptions of service quality in museum of local visitors: Ryfylke Museum case study

AUTHORS		ADVISORS
Student number	**Name**	
1) 247081	**1) Nu Hoang My Le**	**1) Truls Eric Johan Engstrom**
2) 248092	**2) Trang Hong Luong**	**2) Torvald Øgaard**

Abstract

Education has been considered an integrated part of the museum. This phenomenon draws attention to the authors about the question of whether there is a relationship between visitors' preferred learning styles and their perceptions of service quality at the museum where they have been. The answer may bring the new knowledge to the field of psychology in terms of visitors' behavior. Also, this provides museum operators to a more comprehensive look at their visitors regarding what the audiences need and what makes them satisfied.

The research presents a case study, implemented to investigate visitors' behavior in Ryfylke Museum. This thesis's primary objective is to examine and test the correlations between visitors' preferred learning styles and perception of service quality. The study, in which an online survey was employed as a measurement, was carried out in the scope of the Suldal Municipality. The main subjects to the paper are visitors who experienced at least one of the four museum's activities, namely Folk music on Friday, Experience the farm life at Kolbeinstveit, Café, and souvenirs, The Ice Bear exhibition.

SPSS program has been used as a data analytical instrument for the quantitative data collection. Cronbach's alpha coefficient and Exploratory factor analysis are considered appropriate measures for reliability and validity testing. Pearson correlation coefficient, as well as linear regression, were employed to analyze the hypotheses. The result from the basic upon "how the relationships between Suldal visitors' preferred learning styles and perceptions of service quality in Ryfylke Museum are" and additional analysis about the correlation between their perceptions of service quality and visitor's loyalty can contribute as implications and recommendations to the museum in more understanding the museum visitors, and be foundational research for further exploration about the local museum and its visitors.

Keywords: preferred learning styles, perception of service quality, loyalty, museum, local.

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Foreword

"If you really want to seriously think about life, and therefore take painting very seriously… and take seriously the joys that it can bring to one, then you want to go to museums. You want to study the greats of the past." – Nelson Shanks.

The topic idea came to our mind last summer when visiting a series of museums in Bergen. We observed only a few visitors and those were mainly tourists. The observation resurfaced was recalled when participating in a meeting with Ryfylke Museum, a small local museum in Suldal municipality, struggling to find solutions to attract local visitors. We expect that the research can contribute at a certain point in understanding the relationship between preferred learning styles and perceptions of service quality of customers in the museum context. By those, the museum management can discover the services that need to be improved to retain the current customers and to recruit the new visitor segmentation based on their learning styles.

The very first expression of our gratitude is to our two co-advisors, Torvald Øgaard and Truls Eric Johan Engstrom, for advising us on determining the research question, designing the study's constructs, discussing relevant theories and guiding us in how to implement an academic project in a professional manner. We strongly appreciate the devoted time and effort of Lukasz Andrzej Derdowski, Ph.D. student at the Faculty of Social Sciences, enlightening us in carrying out the thesis outline and applying SPSS software.

Secondly, we would like to thank all the Ryfylke Museum staff, especially Mads Drange and Anette Opheim, who were an enormous help in counseling museum knowledge and conducting the online survey on the museum's Facebook page. Every personal contribution in answering the questionnaire by participants of the project is acknowledged and highly valued.

Last but not least, we send many thanks to the extraordinary contribution of our dear Master classmates, including Lino Robles, Sten Hansson and Lene Tveit. They are always overwhelmed with their study and work but are willing to support us in translating questionnaires and sharing their valuable experience in doing a thesis.

From the bottom of our heart, we send the regards to our little daughters who are so co-operative during our thesis process and all members of our families for their understanding and support.

Chapter 1. Introduction

1.1. Overview of museum study

Museums have been considered institutions, that preserve the culture and transfer it to the current and future generations. The importance of the museum is to display the cultural identity of regional and local communities. However, it seems that the museum has no longer attracted local inhabitants and been becoming an old-style attraction because of the ever-changing attitudes and notions of visitors. Regional museums are encountering the challenge of spreading traditional value and historical, cultural identity to locals, especially youngsters.

Furthermore, Kotler and Kotler (2000) stated that museum managers struggle to make their museum more popular and competitive. It explains that due to financial constraints, a large number of local governments have to reduce their budgets for museums and are only able to support those that are either profitable and attractable to visitors (Goulding, 2000). Concurrently, museums have to compete broadly with other entertainment and leisure activities (Salamon, 2003). Moreover, the traditional museum-style felt itself to be primarily responsible for collections, not for its visitors. The museum activist Hudson (1998) has argued that the shift in museums focuses not only on collection and conservation but also on serving and communicating to audiences. Recently, museums have sought ways to approach a broader public, establish community ties, and compete effectively with alternative providers of leisure and educational activities (Kotler & Kotler, 2000). Museums have become to be more aware of the importance of understanding who their visitors are and why the people visit the museums to increase visitors' perceptions of museum service quality, satisfaction, and loyalty when they experience museum exhibits and activities (Black, 2005). In order to achieve the those targets, museums must alter the contents to increase the number of visitors by designing the arrangements, services, and offerings, which will generate positive outcomes for their visitors instead of focussing on collections and scholarly and professional activities (Kotler & Kotler, 2000).

According to Maxwell and Evans (2002), they have described the museum as a learning environment associated with rich and varied materials as well as the interrelationship among the personal, social, and physical contexts of the museum. In other words, museums offer informal learning preferences to visitors with various learning experiences through visitor's participation in engaging exhibits or activities that facilitate visitor learning (Ahmad, Abbas, Yusof, & Taib, 2015a). Therefore, the understanding of how visitors learn and their preferred learning styles is significant. Since it will not only give museum operators a set of effective

strategies and tools for designing exhibits and activities but also shape a sustainable future for the museums as an educational institution and lifelong learning.

1.2. Ryfylke museum case study

According to the book named "The book about Ryfylke Museum", Høibo (2013) introduced the general history and prominent collections and locations of the museum. Ryfylke Museum is a regional museum for Ryfylke, Rogaland, Norway, and the museum has its headquarter situated on Sand in Suldal municipality in which there are approximately 4000 inhabitants (Statistic Norway, 2019). The museum also covers the municipalities of Sauda, Hjelmeland, Strand, Forsand, Finnøy, Rennesøy, and Kvitsøy. Together these municipalities were merged in a municipal connection and unification process in the 1960s to form the Ryfylke Region. Rogaland Folk Museum, which is called the Ryfylke Museum today, was founded in 1936, and the first built from the oldest and the most distinctive loft still left in Rogaland (Høibo, 2013). After a long time of changing and developing, the Ryfylke Museum has become a relatively complex organization with many administrative activities. It has gained support from many organizations such as the Norwegian National Committee of ICOM – International Council of Museums (ICOM Norway), the National Museum Council, the Ministry of Culture and Ecclesiastic Affairs, and so on depending on individual projects (Ryfylkemuseet, 2005). Nowadays, Ryfylke Museum has not only provided traditional, historical collections and museum facilities but also organized activities, exhibitions, guided tours, café, and so on in the region to give visitors insights into the daily life of Ryfylkians from the 16th century until now. The museum has a rich collection of photographs and objects from the region and contains audio and video recordings of folk music archives from Rogaland. They have continuously developed items preservation and presented them to the public through the Digital Museum.

Ryfylke Museum has coped with many internal and external difficulties that should be taken into consideration. To be more specific, the museum has become a developed operation; however, they have faced the challenge of too limited resources to fulfill all expectations or to work on all duties. Those difficulties have often led to the prioritizing when selecting projects that raise strong local interests and have available funds (Høibo, 2013). However, the author Høibo (2013) also indicated that the Ryfylke Museum has had to balance between satisfying local, regional, and national concerns. Therein, national projects have been viewed as a powerful concern because it attracts the most funding from the state to the museum management. It can lead to reducing the priorities of local and regional projects. Høibo

acknowledged that the development and diversity of the Ryfylke Museum are currently invisible for many people since they work in very small, local communities and reach neither a large public nor significant media. Furthermore, the museum has been operated as a traditional museum-style that weighs the collection management and preservation more than the number of tickets sold. Ryfylke Museum has struggled to balance internal factors such as managing the building institution, its collections, presenting information, and external activities related to financial support and visitors.

As for the project scope, we have concentrated on four current programs and activities that consist of Folk Music on Friday, Experience the farm life at Kolbeinstveit, Café and souvenirs, The Ice Bear exhibition, and all of them are located in the Suldal municipality. During the investigation, we have found that in the historical and cultural museum, objects management and preservation is necessary. However, how to present it to local inhabitants and get them involved in homeland history and culture are also said to be equally important. Therefore, the understanding of local visitors has been considered one of the significant duties that should be concerned.

1.3. The aim of the research

Our main objective is to investigate the relationship between local visitors' preferred learning styles and their perceptions of museum service quality. The peferred learning style and perception of service quality have been viewed as a driving force for visitors to choose museum activities and evaluate the museum-quality service through the participation and interaction in the four existing programs and activities of the Ryfylke Museum. Hinton (1998) indicated that the small amount of empirical research has looked at the preferred learning styles in the museum. Moreover, empirical studies regarding the relationship between visitor's preferred learning style and their perceptions of service quality in the museum have been seen to be novel. Thus, this research aims to address the new one as well as to contribute to the growth of knowledge in this field.

By combining the application of the Gardner (1983)'s theory of multiple intelligence that is the origin of forming preferred learning style and the use of combination measurement of Frochot and Hughes (2000)'s HISTOQUAL and E Allen (2001)'s MUSEQUAL, the research model (Figure.1) has been constructed. Besides, we intend to answer the research question with the underlying hypotheses we ought to test in this study.

RQ: How is the relationship between Suldal visitors' preferred learning styles and their perceptions of service quality in Ryfylke Museum?

HP1: There is a significant relationship between Suldal visitors' preferred learning styles and their perceptions of service quality in the Folk Music on Friday activity.

HP2: There is a significant relationship between Suldal visitors' preferred learning styles and their perceptions of service quality in the Experience the farm life at Kolbeinstveit activity.

HP3: There is a significant relationship between Suldal visitors' preferred learning styles and their perceptions of service quality in the Café and souvenirs.

HP4: There is a significant relationship between Suldal visitors' preferred learning styles and their perceptions of service quality in the Ice Bear exhibition activity.

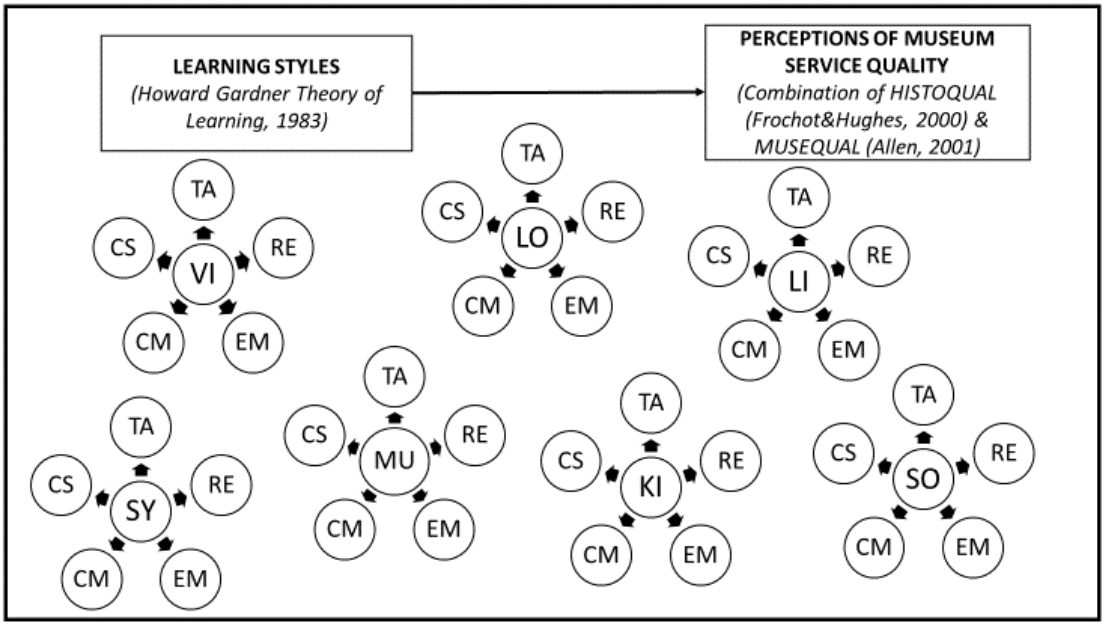

Figure 1: The constructed model of the relationship between local visitors' preferred learning styles and their perceptions of museum service quality.

Note

- Preferred learning Styles:
  - VI: Visual Learner
  - LI: The Linguistic Learner
  - LO: The Logical Learner
  - MU: The Musical Learner
  - KI: The Kinesthetic Learner
  - SO: The Social Learner
  - SY: The Solitary Learner
- Perceptions of museum service quality:
  - TA: Tangibles
  - RE: Responsiveness
  - EM: Empathy
  - CM: Communications
  - CS: Consumables

Furthermore, associated with the investigation of visitor's preferred learning style and perceptions of museum service quality, the analysis of visitors' satisfaction and loyalty has

been considered necessary. Since it further contributes to the museums insight into local visitor development. At the end of the paper, critical recommendations, as well as limitations, will be provided so that readers have a comprehensive perspective of the research.

Chapter 2. Literature Review

2.1. Theoretical review

2.1.1. Defining learning in museum

In the psychology research literature, many scholars have drawn attention to people learning experience. For example, Dewey (1986) and Kolb (2014) lay stress on the connection between learning and experience as one of the standout studies in their research career. Therein, according to the theory of experiential learning by Kolb (2014), he defines that learning is the process of creating knowledge and the result form transaction between the person and the environment and the transaction is symbolized in the dual meanings of the term "experience". Meanwhile Dewey (1986) refers to learning as the relationship between the objective and subjective conditions of the experience as an "interaction". In other words, he argued that the social situation was the key to learning, a shared common experience requiring an impulse and a desire through interaction with the environment. He also saw the "directing" of learning not as an exercise of power, but as a shared group event, given that learners are part of a community held together by common goals (Dewey, 1986). The words transaction and interaction seem to be similar in the description of the relationship between a person and the environment. What are the links between the learning experience and museum experience? Indeed, the museum has been considered as an educational institution and the ideal place to create knowledge through interactions and experiences. To be more specific, and Moussouri (2002) and Chang (2006) state that the learning process in museums can be described as active participation and engagement with experience through the interactive nature concentrating on the combination of the social, personal, and physical interactions. It is similar to the J. Falk and Dierking (1992)'s contextual model of museum learning that consists of *physical, personal, and sociocultural context*. Therein, the *physical context* encompasses the tools and settings of the museum, such as design, architecture objects, subsequent reinforcing events and experiences. As for the *personal context* consists of motivations and expectations, prior knowledge, experience and beliefs and interests, and free-choice learning; as well as how these are perceived, filtered and ultimately incorporated into memory and learning. Additionally, the *sociocultural context* accounts for within-group mediation, facilitated mediation by others and cultural mediation (Falk John & Dierking Lynn, 2000) and (Dierking, 2002).

Learning occurred in the museum can be categorized into the following three categories: *formal learning, self-directed learning,* and *informal learning.* Firstly, *formal learning* has been deemed as a school learning type experience that includes teachers, school staff, students involved in lessons and assignments. Next, *self-directed learning* "describes a process by

which individuals take the initiative, with or without the assistance of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes." (Knowles, 1975, p. 18). Finally, *informal learning* is the term offered to learning that is unstructured and takes place away from traditional, formal learning settings. Additionally, informal learning also has no clear goals or objectives that is often unplanned by the learner. According to Livingstone (1999), informal learning frequently arises from learners' natural settings and is initiated by the learners. In the museum context, J. H. Falk and Dierking (2000) define informal learning as a self-directed form of learning that places learning decisions, such as what, when, and how to learn, in the hands of the learners. It is noticeable that informal learning setting and self-directed learning are predominant and widely embraced in museum activities because learning in museums is driven by visitor intrinsic motivations such as curiosity, self-interests, discovery, free exploration.

2.1.2. Preferred learning style and visitor behaviour (identifying learners)

In the museum, incorporating multiple intelligence theory, which contributes to categorize visitor learning styles, and learning experience into museum programs are better able to reach a wide variety of audiences. In other words, multiple intelligences theory was perceived to hold promise in the museum context in reaching diverse kinds of learners, who learn in different ways (Silver, Strong, & Perini, 1997). Multiple intelligences theory is described as a theory of learning styles with essential implications for museum educators. The term 'learning style' has been used to describe an individual's natural, habitual, and preferred way of absorbing, processing, and retaining new information and skills (Kinsella, 1995, p. 171). It is explained that learning styles have been deemed as the way people prefer to learn and process information. Learners have clear preferences for how they approach new learning material in the learning institutions.

Gardner (1983) published his book Frames of Mind: The Theory of Multiple Intelligences, which introduced his theory of multiple intelligence to the general public. In Gardner's theory of Multiple Intelligences, learning is a product of different intelligence working together. He suggests there are seven different kinds of intelligence, which every person may possess in various combinations. Intelligence contains visual, linguistic, logical-mathematical, musical, bodily-kinesthetic, interpersonal, and intrapersonal (Gardner, 1991). This explains why some people seem to have different skills or abilities that appear to come more naturally to them than to others. Gardner feels that everyone has all the intelligence, but certain intelligence is more

dominant than others and varies depending on the individual. For example, a dancer requires skills in bodily-kinesthetic, musical, interpersonal, and visual intelligence in varying degrees. In contrast, a person with political power requires interpersonal skills, a linguistic facility, and some logical aptitude. Gardner's theory is easily applied to any educational setting, such as schools or museums, but recently there have been theories developed specifically for museum learning (J. H. Falk & Dierking, 2016). It is noticeable that the fundamentally problematic as the multiple intelligence theory is concerned with the difference in the processes of learning while learning styles theory products of learning focus on the content and products of learning (Silver et al., 1997). This is to say, learning styles stress on the individual learning process and Gardner's multiple intelligence model is significantly complementary (Silver et al., 1997). Learning style theory is quite abstract without multiple intelligence theory and multiple intelligence theory seems not to fully describe the difference of thoughts and feelings of learners. It is supposed that each theory responds to weaknesses and strengths to the other; however, together, they are integrated and shaping a complete picture of experiential learning.

Learning styles	**Identifing learners**	**Participating in learning process**	**Behavior of learner**
1. The Visual learner	Artists, photographers and architects often exhibit this learning style	Who learns best if there are visual aids around to guide the learning process. Working efficiently with color and picture	Enjoys by looking at pictures, watching movies, drawing. Activities that appeal to the visual learners include sketching, graphing, creating charts and mapping out stories.
2. The Linguistic Learner	Some of the best teachers and professors are linguistic learners.	Who learns best through linguistic skills including reading, writing, listening, or speaking.	Enjoys reading, writing and telling stories, debating, reading aloud, drama and creative writing.
3. The Logical/Mathematical Learner	Engineers, scientists, mathematicians, and other technical professions often possess this learning style.	Who learns best by classifying, working with abstract patterns, categorizing.	Enjoys doing experiments, asking questions, exploring patterns and relationships

4. The Musical Learner	Musical learners are natural-born musicians.	Who learns best while humming, whistling, toe-tapping, tapping their pencil on the desk, wiggling, or listening to music in the background.	Enjoys singing and humming, listening to music, playing instruments.
5. The bodily-kinesthetic Learner	Who has a job in the arts, manufacturing or creative fields like physical therapy, dancing, acting, farming, carpentry, surgery, and jewelry-making.	Who learns best by interacting with objects such as touching and moving, processing knowledge through action.	Enjoys hand-on experience including moving around, touching and talking. Activities such as drawing, sculpting, drafting, athletics and dance appeal to them
6. The Social/Interpersonal Learner	Who work in various fields of psychology or social sciences.	Who learns best by sharing, cooperating, interviewing and comparing.	Enjoys being with friends, talking to people and being part of a group
7. The Solitary/Intrapersonal Learner	These people often become entrepreneurs, and sometimes small business owners or work industries that allow them to work without direct supervision.	Learns best by selfpaced instruction, reflecting and individualprojects.	Enjoys working alone, pursuing their owninterests.

Table 1: Howard Gardner Theory of Learning 1983 (Ahmad et al., 2015a; Gardner, 1983)

2.2. Museum visitor behaviour research

2.2.1. Visitor development

Visitor development has been deemed an integration of *interpretation* and *museum marketing* into museum programs and activities to improve and enhance offered services to existing visitors and reaching out to new visitors (Waltl, 2006). In other words, the visitor development model including museum assets such as collections and preservation, and museum activities namely exhibitions and displays have been considered as a core to be able to formulate museum programs that are communicated through interpretation and marketing. Ahmad et al. (2015a) insist that visitor development should be a priority for the museum as it

is a driving force for the museum to enrich visitors' experience by providing services in the museums that increase learning, enjoyment and create an attractive environment. Therein, Wearing, Edinborough, Hodgson, and Frew (2008) argue that interpretation is described as a communication tool that is used to facilitate the ways visitors engage with museum programs and activities (Wearing et al., 2008). Interpretation uses various methods consisting of guided walks, talks, drama, staffed stations, displays, signs, labels, artwork, brochures, interactives, audio-guides, and audio-visual media. Effective interpretation enables visitors to make connections between the given information and visitor experience and knowledge (Wearing et al., 2008). Additionally, Serrell argues that an interpretation "is more than presenting information and more than encouraging participation. It is communication between a knowledgeable guide and an interested listener, where the listener's knowledge and meaning-making are as important as the guide's" (Serrell, 2015, p. 20). Indeed, the emphasis of interpretation to increase visitors' experience has been termed 'meaning-making' (Ballantyne & Packer, 2005) and highlights the way people construct their own knowledge (make their own meaning) based on their past and present experiences. Therefore, Wearing et al. (2008) indicate that interpretation can play one of the significant roles in museum management in enhancing visitor experiences and satisfaction. However, this may also mean that visitors may not always interpret messages provided by museum providers in the same way that the providers intend (Wearing et al., 2008).

The basic of mentioned visitor development is the research of museum marketing. The understanding of the expectation of each target visitor group and the analysis of visitors' behaviour in the museum has been considered as a significant part of marketing research. From a marketing perspective, museums have to address their audiences' needs while cultivating new groups of visitors and leading their audience to even more fabulous experiences and benefits. Black (2012) also has demonstrated that museums should alter the approach of museum visitors, converting one-time visitors into repeat users who perceive themselves as active participants in the work of museums. The process of transforming museum visitors to the participants is to ensure that their visit is enjoyable and museum programs provide opportunities for social interaction, soft supports, with no involvement of pressure to encourage people to revisit the museum. ElDamshiry and Khalil (2018) explain that visitor participation and satisfaction are significantly dependent and relevant to their learning experience, discovery, involvement, and motivation of learning behaviour in museums. As an educational environment, museums also promote the learning experience and can fulfill their duties

adequately when visitors are facilitated to have a good experience. To conclude, the main factors of visitor development encompass the actions that try to understand their needs and interests then create appropriate experience and environment to appeal to them. According to Kotler and Kotler (2000), successful museums should provide different and various emotional experiences such as "aesthetic and emotional delight, celebration and learning, recreation and sociability" (p.39) because it is understandable that delivered multiple experiences can meet audiences specific needs in various groups and also help individual visitors in their self-development process.

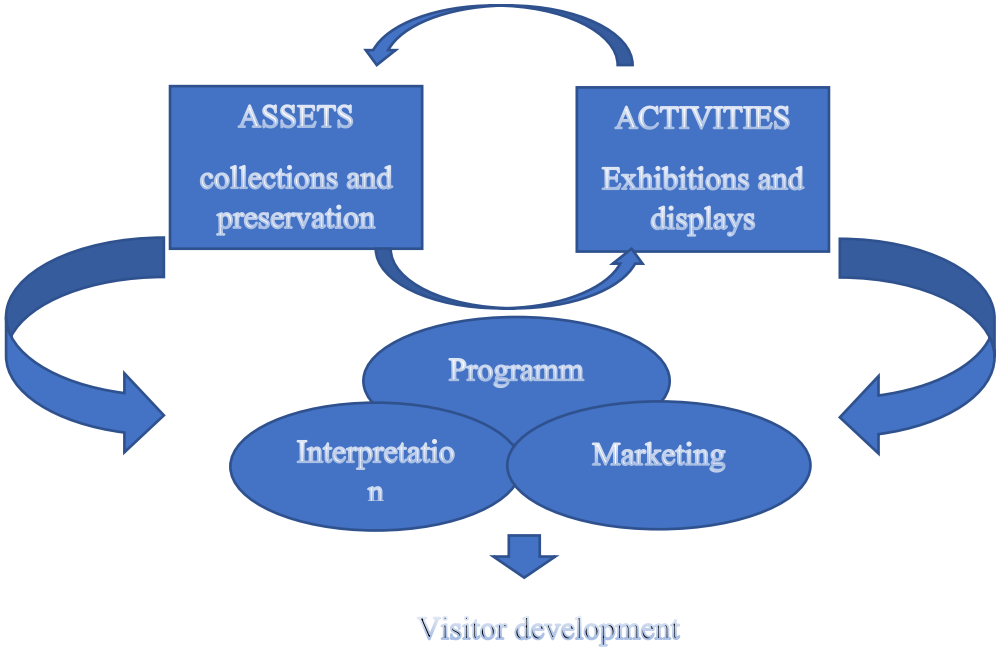

Figure 2: The diagram of visitor development (Waltl, 2006)

2.2.2. Perceptions of museum service quality

Many researchers have different definitions of quality and there exists no uniformly agreed definition of service quality (Mitchell, 1990). Some have defined quality as "value" (Feigenbaum, 1956), "conformance to requirements" (Crosby, 1979), "fitness for use" (Gryna & Juran, 2001) and "meeting customers' expectations" (Parasuraman, Zeithaml, & Berry, 1985). In the service sector, Parasuraman et al. (1985) state that service quality has often been defined as involving a comparison of expectations with performance. According to Lee, Graefe, and Burns (2004), service quality can be adopted as an indicator of profitability and the success of organizational objectives. Nonetheless, it is difficult to understand how visitors perceive their service and measure service quality (Parasuraman et al., 1985) since service possesses three main characteristics: intangibles (Bateson, 1977), heterogeneity (Booms, 1981) and inseparability (Carman & Langeard, 1980). Therefore, many scholars have conceptualized

service quality perceptions as a form of attitude, related to satisfaction, and resulting from a comparison of customers' expectations with the actual service performance (Parasuraman et al., 1985).

According to Parasuraman et al. (1985), it is explained that as the expectations and perceptions or experience of services are different from visitors, their perceived quality is also different. In other words, service quality perceptions are the unlikeness between the expectation of service and perceptions of service. According to Chang (2006), in measuring service quality, the smaller the gap is, the greater the quality of service and more customer satisfaction is. To be more specific, the customers feel quality surprise when their quality perceptions exceed the expectation and they feel the unacceptable quality when their perceptions of service do not meet their expectations and if their perceptions are just enough to meet their expectation, it is a state of satisfactory quality.

Parasuraman et al. (1985) first develop a multiple-item scale that is called SERVQUAL for measuring service quality. SERVQUAL instrument measures the "gap" between customers' expectations and the performance they actually experience by five dimensions that were reduced from 10 original items (Parasuraman, Zeithaml, & Berry, 1988). The five dimensions consist of Tangibles, Reliability, Responsiveness, Assurance, and Empathy. SERVQUAL has been designed to be appropriate across a wide spectrum of service areas and it can be used as a 'skeleton' and further developed to apply to new contexts (Parasuraman et al., 1988). It is emphasized that the SERVQUAL has been deemed as a useful instrument in measuring service quality and widely used by both academics and practicing managers across industries, including those within the hospitality and tourism industry (Cheng & Wan, 2012; Frochot & Hughes, 2000). Moreover, to enable researchers to be able to use the SERVQUAL in measuring service quality in the heritage context including museums. The two researchers Frochot and Hughes (2000) develop a new instrument called HISTOQUAL with five modified dimensions, namely *"responsiveness", "tangibles", "communication", "consumables",* and *"empathy",* by evolving SERVQUAL for the purpose to assess the service quality in the historical and cultural attractions. The process in the development of HISTOQUAL was applied by adding two new dimensions of communication and consumables that substitute two reliability and assurance. Likewise, the MUSEQUAL model, another instrument from the SERVQUAL scale adapted by E Allen (2001), emphasizes primarily museum service experience and satisfaction with the five similar dimensions of HISTOQUAL.

More so, SERVPERF, an adjustment of the SERVQUAL, is suggested as an approach

suitable for measuring visitors' perceptions of service quality (Cronin Jr & Taylor, 1992). SERVPERF model consists of five service dimensions: tangibles, reliability, responsiveness, assurance, and empathy, associated with two sets of 22 item statements for the importance and perceptions sections of the investigation. Lee and Beeler (2006) has noted that the developed SERVPERF scale has been considered a better predictor of overall satisfaction than the SERVQUAL. Hence, this study adopted five dimensions comprising tangibility, responsiveness, empathy, communications, consumables, from a combination of Frochot and Hughes's (2000) HISTOQUAL and E Allen 's (2001) MUSEQUAL, to evaluate the visitors' perceptions of service quality in the museum experience. In addition, the interpretation of the five dimensions has been clarified in the context of the museum as following:

- The first dimension, *responsiveness*, highlights the significpreance of the staff efficiency, the staff response and the properties' ability to recognize customer needs.
- The second dimension, *tangibles*, represents the environment of the property related to the general upkeep, cleanliness, and authenticity of the property, the attractiveness of the grounds, or the helpfulness of directional signs in guiding visitors through the property and grounds.
- The third dimension, *communications*, describes the quality and detail of the historical and cultural information provided. However, since most of the service was indirectly provided by staff, the provision of instruments to help the guidance and information of visitors, therefore, became a prominent feature of the service quality.
- The fourth dimension, *consumables*, relates to the side services provided by the property such as the restaurant and shop.
- The last dimension, *empathy*, emphasizes the willingness of the properties to take into consideration the needs of children and less able visitors and also relates to the understanding of visitors' needs.

2.2.3. Visitor satisfaction and loyalty

Research studies on visitor satisfaction and behavour intention in the museum are many. Anton (1997) proposes a contemporary approach, and conceptualized customer satisfaction as a state of mind in which the customer's needs, wants and expectations throughout the products or services have been met or exceeded. It is believed that satisfaction of visitors is based on the experiences that they received from their visitation and it will direct to their post-consumption (Bahrin, Mahdzar, Hamid, & Ghani, 2017). Some scholars who investigate the service environment of museums acknowledged that satisfaction is determined by a number of

environmental elements that are encountered during the museum visit experience (Goulding, 2000; Vom Lehn, 2006). Goulding (2000) states that: “As with many services, the museum product is delivered in a physical environment or site which encompasses the land or building area, shape, lighting, means of orienting the visitor, queues, waiting, crowding, and methods of stimulating interest and engagement” (p.261). Therefore, facilities, amenities, staff services and the exhibition itself would have influences on the overall visiting satisfaction (Harrison & Shaw, 2004; Huo & Miller, 2007). In the marketing perspective, satisfaction is defined as one of the key judgments that visitors make concerning a tourism service and is always a pivotal point for marketer attention (Yüksel & Yüksel, 2003). Satisfied customers will offer the intention of repeat visits and positive word-of-mouth to others (Harrison & Shaw, 2004; Huo & Miller, 2007).

According to Onwonga (2012), customer loyalty in service businesses refers to the customer’s commitment to do business with a particular organization, purchasing their products repeatedly and recommending others to the organization’s services. In other words, loyalty corresponding with customer satisfaction is an element that more directly affects customers’ future purchase and positive words of mouth to others (Oliver, 1999). In the study of Backman and Veldkamp (1995), two authors reveal a positive relationship between consumers' perceptions of service quality gaps and their degree of loyalty. Additionally, loyalty has been considered as one of the most pivotal subjects in contemporary marketing. Since it is explained that attracting return visitors is more cost-effective than obtaining profits from the new ones (Jang & Feng, 2007). In other words, the loyal behaviour of these visitors can be regarded as indicators of whether museum operators can successfully retain customers (Parasuraman et al., 1988). Furthermore, membership has been viewed as a form of loyalty. Several researchers have indicated that various types of customers and different membership status demonstrate different degrees of perceived service quality, overall satisfaction, and loyalty (Bolton, Kannan, & Bramlett, 2000). To be more specific, Garbarino and Johnson (1999) investigate that theater visitors in three groups comprising subscribers, occasional subscribers, and individual ticket buyers had different satisfaction and loyalty. In the other case, visitor types such as general customers, and loyalty membership also have a different buying intention bases on the relationships between them and the particular business; for instance, loyalty memberships who intend to buy at a particular retailer are more likely to actually purchase there than are those who are general customers (Evanschitzky & Wunderlich, 2006).

Chapter 3 – Methodology

The study applies quantitative measurement proceeds in a straightforward sequence: first conceptualization, next operationalization, and then applying the operational definition or the collection of data (Lawrence Neuman, 2014, p. 208). Hence, the chapter would demonstrate the whole research process of the project from designing the concept of identifying the population to be examined, choosing the measurement tools and the manner in which data would be interpreted.

3.1. Design

On the journey to narrow down the problem "how to attract and retain the local visitor to the museum", the research has come up with many conceptual definitions which are defined by (Lawrence Neuman, 2014, p. 205) as a careful, systematic definition of a construct that is explicitly written down. A number of keywords searches such as learning museum, learning community, learning styles, local community engagement, technology in museums, … have been employed to search in some search engines like Google Scholar, Oria, Archive, Perish then hundreds of articles and books were scanned. From there, some books of relevant theories and a list of published articles ranked Level 1 and Level 2 on Perish or Norwegian Center for Research Data (Tabachnick, Fidell, & Ullman) discussing or applying those theories in case studies, are chosen to build up the thesis structure and reference for literature review.

Theory of Ryan and Deci (2000) with the construct of motivation or theory of experiential learning of Kolb (2014) with the construct of learning styles were two of several investigated theories before determining that the learning styles construct of Gardner (2011) theory and the perceptions of service quality construct of the combination theories of Frochot and Hughes (2000) and E Allen (2001) were the best abstracts in the museum context. Based on the chosen theories, the two main constructs are operationalized deeply in seven variables for learning styles and five variables for perceptions of service quality.

Aiming at searching the answer for the research question whether learning styles and perceptions of service quality correlate with each other in the context of Ryfylke Museum, the research exploits correlational design to examine variables in their natural environments and do not include researcher-imposed treatments (Simon & Goes, 2011). Again, Simon and Goes (2011) emphasized the main purpose of a correlational study is to determine relationships between variables, and if a relationship exists, to determine a regression equation that could be used to make predictions to a population. In such a way, the study expects that the prediction could be contributed to the museum as potential solutions throughout the understanding of the

local inhabitants' learning styles and their perceptions of provided service quality to increase the retention rate for the museum.

3.2. Sample

The target population of the research is around 4000 people living permanently in Suldal municipality (StatisticNorway, 2019) where Ryfylke Museum is located. The study applies an online survey as the measurement instrument to collect data which is estimated that response rates averaged 6-15% (Manfreda, Bosnjak, Berzelak, Haas, & Vehovar, 2008). Therefore, the sample size which seems to be one of the most difficult sampling problems (Rudestam & Newton, 2007) is originally predicted to obtain approximately 400 inhabitants in Suldal with the expected response rate at 10%.

Moreover, in the interest of measurement of perceptions of service quality theory, the study implements a theoretical sampling strategy to filter respondents. This is a non-random sample in which the researcher selects specific times, locations, or events to observe in order to develop a social theory or evaluate theoretical ideas (Lawrence Neuman, 2014, p. 276). The participants must be from 18 years old and have ever participated in at least one of the four most attractive activities of the museum then they could have their own perspectives to evaluate the museum service quality. As a result, the added-up characteristics for sample generate the decline of sample size. Thus and so, with nearly 3000 residents are over 18 years in Suldal (Statistic Norway, 2019) parallelly with the fact that no national organization keeps statistics on museum attendance nor is there an industry-wide formula for counting admissions and visitors to any one museum are frequently not counted the same way from one year to the next but the attendance at history museums has plunged in the last five years (Carson, 2008). Then, the sample size of the project is finally considered from 100 to 300 people as a prophecy with a theoretical sample of Suldal inhabitants which are over 18 years and had experience with the certain museum's activities.

There was an unexpected event occurring during survey conduct which caused severe influence on data collection progress, it was coronavirus pandemic. Norway was under lockdown control from 12th March till 20th April 2020 when the survey spread. It should have been a good sign when people must stay at home and have more time on the internet. However, there could be so distracted when children stayed at home or people induced side effects of social distancing then they could not be fond of non-entertain activities such as an academic survey. The researchers are aware of that these disadvantages will draw a certain line on the

study's result and envision that the minimum respondents might reach 30 individuals to apply parametric methods of correlational evaluation (Simon & Goes, 2011).

3.3. Data collection

As Lawrence Neuman (2014, p. 317) expressed in his book, "Surveys produce information that is inherently statistical in nature. Surveys are quantitative beasts" then the research decided to exercise a survey format for collecting data. A question on what methods of survey (mail, telephone, e-mail, web (online) or interview) should be executed to minimize misleading results and desirability bias but also eliminate the dilemma of language barrier when the researchers are non-native. Pursuant to Fan and Yan (2010), web surveys have several advantages, including shorter transmitting time, lower delivery cost, more design options, and less data entry time compared with traditional modes of surveys then the method was recognized to be the first option for the study. In the consideration of curtailing web surveys specific challenges, such as losing participants who do not Internet access, and having low response rates that could lead to biased results (Fan & Yan, 2010), Norstat – a market survey company – has been initially contacted for offering data collection service. Unfortunately, the company did not have enough panel members in Suldal to make a web survey viable as email dated 8th January, 2020. At that point, huge support from Ryfylke Museum was approved by which the project could deliver the survey on the museum Facebook page with more than 1800 followers and nearly 250 members locate in Suldal area among them following the page's statistics. The survey was designed in an online format with SurveyXact tool which license has been bought by University of Stavanger and provided to students, and spread out on Ryfylke Museum Facebook page from 25th March to 30th April, 2020 and was sponsored by Facebook advertisement as well to enhance productivity of reaching the population.

Based on two main theories of Gardner (2011), Frochot and Hughes (2000), E Allen (2001) and the practices of these in the museum context of many authors such as Ahmad, Abbas, Yusof, and Taib (2015b) and Hsieh, Park, and Hitchcock (2015) and others, the study has developed a questionnaire in 04 fundamental parts and 78 close-ended questions. These parts comprise demographic information, exploring preferred learning types, evaluating the museum service quality and classifying the degree of loyalty. They are specified in 78 questions with a combination of mandatory and optional ones and as a result, respondents were expected to answer 26 mandatory and maximum 50 questions relying on their experience with the museum. Furthermore, in the interest of avoiding language boundary, the survey exercises in Norwegian yet it was developed and implemented for pre-test and pilot phase in English version and

Norwegian one before official launch to local people. The Norwegian version was translated by two native students in the University of Stavanger then edited by staff from Communication department of the museum to guarantee message conveys.

In the favor of increasing response rate, Fan and Yan (2010) in their research address various factors in different phases from development to delivery then completion and analysis in which emphasize the importance of incentives and reminders beside the introduction design identifying the survey task clearly, providing realistic estimation of the time to finish the survey and telling the deadline of survey participation. The survey noted on the introduction that *"De første 100 deltakerne som bor i Suldal kommune og sender inn sin besvarelse før 30. april 2020 vil motta en liten gave som takk for hjelpen."* and in practice, the study offered 100 NOK by Vipps money transfer means for respondents who met the requirements and were willing to leave their personal phone number in the end of the survey.

Originally, the survey should have conducted in two weeks from 25th March to 5th April, yet the collection could not meet the minimum respondents then it was decided to extend to 30th April. A second post informed that the qualified respondents received the gift and the survey was still open until 30th April. Again, one week before the deadline, another post was made to encourage respondents to answer the survey and consequently, the number of respondents doubled thanks to these two reminders.

Prior to delivering to targeted sample, the survey was appraised and approved by Norwegian Centre for Research Data (NSD) in compliance with General Data Protection Regulation 2016/679 (GDPR) on the protection of natural persons with regard to the processing of personal data and on the free movement of such data. In addition, the survey provided respondents the Information Letter where they can find detailed information about the project for a better decision whether to participate in or not, the focal point for needed help and a reminder of avoiding commenting on the post resulted in disclosing personal information accidentally. A full message has sent to respondents as below *"Undersøkinga finn du her: https://svar.uis.no/LinkCollector?key=WDL1FSY2SJ31. Ved å klikke på lenka gir du samtykke til å delta i den elektroniske undersøkinga og samtykker til at personopplysningane dine blir behandla til sluttdatoen for prosjektet (sjå her for meir informasjon om prosjektet: https://ryfylkemuseet.no/sporjeundersoking/). For å beskytte personvernet ber me om at du sender spørsmål om undersøkinga til t.hongluong@stud.uis.no, og ikke i kommentarane her.»*

3.4. Measurements

In the direction of testing the hypothesis "*There is a significant positive relationship between Suldal visitors' preferred learning styles and their perceptions of service quality."*, the researchers have gone through such a comprehensive way of scanning articles before coming to the appropriate measurement tools for the main two constructs.

When studying learning styles, most authors have reviewed theories in the context of education like kindergartens, schools or universities where formal teaching methods carried out in hundreds of years. Experiential learning theory of Kolb (2014) with four types of concrete experience, reflective observation, abstract conceptualization, and active experimentation should have been chosen while aware of visitors expect learning and cognitive experiences as well, and to encounter things in museums which contrast with the routines of work and everyday life (Kotler & Kotler, 2000). Yet, the study coped with operationalizing the set of indicators into museum background to implement empirical test because museums are offer informal learning preferences to visitors with various learning experiences through visitors participation in engaging exhibits that facilitated visitor learning (Ahmad et al., 2015b) whereas Kolb's theory investigates learners in the direction of self-directed learning. Eventually, the project by Ahmad et al. (2015b) who exploited the theory of multiple intelligences of Gardner (2011) to measure learning styles in museums was revealed and accommodated with the study. The research was published by Elsevier Ltd. in 2015, peer-review under responsibility of Centre for Environment – Behavior studies, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia and ranked Level 3 in Perish.

With respect to perceptions of service quality theory, the researchers discovered thousands of studies applied SERQUAL model of Parasuraman et al. (1985) in evaluating quality in various hospitality industries. Nonetheless, in the study published in Asia Pacific Journal of Tourism Research in 2015 and ranked Level 1 in Perish, Hsieh et al. (2015) proposed a new combination of (Frochot & Hughes, 2000) and (E Allen, 2001) which inherited and adjusted from SERQUAL theory to adapt in museum situation.

At the last moment, the project has decided to examine 35 relationships of discrete variables made from seven ones (The Visual Learner, The Linguistic Learner, The Logical Learner, The Musical Learner, The Kinesthetic Learner, The Social Learner, The Solitary Learner) of Gardner (2011) learning styles theory and five ones (Tangibles, Responsiveness,

Empathy, Communications, Consumables) of HISTOQUAL and MUSEQUAL theory from Frochot and Hughes (2000) and E Allen (2001) respectively.

Based on these theories and articles, the research inherited and customized questions to apply to the real context of Ryfylke Museum case study. These questions were built to measure the determined variables at interval-level that identifies differences among variable attributes, ranks categories, and measures distance between categories and allows to measure them as continuous ones as well (Lawrence Neuman, 2014, pp. 223, 224). To guarantee validity and reliability of quantitative measurement, the survey applied 7-point Likert Scale where participants are asked to show their level of agreement (from strongly disagree to strongly agree) with the given statement (items) on a metric scale. The scale has several constructional diversities such as symmetric including 5, 7 or 10-point scale or asymmetric. And in that direction, Joshi, Kale, Chandel, and Pal (2015) addressed that the 7 point scale provides more varieties of options which in turn increase the probability of meeting the objective reality of people. As a 7-point scale reveals more description about the motif and thus appeals practically to the "faculty of reason" of the participants then chances are that the 7-point scale may perform better compared to 5-point scale owing to the choice of items on scale defined by the construct of the survey.

Antecedent to calibrate the targeted group, the survey was carried out in two other phases made up of Pre-testing with experts and Pilot. At the pre-test step, the survey was scanned by a well-chosen small group which were Professors, Philosophy Doctoral students, some students with high grades in academic subjects. Each participant was invited in a personal meeting lasting 30 minutes or more to go through part by part of the survey and deliver feedback and advice from introduction to demographic part, from construct to scale to measure, from words using to kind of incentives. It must say that the survey has achieved a significant improvement after the due diligence step.

Next, the survey run pilot with English on-line version designed in the SurveyXact format on Master of Hospitality Facebook group and networking of researchers with sample size N = 15. In order to execute the pilot successfully, some filter conditions of the survey were inactive like the question of living place or the request of leaving phone number was replaced by the request of leaving feedback then the respondents could give their comments directly on-line. After the phase, the project collected some complaints on mobile format of the study which was recognized as the existing limitation of the SurveyXact tool and might cause a low

response rate in real conduct. Otherwise, most commented on the acceptable time consuming and understandable statements and questions.

The pilot took a further test with the final on-line Norwegian version on the group of Ryfylke Museum staff who would focus on checking Norwegian vocabulary, grammar and the descriptions of service quality of activities and programs offered by the museum. Once again, the survey was revised completely before launching it to the targeted group.

After collecting data and importing to the Statistical Package for the Social Sciences (SPSS) system, the study will compute the correlation coefficient *R*, also known as the Pearson correlation coefficient factor, to obtain objective analysis that will uncover the magnitude and significance of the relationship between the variables. If *R* is statistically significant, then regression analysis can be used to determine the relationship between the variables. (Simon & Goes, 2011). All calculation and analyses will be described far-reaching in the next part of the project.

Chapter 4: Data Analysis

4.1. Respondent's profile

After conducting the online survey, the result of the data collection process indicated that 269 respondents were interested in the project and clicked to start the survey. However, 214 answers were not accepted because of the interruption in answering. Based on manipulation checks, some respondents just completed a few first questions and some ceased the survey when they were almost done. Additionally, 18 responses from those who do not live in the Suldal community were also excluded. 37 qualified answers were collected from 37 respondents who are permanently living in the Suldal municipality. Still, 5 in total 37 completed surveys that came from people who have not visited the Ryfylke Museum were considered to be removed since they would not support the research. Finally, there were 32 usable answers that would contribute to the further analysis. It achieved 8% of the research's plan of 400 respondents as mentioned in Chapter 3.

The overview of demographic information of the sample in the project was illustrated in the Chart 1. Firstly, the gender distribution exposed that females accounted for the higher proportion of the total respondents, at 78% whereas males accounted for 22%. Next, respondents ranged in age from greater than 18 years old. Therein, the majority (46%) of participants were 51-70 years old meanwhile the percentage of respondents 31-50, 18-30, and above 70 were 35%, 11%, and 8% respectively. The education level of the participants ranged from holding primary school (5%), secondary school (24%), bachelor's degree (30%) to master's degree (19%). Finally, the investigating basic demographic information about have or have not children of respondents illustrated that the proportion of respondents who have children accounted for 84% while that of participants who have no children accounted for 16%.

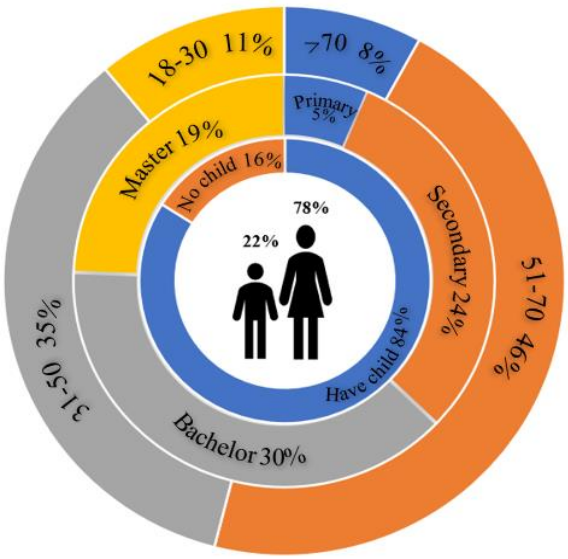

Chart: The Overview Demographic Information

Although these characteristics are slightly different when stipulating in four activities, they still share common observations in general and Table 2 below brings a clear picture of the same but different among those.

Criteria		FO	MK	KA	BJ
Age	18-30		4%	10%	6%
	31-35	20%	33%	38%	56%
	51-70	67%	54%	43%	39%
	>70	13%	8%	10%	
Gender	Female	67%	79%	90%	94%
	Male	33%	21%	10%	6%
Education	Primary	7%	8%	5%	11%
	Secondary	27%	21%	24%	17%
	Vocational	27%	13%	14%	11%
	Bachelor	20%	29%	33%	33%
	Master	27%	29%	24%	28%
Children	Have	93%	92%	86%	94%
	Not have	7%	8%	14%	6%

Note: FO = Folk Music on Friday; MK = Experience the farm life at Kolbeinstveit; KA = Cafe and Souvenirs; BJ = The Ice Bear exhibition.

Table 2: Demographic Information in four activities

4.2. Reliability and Validity analysis

4.2.1. Reliability testing

Reliability testing has been considered as an initial process before starting the data analysis. To be more specific, collected data sets have been inspected for errors and violations of the assumption of the linear model. According to Allen (2017), reliability refers to scrutinizing the stability or consistency of a measurement of a variable. In another definition, G. Churchill (1979) indicates that reliability would be obtained if all items of the concept domain have an equal amount of common core. One method to evaluate the reliability for a scale is to examine the degree to which respondents' answers on the different items are consistent with each other. It is also named internal consistency. Although there are various approaches to measure internal consistency, the most widely used measure of internal consistency reliability in the social and organizational sciences is Cronbach's alpha (Allen, 2017; D. Bonett & Wright, 2015).

The recommended values of coefficient alpha differ from scholars depending on nature and the purposes of scale (Pallant, 2013). Nunnally (1978) suggests that the level of Cronbach's alpha values should reach at least 0.7; however, they are dependent on the number of items in

the scale. For instance, if the number of items in the scale is small (fewer than 10 items), Cronbach's alpha values can be quite small. When this situation occurs, the mean inter-item correlation for the items should be calculated and reported (Pallant, 2013). Recommended optimal mean inter-item correlation values range from 0.2 to 0.4 (Briggs & Cheek, 1986). If the values are lower than 0.20, then the items may not be representative of the same content domain (Piedmont, 2014). There is little agreement on the estimation of such, DeVellis (2016) notes that the coefficient alpha value of a scale should be greater than 0.7 whereas Pallant (2013) argues the values above .8 as preferable. According to criteria established by (George & Mallery, 2003), the internal consistency of items calculated by using Cronbach's alpha indicated that values > 0,9 are considered excellent, 0.8-0.9 good, 0.7-0.8 acceptable, and 0.6-0.7 questionable. In this paper, the Cronbach Alpha value 0.6 has been chosen as the minimum level to test the reliability. However, the coefficient alpha value less 0.6 would be re-examined.

Cronbach's Alpha test in SPSS Statistics was used to identify Cronbach's alpha value as well as the reliability of the items of the variables. The statistical data of Cronbach's Alpha result of 7 types of preferred learning styles and perceptions of service quality of four activities encompassing Folk Music on Friday, Experience the farm life at Kolbeinstveit, Café and souvenirs, The Ice Bear exhibition are continued to analyse.

As an observation at the Cronbach's Alpha in SPSS, there are a total of 14 scales that have the results with insufficient reliability that are less than 0.6 (Appendix A). G. Churchill (1979) argues that the low coefficient alpha demonstrates that the performance of items is poor in capturing the construct which motivated the measure. When it comes to low coefficient alpha value, some items that do not share equally in the common core in the item pool should be eliminated (G. Churchill, 1979). Because they are considered unreliable items in the item pool. G. Churchill (1979) also suggests that the easiest way to seek error items is to calculate the correlation of each item with the total score and to plot these correlations by reducing order of degree. To be more precise, items with correlation near zero will be deleted. In this study, items in the inter-item correlation values less than 0.3 would be scrutinized and removed. Items in the inter-item correlation correspondent value more than 0.3 were deemed as reliable items.

By checking reliability analysis in SPSS in each activity, variables that have minus value were considered to be deleted. Additionally, the remaining variables ($\alpha < .6$) continued to be reviewed based on reliable corrected item-total correlation values. Corrected item-total correlation values of these variables were removed alternately from low value to high value until coefficient alpha values become qualified (Table 3).

Activity	Constructs	Variables	Lable	Number of items	Cronbach's Alpha
Folk Music on Friday	*Preferred learning styles*	The Logical/Mathematical Learner	LO_FO	2	.725
		The Musical Learner	MU_FO	3	.927
		The Social/Interpersonal Learner	SO_FO	3	.678
		The Solitary/Intrapersonal Learner	SY_FO	3	.918
		The Visual learner	VI_FO	3	.805
		The Linguistic Learner	LI_FO	3	.786
	Perceptions of service quality	Tangibles	TA_FO	3	.706
		Communications	CM_FO	3	.632
		Consumables	CS_FO	1	
Experience the farm life at Kolbeinstveit.	*Preferred learning styles*	The Musical Learner	MU_MK	3	.95
		The Social/Interpersonal Learner	SO_MK	3	.631
		The Solitary/Intrapersonal Learner	SY_MK	3	.923
		The Visual learner	VI_MK	3	.631
		The Linguistic Learner	LI_MK	3	.73
	Perceptions of service quality	Responsiveness	RE_MK	4	.776
		Communications	CM_MK	4	.64
		Consumables	CS_MK	3	.634
Café and souvenirs	*Preferred learning styles*	The Musical Learner	MU_KA	3	.947
		The Social/Interpersonal Learner	SO_KA	3	.656
		The Solitary/Intrapersonal Learner	SY_KA	3	.829
		The Visual learner	VI_KA	3	.664
		The Linguistic Learner	LI_KA	3	.658
	Perceptions of service quality	Tangibles	TA_KA	3	.664
		Responsiveness	RE_KA	3	.852
		Empathy	EM_KA	3	.735
		Communications	CM_KA	1	
Ice Bear exhibition	*Preferred learning styles*	The Logical/Mathematical Learner	LO_BJ	2	.788
		The Musical Learner	MU_BJ	3	.913
		The Solitary/Intrapersonal Learner	SY_BJ	3	.898
		The Visual learner	VI_BJ	3	.691
		The Linguistic Learner	LI_BJ	2	.722
	Perceptions of service quality	Responsiveness	RE_BJ	4	.825
		Communications	CM_BJ	4	.628

Note: LO = The logical/mathematical learner, MU = The musical learner, SO = The social/interpersonal learner, VI = The visual learner, SY = The solitary/intrapersonal learner, LI = The linguistic learner, FO = Folk Music on Friday, KA = Café and souvenirs, MK = Experience the farm life at Kolbeinstveit, BJ= The Ice Bear exhibition; TA = Tangibles; RE = Responsiveness; EM = Empathy; CM = Communication.

Table 3: The qualified Cronbach alpha variables

4.2.2. Validity testing

In the testing validity of variables, Exploratory Factor Analysis (EFA) can be used as a statistical method to examine appropriate variables and analyse the relationships among large numbers of variables. EFA is also defined as a technique within factor analysis that identifies the relationships in the most general form by explaining them in terms of their common underlying dimensions (J. Hair, Black, Babin, & Anderson, 2010). The results from the EFA in this paper provided a number of factors to retain in the learning styles as well as perceptions of service quality construct and clear estimation of the factor structures for the measures of these constructs. In other words, EFA is a process that can be carried out to validate scales of items in a questionnaire which has not been validated. SPSS statistical platform was used to support the process in the research.

While conducting an EFA, the test of sample adequacy called Kaiser-Meyer-Olkin measure of Sampling (KMO) should be noticed. According to Kaiser (1974), a minimum acceptable score for the research is 0.5. Furthermore, when it comes to factor rotation, factor loadings are also significant. Comrey and Lee (1992) argues that one of the simplest ways to calculate factor scores for individual factors involves summing raw scores corresponding to all items loading on a factor. It is highlighted that if an item bears a negative factor loading, the raw score of the item is withdrawn rather than put in the computations because the item is negatively related to the factor (Distefano, Zhu, & Mindrila, 2008). (Field, 2013); Tabachnick et al. (2007) recommend that factor loadings with an absolute value less than 0.32 need to be suppressed because it represents only 10% of the shared variance. Retained factors should have at least three items with loading greater than 0.4. Samuels (2016) states that after applying the rule for factor suppression and retention, main items of loading factors should not cross-load so highly on other factors in the rotation table. It is also recommended that a consistent cross factor loading cut off is a maximum of 75% of any factor loading (Samuels, 2016). In case, if there are any items which load on more than two factors, they would be required a lower cut off value.

The tables labelled communality present how much of the variance in each item is explained. According to Pallant (2013) dimension reduction techniques named communality is advisable to remove any item with a communality score less than .3 because low value could indicate that the item does not fit well with the other items in its component. In the other explanation, items with low communality scores may indicate additional factors which could be explored in further studies by measuring additional items (Costello & Osborne, 2005).

Moreover, the percentage of the total variance explained by the retained factors should be at least 50% as the general rule (Streiner, 1994).

Measure	Recommended value	LS_FO	PC_FO	LS_MK	PC_MK	LS_KA	PC_KA	LS_BJ	PC_BJ
(Factor, N)	Eigenvalue >1	4	1	2	1	3	3	3	1
Total variance explained	> 50%	84.84%	67.56%	77%	64.27%	76.65%	75.85%	83.66%	62%
KMO	>.5	.537	.582	.691	.841	.55	.64	.595	.775
Barlett's test of sphericity	Sig <.05	< .001	< .05 (.008)	< .001	< .001	< .001	< .001	< .001	< .001
Communalities min (max)	>.3	.79 (.963)	.476 (.832)	.354 (.916)	.484 (.82)	.521 (.941)	.50 (.937)	.729 (.912)	.366 (.674)
Factor loadings min (max)	>.4	.422 (.968)	.690 (.912)	.412 (.955)	.696 (.906)	.689 (.965)	.401 (.947)	.771 (.943)	.605 (.881)

Note: LS = Preferred learning styles, PC = Perceptions of service quality, FO = Folk Music on Friday, MK = Experience the farm life at Kolbeinstveit, KA = Kafe, BJ = Ice Bear exhibition, N = number; KMO = Kaiser-Meyer-Olkin measure of Sampling Adequacy; min = minimum; max = maximum.

Table 4: Factor analysis for variables

In general, the result (Table 4) indicates that all scales including preferred learning styles and perceptions of service quality constructs display the presence of at least one component (eigenvalue > 1) with a satisfying percentage of variance (> 50%). Additionally, Kaiser-Meyer-Olkin (KMO) of the data sets also are verified at the value KMO > .5 that is qualified as the mentioned rule, and Bartlett's Test of Sphericity (1954) reached statistical significance at $p <$ 0.001 level (except for PC_FO with $p = .008 < .05$). Communality values of these scales disclose that all items fit well with each other (> 0.3), while factor loadings demonstrate strong belonging to the assigned components (> 0.4).

As for examining the validity of construct preferred learning styles in Folk Music on Friday activity, the variables SO_FO1, SO_FO3, SO_FO3, and LI_FO3 have to be deleted because of the high cross-loading with the others over 75%. Otherwise, the construct perceptions of service quality, although satisfies the condition of cross-loadings and loading factors, KMO indicates value < .05. Therefore, variables TA_FO1, TA_FO2, TA_FO3 can be removed to increase KMO to .537. Next to the activity Experience the farm life at Kolbeinstveit, the problem is that 5/15 variables of preferred learning styles violate the rule of cross loading over 75% compared to the main loading. Additionally, after eliminating these

errored items, KMO significantly improves from .36 to .691. Likewise, one item in the perceptions of service quality construct (EM_KA2) that encounters the same problem with cross-loading is removed from the data. However, it is noticeable that the factor loading of SO_KA2 indicates the value of minus .671 that negatively loaded items measures the opposite pole of the intended measured construct. It is decided to be removed from all these items loading of the factor. In the fourth activity named Ice Bear exhibition, a certain number of variables should be subtracted since again these items have a higher cross-loading with other than acceptance.

After reliability and validity testing, the retained variables will be put in order and described obviously. These qualified variables support the hypotheses as well as additional testing in the next part.

4.3. Descriptive variables

Following the previous part, the study carries out Descriptive statistics in SPSS to describe the characteristics of the sample (Pallant, 2013) and separates in four different activities. The minimum, maximum, mean and standard deviation are checked with the selected variables of each activity. Standard deviation (SD) demonstrates the spread of data which means a low SD shows that the data points tend to be very close to the mean, whereas the high SD indicates data is spread out over the range of value (Jerry, Masters, & Tavares-Jones, 2012). However, the evaluation of how data spread out the mean value also depends on sample size (O'Sullivan & Sheffrin, 2008) and the purpose of researchers (Brown & Saunders, 2007).

Regarding the Folk Music on Friday activity with 15 people (N=15) who have already experienced the activity, there are five out of seven learning styles, including the Musical, the Logical, the Solitary, the Visual, the Linguistic with the range from 1 – strongly disagree to 7 – strongly agree. Among those, the Linguistic with the question of item LI_FO2 “You memorize best things by saying, hearing or seeing words” achieves the highest value (mean = 5.8; SD = 1.146) whereas the question of MU_FO2 “You learn best by rhythm, melody and music” defines the lowest value (mean = 3.87; SD = 1.846).

In the approach of perception of service quality, Communication dimension records that all mean values of variables are greater than 5 on the measurement scale of 7, in which the question “Performance introducer has good communication skills (e.g., clarity, fluency, interaction with audiences, time control, etc)” labelled CM_FO2 exposes the highest value (mean = 6.53; SD = .743). Table 5 demonstrates all above descriptions.

Variable	Label	N	Minimum	Maximum	Mean	Standard Deviation
You enjoy doing experiments, asking questions, exploring patterns and relationships.	LO_FO1	15	3	7	5.67	1.113
You learn best by classification, working with abstract patterns and categorization of things.	LO_FO2	15	3	7	4.53	1.302
You enjoy singing, humming, listening to music and playing instruments.	MU_FO1	15	1	7	4.80	1.935
You learn best by rhythm, melody and music.	MU_FO2	15	1	7	3.87	1.846
You easily learn new songs and melodies.	MU_FO3	15	1	7	4.00	1.964
You enjoy working alone, pursuing your own interests.	SY_FO1	15	1	7	4.33	2.127
You learn best by self-learning, reflecting or individual projects.	SY_FO2	15	1	7	4.27	1.580
You prefer doing things by yourself rather than working in group.	SY_FO3	15	1	7	4.47	1.995
You prefer using pictures and colors to visualize or memorize things.	VI_FO1	15	2	7	5.13	1.727
You remember pictures better than texts.	VI_FO2	15	2	7	5.33	1.543
You are interested in activities relevant to visual style including sketching, graphing, creating charts and mapping out stories.	VI_FO3	15	2	7	5.07	1.624
You like to read, write or tell stories in your leisure time.	LI_FO1	15	3	7	5.60	1.404
You memorize best things by saying, hearing or seeing words.	LI_FO2	15	4	7	5.80	1.146
Directional signs for the concert make it easy to navigate	CM_FO1	15	1	7	5.40	1.957
Performance introducer has good communication skills (e.g., clarity, fluency, interaction with audience, time control, etc)	CM_FO2	15	5	7	6.53	.743
Performance introducer makes the audience immersed into the concert.	CM_FO3	15	3	7	5.87	1.356

Note: FO = Folk music on Friday; MU = the Musical learner; LO = the Logical learner; SY = the Solitary learner; VI = the Visual learner; LI = the Linguistic learner; CM = Communication.

Table 5: The Description of learning styles and perception of service quality at Folk Music on Friday

The statistics on Loyalty explores a missing data problem when the number of participants answered REV, MEM and REN are only 14 out of 15. According to (Dong & Peng, 2013; Peugh & Enders, 2004) ignoring cases with missing data not only leads to the loss of information in the research but also can introduce potential bias in parameters. Dong and Peng (2013) further argue that the percentage of missing data is directly related to the quality of statistical inferences. Yet, there is no specific percentage from the literature regarding an acceptable proportion of missing data in a data set for valid statistical inferences. (Rubin, 1999); Schafer (1999) recommends that a missing rate of 5% or less is insignificant. Bennett (2001) agrees that statistical analysis is considered to be biased when data missing is more than 10%. In this section, the rate of missing data calculated (5,2%) is likely to be inconsequential. Table 6 illustrates the fact that the mean value of the question "I will revisit the museum" is the highest value (mean = 6.86, SD = .363) and followed by "I will recommend the museum to others" with (mean = 6.73, SD = .594). The ranging from minimum 5 to maximum 7 of this question indicates that most visitors are willing to revisit or recommend the Ryfylke Museum to others. However, it is striking that the question "I will become a member" is supposed to be the lowest mean value (mean = 5.14, SD = 1.460) compared to others.

Variables	Label	N	Minimum	Maximum	Mean	Standard Deviation
I will revisit the museum	REV	14	6	7	6.86	.363
I will recommend the museum to others	REC	15	5	7	6.73	.594
I will become a member	MEM	14	3	7	4.86	1.460
I will renew my member card (if any)	REN	14	4	7	5.14	1.460

Table 6: The Description of Loyalty at Folk Music on Friday

Continuing to Experience the farm life at Kolbeinstveit with 24 participants (N-24), descriptive analysis points out that the activity has equivalent results as the previous in learning styles. It means that the Linguistic with the question "You memorize best things by saying, hearing or seeing words" labelled herein as LI_MK2 has the highest value (mean = 5.67, SD = 1.129) and the Musical with the question "You learn best by rhythm, melody and music" labelled MU_MK2 remarks the lowest score (mean = 3.58, SD = 1.909).

Besides, the perceptions of service quality construct declare the appearance of Responsiveness, Communication and Consumable with all means above 5. Among those, RE_MK3 – the representative of the question "Staff (the hosts and guides) are friendly and warm-welcome" - is made a record (mean = 6.54, SD = .779) and CM_MK2 of "Overall,

physical display of the interpretation/ exhibits (size of signs, layout of design, brightness of light) is well provided" stands at the bottom (mean = 5.29, SD = 1.459) (Table 1, Appendix B).

The equivalence is also discovered in the Description of loyalty of the activity. The missing data at 3.2% allows the search to possibly move forward without any applicable solution. Then, the result presents that people are willing to recommend (REC) the activity to others (mean = 6.62, SD = .711) whereas they are on the fence with the question if they want to become a member (MEM) (mean = 4.13, SD = 1.842) (Table 2, Appendix B).

The next observation is Café and souvenirs with 21 people (N=21) who have already visited the activity at the museum. Table 3 (Appendix B) shows that the Linguistic learner stays at the top again, yet slightly different from those of two other activities is that LI_KA1 represented the question "You like to read, write or tell stories in your leisure time" (mean = 5.71, SD = 1.384) is at first, then is followed by LI_KA2 with the question "You memorize best things by saying, hearing or seeing words" (mean = 5.62, SD = 1.203). In contrast, the question "You enjoy working alone, pursuing your own interests" labelled by SY_KA1 is in the bottom (mean = 4.19, SD = 1.662).

Furthermore, based on the content of perceptions of service quality, the mean scores of four service dimensions, including Tangibles, Responsiveness, Empathy, and Consumables range from 5.86 to 6.76. It is noticeable that the highest value belongs to TA_KA4 of the question "The atmosphere is cozy" (mean =6.76, SD = .539). On the contrary, the mean value of variable RE_KA2 with the question "Staff is willing to spend time conversing with the visitors" has the smallest value (mean = 5.86, SD = 1.195).

In loyalty perspective, the similarity is highlighted when REC and REV stay at the peak with mean = 6.71 and 6.65, respectively and MEM contributes the modest score with mean = 4.00 (Table 4, Appendix B). The missing data also happens at the acceptable ratio of 3.7%.

Table 5, Appendix B expresses the descriptive statistics of learning styles and perceptions of service quality of The Ice Bear exhibition activity which has a total of 18 people (N=18) who have involved. MU_BJ1 stands for the question "You enjoy singing, humming, listening to music and playing instruments" and LI_BJ1 is on behalf of the question "You like to read, write or tell stories in your leisure time" share the top position with mean = 5.67. In contrast, "You learn best by self-learning, reflecting or individual projects" labelled by SY_BJ2 lies at the lowest value (mean = 3.89, SD = 1.568). In another construct, the mean value of the question "Staff is friendly" (RE_BJ4) has the highest value of mean = 6.28, SD =1.179.

Conversely, the question “Interpreters are professional (e.g., accessible, knowledgeable of the subjects)” (RE_BJ2) has the lowest value of mean = 4.83, SD = 1.823.

Still, the result of Loyalty has the parallel with other activities with a notice on the Recommendation (REC) and Revisit (REV) with mean = 6.67 and 6.47 orderly and the lowest score with the statement “I will become a member” (mean = 3.72, SD = 1.638). There is only one data missing resulted in the ratio stays at 1.4% (Table 6, Appendix 6).

4.4. Hypothesis testing

In this part, the hypotheses H1, H2, H3, H4 will be performed in the test of significance of the correlation coefficient and then considered whether the linear relationship in the sample data collection is significant enough to apply to the model relationship in the population. To be more specific, a sample correlation coefficient (R) will be examined to estimate a population correlation coefficient (ρ) between variables (Kozak, 2008). When testing the hypotheses, two definitions null hypothesis (H_0) and alternative hypothesis (H_a) are used to demonstrate the result of hypotheses. If the test accepts the null hypothesis H_0: $\rho = 0$, there is no linear relationship, conversely, if the null hypothesis is rejected, it means that the relationship is statistically significant, and the project will continue with alternative hypothesis H_a: $\rho \neq 0$ and linear regression (Schober, Boer, & Schwarte, 2018).

The significance level (listed as Sig. 2 tailed) has been taken into consideration. The magnitude of statistical significance (p-value) does not illustrate how strongly the two variables are associated with the correlation coefficient (this is given by R), instead, it illustrates how much confidence researchers should have in the results obtained (Pallant, 2013). In the research literature, the significant level .05 and .01 are encouraged to support rejecting the null hypothesis (H_0) (Morrison & Henkel, 2006). In other words, significant value at .05 and .01 indicates 95% and 99% probability the interval covers the population parameter (Sullivan, 2017).

Furthermore, Pearson correlation coefficient has been used in this paper to illustrate the strength and direction of the relationship or association between two continuous variables (J. F. Hair, Black, Babin, Anderson, & Tatham, 1998). According to Pallant (2013), Pearson correlation coefficient gives researchers an indication of both the direction (positive or negative) and the strength of the relationship. To be more specific, a positive correlation indicates that as one variable increases, so does the other. A negative correlation indicates that as one variable increases, the other decreases. The value of the relationship can range from -1.00 to 1.00. A correlation of 0 indicates no relationship at all, a correlation of 1.0 indicates a

perfect positive correlation, and value of -1.0 indicates a perfect negative correlation (Pallant, 2013). It is noticeable that the negative sign refers only to the direction of the relationship, not the strength. In detail, the strength of correlation of *R* =.5 and *R* = -.5 is not different (Pallant, 2013). In psychological research, the correlation strength differed from scholars. Cohen's (1988) conventions have been used to determine the correlation coefficient. Coefficients (*R* =.10 to .29) is thought to represent a weak or small association; a correlation coefficient of (*R* =.30 to .49) is considered a moderate correlation, and a correlation coefficient of (*R* =.50 to 1.0) is thought to represent a strong or large correlation (pp. 79-81).

In case, the null hypothesis is rejected, linear regression has been used as a linear approach to model the relationship and predicts a single dependent variable from several independent variables in the form of an equation (Morrison & Henkel, 2006; Zikmund, 2003). For the linear regression testing, Analysis of Variance (ANOVA) has been used as calculations that provide information about levels of variability within a regression model and form a basis for tests of significance. The model prediction correctness is measured by Adjusted *R* square, which expresses itself as a percentage. When a small sample is involved, the *R* square value in the sample tends to be a rather optimistic overestimation of the true value in the population. The Adjusted *R* square statistic 'corrects' this value to provide a better estimate of the true population value (Tabachnick et al., 2007). In other words, the closer the Adjusted *R* square approaches to 1, the better the model prediction accuracy is (Nusair & Hua, 2010)

Evaluating each of the independent variables is considered necessary as a next step. The authors should clarify which of the variables included in the model contributed to the prediction of the dependent variable. The table labeled Coefficients in statistical data describes the value of Standardized Coefficients Beta and Unstandardized Coefficients B; however, according to Pallant (2013), it depends on the purpose of the research. To compare the different variables, it is essential to look at the standardized coefficients. Standardized means that these values for each of the different variables that have been converted to the same scale; moreover, it can be used for the comparison between variables. If the research concentrates on constructing a regression equation, unstandardized coefficient values listed as B should be taken into account (Pallant, 2013).

Taking into consideration in such measurements, the four activities namely Folk Music on Friday (N=15), Experience the farm life at Kolbeinstveit (N=24), Café and souvenirs (N=21), The Ice Bear exhibition (N=18) are furthermore incorporated for the test hypotheses H1, H2, H3, H4.

Hypothesis H1

To begin with, null hypothesis $H1_0$ and alternative hypothesis $H1_a$ are established to perform hypothesis testing.

$H1_0$ ($\rho = 0$): There are no significant correlations between preferred learning styles and perceptions of service quality in the Folk Music on Friday activity (N=15).

$H1_a$ ($\rho \neq 0$): There are significant correlations between preferred learning styles and perceptions of service quality in the Folk Music on Friday activity (N=15). Moreover, significant linear regression exists between variables in the population.

Pearson correlation coefficient in SPSS reveals the non-significant difference of the correlation between the preferred learning style and perception of service quality with *p*-value >.05. To be more precise, *p*-value >.05 indicates that there is insufficient evidence to conclude there is a significant relationship between the variables in the correlation coefficient. Therefore, it can be noticed that it has failed to reject the null hypothesis ($H1_0$). Pallant (2013) explains that, in a small sample (N=30), researchers may encounter the result of moderate correlations that do not reach statistical significance at the traditional *p*-value <.05. In addition, in large samples (N>100), however, very small correlations may reach statistical significance. David (1938) recommends that the use of sample size for Pearson correlations only if N >=25 can lead to an unusual statistical distribution. In other words, the research would be processed with the caution that it is not necessarily apparent (D. G. Bonett & Wright, 2000).

Overall, it may be said that there has not enough evidence to conclude that there is a significant linear relationship between Preferred learning style and Perception of service quality in the Folk Music on Friday activity. Therefore, the authors cannot use the regression line to model a linear relationship between variables in the population.

Hypothesis H2

Before starting hypothesis testing, the null hypothesis and alternative hypothesis are created as the best way that determines whether a statistical hypothesis is true would be to examine the entire population (Kolawole & Sekumade, 2017).

$H2_0$ ($\rho = 0$): There are no significant correlations between preferred learning styles and perceptions of service quality in the Experience the farm life at Kolbeinstveit activity (N=24).

$H2_a$: ($\rho \neq 0$): There are significant correlations between preferred learning styles and perceptions of service quality in the Experience the farm life at Kolbeinstveit (N=24). Moreover, linear regression exists between variables in the population.

Statistical data of Pearson correlation coefficient in SPSS (Table 7) displays significant value p <.01 and p <.05 of 6 correlations between preferred learning styles and perceptions of service quality. These correlations consist of MU_MK2 and CM_MK4 (p <.05, R =.443) , MU_MK3 and CM_MK2 (p <.05, R =.440), MU_KA3 and CM_MK4 (p <.01, R =.518), LI_MK3 and RE_MK1 (p <.05, R =.477), LI_MK3 and CM_MK2 (p <.01, R =.636), and LI_MK3 and CM_MK4 (p <.05, R =.421). A glance at the table reveals that R-values of 6 correlations expose the strength from moderate to strong positive relationships between variables (J Cohen, 1988).

Scale	1	2	3	4	5	6
1.MU_MK2	-	.849**	.412*	.105	.358	.443*
2.MU_MK3		-	.513*	.132	.440*	.518**
3.LI_MK3			-	.477*	.636**	.421*
4.RE_MK1				-	.660**	.611**
5.CM_MK2					-	.634**
6.CM_MK4						-
** p<0.01 (2-tailed)						
* p < 0.05 (2-tailed)						

Note: MK = Experience the farm life at Kolbeinstveit, MU = The musical learner, LI = The Linguistic Learner, RE = Responsiveness; CM = Communication

Table 7: Pearson Product- Moment Correlations between preferred learning styles and perception of service quality in the Experience the farm life at Kolbeinstveit activity

With the confident level greater than 95%, the hypothesis testing will continue to further analyze regression linear. It is apparent that there are 3 observed linear regressions encompassing one multiple regression including three independent variables (MU_MK2, MU_MK3, and LI_MK3) and one dependent variable (CM_MK4), one multiple regression linear including two independent variables (MU_MK3 and LI_MK3) and one dependent variable (CM_MK2), and one simple linear regression including one independent variable (LI_MK3) and one dependent variable (RE_MK1).

The first linear regression carried on is a multiple regression between three independent variables of preferred learning styles (MU_MK2, MU_MK3, and LI_MK3) and one dependent variable of perceptions of service quality (CM_MK4). However, the multiple regression encounters multicollinearity between two independent variables of MU_MK2 and MU_MK3 when the r value is relatively high R = .849 (Ng, 2013) associated with the confidence level 99% (p <.01) (Table 7). The problem of multicollinearity signals that there are considerable overlaps among the indicators such that some of them are redundant. More seriously, it makes the estimate unstable and hence cannot be trusted (Soh, 2015). Streiner (2003) emphasizes that

a difference needs to be made between a set of indicators forming a scale and another set of indicators forming an index. Therefore, the solution is to identify and exclude the redundant indicators as they are not only non-contributing but also misinforming (Soh, 2015). The project may need to consider omitting one of the variables or forming a composite variable from the scores of the two highly correlated variables (Pallant, 2013).

The presence of multicollinearity was determined by conducting multiple regression analysis between three independent variables and one dependent variable. Besides, there is a problem with multicollinearity if tolerance value is less than .2 and variance inflation factors (VIF) value exceeds 4.0 (J. Hair, Anderson, Babin, & Black, 2010). Tolerance is defined as $(1 - R^2)$ where R is the multiple regression coefficient of a specific predictor predicted by all other predictors in the regression analysis. If R is large, much of the variance of that predictor is anticipated by the other predictors. This renders the predictor redundant because what it can explain is already explained by the other predictors in the model.

Table 2 (Appendix C) depicts that the variable MU_MK3 yields the smallest tolerance value at .248 and the highest VIF value that approaches 4.04. More so, the current significant value .662 exceeds accepted value .05 following Pallant's (2013) recommendation. Adjusted R square indicates the percentage of the variance of three independent variables (MU_MK2, MU_MK3, and LI_MK3) and one dependent variable (CM_MK4). It is obvious that when MU_MK3 is eliminated, significant value (Sig.) decreases to .039 (p<.05). With the sig. of F-test < .05, a percentage of the variance of 19.5%, and R = .515, there is a significance of the correlation coefficient between independent variables (MU_MK2, LI_MK3) and dependent variables (CM_MK4) (Table 8). In other words, there is sufficient evidence to reject null hypothesis and the statistical correlation coefficient would be true when examining the entire population.

Multiple regression assessment will continue with Unstandardized Beta coefficient (B) that allows the introduction of several independent variables in one equation (G. A. Churchill, Brown, & Suter, 1996). Also, a Standardized Beta coefficient compares the strength of the influence of each individual independent variable to dependent variable. However, in term of contribution to the dependent variable prediction, sig. value of two independent variables MU_MK2 (.128) and LI_MK3 (.176) far surpass accepted value .05. Therefore, there is not enough proof to conclude the magnitude of the effect of individual independent variable to dependent variable.

Multiple regression is very sensitive to outliers (very high or very low scores) and normality, linearity, homoscedasticity, independence of residuals because these all refer to various aspects of the distribution of scores and the nature of the underlying relationship between the variables (Pallant, 2013). Then, the research must examine thoroughly these assumptions in Scatterplot. Regression assumes that variables have normal distributions (Osborne & Waters, 2002) and from Histogram of Regression Standardized Residual of REC, there is a chart with a bell shape, mean nearly 0 and standard deviation approximately 1 and standardized residual values in the range of -2 to 2 (Tabachnick et al., 2007). Additionally, in the Normal P-P Plot, the points lie in a reasonably straight diagonal line from bottom left to top right and would suggest no major deviations from normality (Pallant, 2013). Therefore, it is evidently that the regression model of CM_MK4 and MU_MK2, LI_MK3 is a normal distribution and does not have any violation of assumptions.

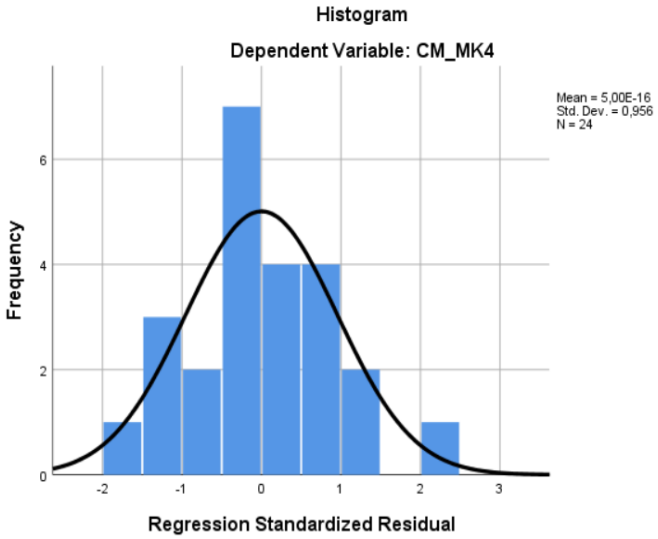

Figure 3: Histogram of Regression Standardized Residual of CM_MK4

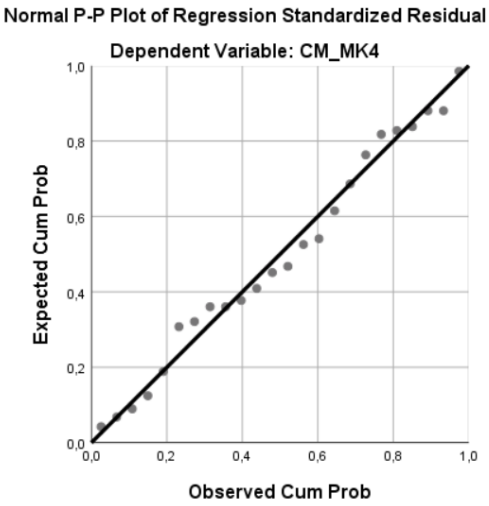

Figure 4: Normal P-P Plot of Regression Standardized Residual of CM_MK4

Continuing with the multiple regression of two independent variables (MU_MK3 and LI_MK3) and one dependent variable (CM_MK2), it is portrayed that significant value of F-test .003 (sig. <0.01) and Adjusted *R* square 36.7% (Table 9). The multiple correlation coefficient *R* = .649 shows there is a strong positive correlation between variables (J Cohen, 1988). It is apparent that there is a significant correlation coefficient between variables. More so, the strength of the effect of independent variables on the dependent variable will be scrutinized at sig. value of individual independent variables. The coefficient (Table 10) contains the significant value of .009 (sig. <.01). and .432 (sig > .05) in order of variables LI_MK3 and MU_MK3. The data exposes that the variable LI_MK3 (sig. <.01) has a unique significant contribution to prediction of the dependent variable (Pallant, 2013). Otherwise, variable MU_MK3 has sig. value greater than .05; therefore, the variable is not making a significant unique contribution to the prediction of the dependent variable. To sum up, the linear equation is demonstrated in the form of CM_MK2 = .587*LI_MK3 with unstandardized coefficients B (B = .587).

The final regression linear in the Experience the farm life at Kolbeinstveit activity is defined as simple regression linear that concerns two-dimensional sample points with one independent variable (LI_MK3) and one dependent variable (RE_MK1). Statistical data illustrates the significant value of F-test is less than .05 (sig. = .018), Adjusted *R* square 19.3%, and the multiple correlation coefficient *R* = .477 that shows a moderate positive correlation between variable (J Cohen, 1988) (Table 8). It is evident that sig. above 95% probability of the result of significant correlation coefficient between variables reflects the characteristics of the whole population. The unstandardized beta (B = .443*)* (Table 9) shows amount of change in the dependent variable (RE_MK1) due to the change of independent variable (LI_MK1). The linear equation is illustrated in the form of RE_MK1 = .443*LI_MK3.

Hypothesis H3

First of all, the null hypothesis and alternative hypothesis are created as the best way that determines whether a statistical hypothesis of the sample reflects the entire population (Kolawole & Sekumade, 2017).

$H3_0$ ($\rho = 0$): There are no significant correlations between preferred learning styles and perceptions of service quality in the Café and souvenirs (N=21).

$H3_a$: ($\rho \neq 0$): There are significant correlations between preferred learning styles and perceptions of service quality in the Café and souvenirs (N=21). Moreover, significant linear regression exists between variables in the population.

Statistical data of Pearson correlation coefficient in SPSS indicates the significant level *p* =.031 (*p*-value <.05) of a couple of variables SY_KA1 and RE_KA1. It is confident to continues examining the regression linear in the Café and souvenirs. The regression linear of one independent variable (SY_KA1) and one dependent variable (RE_KA1) is defined as simple regression linear that concerns two-dimensional sample points. Analysis of Variance (ANOVA) displays Sig. of F-test value .031 (sig. <.05). It is evident that over 95% probability of rejecting the null hypothesis. Putting in the other way, 95% probability of the result reflects the characteristics of the whole population. Statistical data (Table 9) illustrates Adjusted *R* square 18,1%, it means that the model of SY_KA1 explained 18.1% of the variance in RE_KA1. The multiple correlation coefficient approaches *R* = -.472, it can be commented that the correlation coefficient shows a moderate negative correlation between SY_KA1 and RE_KA1 (J Cohen, 1988). Additionally, unstandardized beta (B = -.256*)* depicts amount of change in the dependent variable (RE_KA1) due to the change of independent variable (SY_KA1). The equation is initiated in the form of RE_KA1 = -.256 * SY_KA1.

Hypothesis H4

The hypothesis testing starts with the establishing null hypothesis $H4_0$ and alternative hypothesis $H4_a$.

$H4_0$ ($\rho = 0$): There are no significant correlations between preferred learning styles and perceptions of service quality in the Ice Bear exhibition activity (N=18).

$H4_a$ ($\rho \neq 0$): There are significant correlations between preferred learning styles and perceptions of service quality in the Ice Bear exhibition activity (N=18). Moreover, significant linear regression exists between variables in the population.

Statistical data of Pearson correlation coefficient in SPSS (Table 8) illustrates significant value *p* <.01 and *p* <.05 of 3 correlations between Preferred learning styles and perceptions of service quality. These correlations consist of MU_BJ2 and RE_BJ2 (*p* <.05, *R* =.574), MU_BJ3 and RE_BJ2 (*p* <.05, *R* =.523), LI3_BJ3 and CM_BJ4 (*p* <.05, *R* =.591). An observation at the table reveals that *R*-values of 3 correlations expose the strength from moderate to strong positive relationships between variables (J Cohen, 1988).

Scale	1	2	3	4	5
1. MU_BJ2	-	.783**	.295	.574*	.376
2. MU_BJ3		-	.172	.523*	.179
3. LI_BJ3			-	.281	.491*
4. RE_BJ2				-	.572*
5. CM_BJ4					-

**P<.01 (2-tailed);
* p<.05 (2-tailed)

Note: BJ = the Ice Bear exhibition, MU = The musical learner, LI = The Linguistic Learner, RE = Responsiveness; CM = Communication.

Table 8: Pearson Product- Moment Correlations between preferred learning styles and perception of service quality in the Experience the Ice Bear exhibition

With all the confident level greater than 95%, the hypothesis testing will continue to analyze regression linear. It can be seen that there are 2 scrutinized linear regressions including one multiple linear regression of two independent variable (MU_BJ2, MU_BJ3) and one dependent variable (RE_BJ2), and one simple linear regression of one independent variable (LI_BJ3) and one dependent variable (CM_BJ4).

The first linear regression carried on is a multiple regression between two independent variables of Preferred learning styles (MU_BJ2 and MU_BJ3) and one dependent variable of perceptions of service quality (RE_BJ2). However, the multiple regression encounters multicollinearity between two independent variables of MU_BJ2 and MU_BJ3 when the *R*-value is relatively high $R = .783$ (Ng, 2013) with the confidence level 99% ($p < .01$). The correlation model encounters the problem of multicollinearity signals that there are considerable overlaps among the indicators such that some of them are redundant. Looking at the coefficients table (Table3, Appendix C), VIF values of two independent variables are equal, the authors decide to practice the mean center of variables to reduce multicollinearity (Iacobucci, Schneider, Popovich, & Bakamitsos, 2016). After applying the mean center of two variables, it is highlighted that significant value decreases from .042 to .012. Also, with the sig. of F-test <.05, it has failed to reject the null hypothesis. Statistical data illustrates Adjusted R square 29.3%, it means that the model of MU_BJ23 explained 29.3% of the variance in RE_BJ2. The multiple correlation coefficient approaches $R = .578$, it shows that the correlation coefficient has a strong positive correlation between MU_BJ23 and RE_BJ2 (J Cohen, 1988) (Table..). The equation is initiated in the form of RE_BJ2 = .663 * MU_BJ2 with B = .663.

The last regression linear in the Ice Bear exhibition activity is defined as simple regression linear that concerns two-dimensional sample points with one independent variable (LI_BJ3) and one dependent variable (CM_BJ3). Statistical data portraits that the significant value of F-test is less than .05 (sig. = .039), Adjusted *R* square 19,3%, and the multiple correlation coefficient $R = .491$ which shows a moderate positive correlation between variable (J Cohen, 1988). It is evident that sig. above 95% probability of the result of significant correlation

coefficient between variables reflects the characteristics of the whole population. The unstandardized coefficients B is used to form the linear equation CM_BJ1 = .318*LI_MK3.

Activity	Linear regression	Coefficent (*R*)	Adjusted *R* square	Sig.	Hypothesis
Experience the farm life at Kolbeinstveit.	MU_MK2, LI_MK3 -> CM_MK4	.515*	.195	.039	H2: supported
	MU_MK3, LI_MK3 -> CM_MK2	.649**	.367	.003	H2: supported
	LI_MK3 -> RE_MK1	.477*	.193	.018	H2: supported
Café and souvenirs	SY_KA1-> RE_KA1	-.472*	.181	.031	H3: supported
the Ice Bear exhibition	MU_BJ23-> RE_BJ2	.578*	.293	.012	H4: supported
	LI_BJ3-> CM_BJ4	.491*	.193	.039	H4: supported

**p<.01(2-tailed), *p<.05 (2-tailed)

Note: MK = Experience the farm life at Kolbeinstveit, KA = Café and souvenirs, BJ = the Ice Bear exhibition, MU = The musical learner, LI = The Linguistic Learner, RE = Responsiveness; CM = Communication.

Table 9: Hypothesis testing result

Activity	Independent variables	Dependent variables	B	Sig.	Contribution
Experience the farm life at Kolbeinstveit	LI_MK3	CM_MK2	.587**	.009	Contributed
	LI_MK3	RE_MK1	.443*	.018	Contributed
Café and souvenirs	SY_KA1	RE_KA1	-.256*	.031	Contributed
The Ice Bear exhibition	MU_BJ23	RE_BJ2	.663*	.012	Contributed
	LI_BJ3	CM_BJ4	.318*	.039	Contributed

**p<.01(2-tailed), *p<.05 (2-tailed)

Note: MK = Experience the farm life at Kolbeinstveit, KA = Café and souvenirs, BJ = the Ice Bear exhibition, MU = The musical learner, LI = The Linguistic Learner, RE = Responsiveness; CM = Communication. B = Unstandardized coefficients B.

Table 10: Result of regression analysis for variables contribution

4.5. Other Results

The project expands discovering the relationship of loyalty and perceptions of service quality in the four activities by applying Bivariate Correlation Analysis with Pearson correlation coefficient (*R*) and linear regression in SPSS in the order of correlation first and if *R* is statistically significant, then regression analysis can be used to determine the relationship between the variables (Simon & Goes, 2011).

Regarding Folk Music on Friday activity, the table shows that the level of statistical significance (Sig.) of REC and CM_FO1, CM_FO2 in the order of .043 (Sig. <.05) and .006 (Sig. <.01), then, with the confidence greater than 95%, the study understands that the strength

of correlation of these variables with Pearson correlation *R* of .529 and .669 is large (JW Cohen, 1988) and in positive direction. It is a sound foundation to examine comprehensively the bonding in the upper level of regression - the study of dependence (Weisberg, 2005).

To explore the relationship between REC and CM_FO1, CM_FO2, the project defines that REC as a dependent variable and the two others as independent or predictor ones in the model. As a result, the value of Adjusted *R* square hereby .421 which means that the model of CM_FO1 and CM_FO2 explained 42.1 percent of the variance in REC. Moreover, the Sig. of F-test value in ANOVA analysis is .015 < .05 (Pallant, 2013) which indicates that the model as a whole is significant. Finally, the project could construct a regression equation for the relation based on unstandardized coefficient value. However, the Sig. of CM_FO1 is .269 > .05 then the equation is only formed as REC = .431 * CM_FO2.

In the direction of Experience the farm life at Kolbeinstveit activity, the study recognizes relationships of REC and all perceptions of service quality variables, including RE_MK1, RE_MK2, RE_MK3, CM_MK2, CM_MK3, CM_MK4, CS_MK1. Based on the value of Sig. (2-tailed) of these all pairs < .05, or even three pairs (REC and CM_MK2; REC and CM_MK4; REC and CS_MK1) < .01, the study can be confident over than 95% that these pairs have a strength of correlation from medium to large with *R* in the range of .429 to .643 (Pallant, 2013). It creates a sound groundwork for multiple regression to explore the intensive relationship among them.

However, the project discovers multicollinearity between several couples of independent variables of RE_MK1 and RE_MK2 (*R* = .707), RE_MK1 and CM_MK3 (*R* = .710), RE_MK1 and CS_MK1 (*R* = .756), RE_MK2 and CS_MK1 (*R* = .732) when all *R*-values are > .7 (Ng, 2013) with the confidence level 99% thanks to Sig. (2-tailed) < .01. With Tolerance value is lowest at .226 and variance inflation factors (VIF) value (4.424) exceeds 4.0 (J. Hair, Anderson, et al., 2010), the study decides to eliminate RE_MK1 and reperform the multiple regression analysis based on all selected indicators. Consequently, the model of RE_MK2, RE_MK3, CM_MK2, CM_MK3, CM_MK4, CS_MK1 illustrates 32.7 per cent of the variance in REC. The model is significant statistically to the population because the Sig. of F-test value is .041 < .05 (Pallant, 2013). These values have remarkably improved in comparison with the results before excluding RE_MK1 when Sig. value is .053. However, none of Sig. value of these variables is less than .05 which means none of them makes a significant unique contribution to the prediction of the dependent variable (Pallant, 2013), then the regression equation is insufficient to initiate.

Pursuing the progress with Café and souvenirs activity, the analysis on SPSS discovers that there are correlations in two groups, including REV & TA_KA2, TA_KA4 and REC & TA_KA2, TA_KA3, RE_KA2. All Sig. (2-tailed) values are < .05 and even that of REC and TA_KA2 (.006), TA_KA3 (.001) < .01. Then, the research is confident over 95% that these pairs have the strength of correlation from medium to large (Pallant, 2013) in the range of *R* from .464 to .687 and in the positive direction. And it is necessary to implement regression examination where each independent variable is evaluated in terms of its predictive power, over and above that offered by all the other independent variables (Pallant, 2013).

Respect to the regression of REV and TA_KA2, TA_KA4, the project notices that the two independent variables TA_KA2 and TA_KA4 contributes to 21.5 per cent of the explanation in the variance of REV. Furthermore, the model has statistical significance to the population when the Sig. of F-test value is .05. However, the Sig. of each independent variable > .05 then it is impossible to build a regression equation to demonstrate for the relationship.

Moving forward to the multiple regression of REC and TA_KA2, TA_KA3, RE_KA2, it is obvious that the three independent variables TA_KA2, TA_KA3, RE_KA2 explain a remarkable 52.9 per cent in the variance of REC thanks to the Adjusted R square .529. Among those, TA_KA3 is the sole variable owning Sig. (.045) < .05 and contributes to .425 in the difference of REC when comparing their standardized coefficients Beta.

Finally, the project has a review on the relationship of loyalty and perception of service quality in The Ice Bear exhibition. Nonetheless, none of pair of variables is recorded to have significant link because the Sig. (2-tailed) values are much higher than .05.

Activity	Independent variable	Dependent variable	Coefficent (R)	Adjusted R^2	Sig. (ANOVA)	B	β	Sig.
Folk music on Friday	CM_FO1	REC	.529*	.421	.015	.082	.269	.269
	CM_FO2		.669**			.431	.540	.038
Experience the farm life at Kolbeinstveit	RE_MK2	REC	.429*	.327	.041			.488
	RE_MK3		.461*					.786
	CM_MK2		.529**					.631
	CM_MK3		.431*					.714
	CM_MK4		.643**					.072
	CS_MK1		.546**					.517
Café and souvenirs	TA_KA2	REV	.519*	.215	.050			.300
	TA_KA4		.500*					.423
	TA_KA2	REC	.576**	.529	.001		.294	.137
	TA_KA3		.687**				.425	.045
	RE_KA2		.464*				.298	.084

**p<.01 (2-tailed), *p<.05 (2-tailed)

Note: MK = Experience the farm life at Kolbeinstveit, KA = Café and souvenirs, BJ = the Ice Bear exhibition, MU = The musical learner, LI = The Linguistic Learner, RE = Responsiveness; CM = Communication.

Table 11: Correlation and Regression result of the extend analysis

Chapter 5. Discussion

5.1 Overall reliability and validity

Overall, reliability and validity have been considered both important factors of the psychological studies since they allow researchers to obtain firm and accurate results from the phenomenon. More so, they support the authors to generalize the findings to a wider population and, sequentially, apply research results to the world to improve aspects of people's lives.

In this study, before starting data analysis, the constructed model was subjected to a validation process. As a set of Likert scale survey questionnaire that forms a scale and is examined if the scale is reliable, Cronbach's alpha coefficient is assessed as an applicable instrument that measures scale reliability and internal consistency of the collected data (Croasmun & Ostrom, 2011). It is more appropriate and significant in psychological research because research involving humans and the use of humans generally leads to inconsistency of results caused by environmental changes, emotional fluctuation, and health conditions. With a general accepted Cronbach's alpha value 0.6 that is indicated the acceptable level reliability in the research (George & Mallery, 2003). The authors have tried to increase the power of Cronbach's alpha coefficient between different items by eliminating the items with a lower correlation.

Furthermore, many variables are difficult to study in psychological research, such as hypothetical constructs as they cannot be directly observed or measured. Especially, questions related to measuring multiple intelligence and perception are tough to achieve validity. In this paper, the scholars strive to gain high validity to achieve valid conclusions from studies. The results of the paper must be valid to be accurately applied and interpreted. Construct validity in this paper was closely determined with the help of Exploratory Factor Analysis that that is used to reduce data to a smaller set of summary variables and to explore the fundamental theoretical structure of the phenomenon (J. Hair, Black, et al., 2010). The overall constructed model results with an acceptable data fit, however; the limitations of the data are inevitable, and it continues to be discussed in the limitation section.

5.2. Findings

ElDamshiry and Khalil (2018) addressed that visitor participation and satisfaction are significantly dependent and relevant to their learning experience, discovery, involvement, and motivation of learning behaviour in museums. The aim of the study is to answer the research question "*How is the relationship between Suldal visitors' preferred learning styles and their perceptions of service quality in Ryfylke Museum?".* Then, it is apparent that there are

relationships between learning styles and perceptions of service quality and perceptions of service quality and loyalty as well in the museum. However, the pair factors and their bonding strength are distinctive among four activities.

Respecting the Folk Music on Friday activity, people who have ever participated in seem to describe themselves as the Linguistic learners with the characteristic “memorize best things by saying, hearing or seeing words” and expose their best evaluation in Communication skills of the performance introducer and their modest satisfaction in directional signs of the concert. However, none of the relationships between these factors or others are recorded. Instead, the two Communication evaluations in the perceptions of service quality account for 42.1% of the Recommendation reason which achieved the remarkable agreement in loyalty score. It is not the quality of the collection which is the main factor for potential visitors when deciding to visit a museum or gallery, it is much more the environment as a whole and the interaction with the collection that proves to be the key factor. It is very much about offering opportunities for engagement (Waltl, 2006).

Looking at the Experience the farm life at Kolbeinstveit activity, it is noticeable that learning styles have a significant impact on perceptions of service quality. The Linguistic style and the Musical style perform strong relationship with Communication and Responsiveness in the positive way. Especially, the Linguistic learner with tendency “feel easy to learn new words” has critical influence on the factor “Overall, physical display of the interpretation/ exhibits (size of signs, layout of design, brightness of light)” which receives the least alliance from visitors. Moreover, the factor also plays a momentous role in the evaluation of staff (the hosts and guides) respond to visitors’ requests which also needs improvement.

Extending attention on loyalty estimation in the Experience the farm life at Kolbeinstveit activity, the relationship among learning style, perceptions of service quality and loyalty is observed. It is interesting that people who have enjoyed the activity agree at least with the Musical style when asking if they learn best by rhythm, melody, and music. Yet, it is the style and certainly, the Linguistic style as well make a meaningful effect on the assessment of Communication, particularly exhibit descriptions. Then its turn, the factor has impression on Recommendation which gains the uppermost agreement in loyalty maneuvers. Again, the Communication plays an incredible role in the visitors’ decision since they are willing to recommend the activity to others.

The link between learning styles and perceptions of service quality is further acknowledged in the Café and souvenirs activity. The Solitary style portrayed by “enjoy

working alone, pursuing your own interests" strikes to the judgement of "Staff responds to visitors' requests" under Responsiveness criteria in the medium level and negative direction. It means the more people like to work alone, the less they appreciate the speed of staff responsiveness. Although the learning style tends to be molecular among participants in the activity, it still requests Ryfylke museum a serious consideration in its assessment for service quality.

In regard to loyalty appraisal of the activity, the willingness to revisit and recommend share the peak on consensus ratio when visitors rely mostly on Tangibles including the facilities, the light and sound, the atmosphere of the shop. Still, the evaluation for Responsiveness perception "Staff is willing to spend time conversing with the visitors" has the smallest value whereas it contributes partly to the Recommendation decision of the participants. It is such a complicated task for the museum to balance between privacy respect and interaction. Indeed, Responsiveness is the process of transforming museum visitors to the participants is to ensure that their visit is enjoyable and museum programs provide opportunities for social interaction, soft supports, with no involvement of pressure to encourage people to revisit the museum (Black, 2012).

The Ice Bear exhibition recognizes the tie between learning styles and perceptions of service quality but none with loyalty. Once again, the Musical and the Linguistic learners both impact on evaluation of service quality, in which the learner "easy and best to learn new songs and melodies" has significant impression on assessment of how professional the interpreters are; and the learner "easy to learn new words" plays an critical role on judgement of how understandable the exhibit descriptions are.

In a nutshell, there are four key factors which devote their imperative positions in the museum programs and activities. From learning styles aspect, the Linguistic learner who adores reading, writing and telling stories, debating, reading aloud, drama and creative writing (Gardner, 2011). Whereas, in the perceptions of service quality, it is contributed by two elements. Detailly, Communication which describes the quality and detail of the historical and cultural information provided and Responsiveness which highlights the significance of the staff efficiency, the staff response and the properties' ability to recognize customer needs (Parasuraman et al., 1985). As a result, Recommendation immigrates in a natural way when the satisfied customers offer the intention of repeat visits and positive word-of-mouth to others (Harrison & Shaw, 2004; Huo & Miller, 2007).

5.3. Limitation

As for any research project, the empirical results reported herein should be considered in the light of some limitations. Recognizing and addressing the limitations and weaknesses is an opportunity for researchers to make suggestions for further research.

Regarding methodological limitations, the significant drawback that impacts on the reliability and validity of the whole research is a small sample size. A lack of probability sampling majorly effects on identifying significant relationships from the data. According to Faber and Fonseca (2014), the higher sample size allows the author to boost the significance level of the findings because the significant level of the result is likely to increase with higher sample size. This is to be expected since the larger the sample size is, the more accurately it is expected to mirror the behavior of the whole group. Therefore, with the desire to reject the null hypotheses, the sample size is at least equal to the sample size needed for the statistical significance chosen and expected effects. In other words, insufficient sample size is difficult to accurately represent the entire population being studied. The two main obstacles that affect decreasing sample size consist of the difficulty of approaching participants and language constraints.

Accounting for the limitation of lack of available data, the difficulties to access research data should be taken consideration. An online survey questionnaire was used to gather data collection; however, the achieved number of respondents could not reach the expected sample size (400 qualified answers). During the time of running the project, the coronavirus pandemic has been considered as the biggest obstacle in collecting responses. Contingency plans that need face-to-face contact with Suldal people at public places such as supermarkets and associations as well as visitors at the museum had to be canceled. Additionally, some participants who have lived permanently in Suldal but have never been Ryfylke Museum had no chance to visit the museum during that time to fulfill the questionnaire. Furthermore, psychological fear and panic for people who were in social distance and quarantine were likely to lead to sample size decrease. It was explained that in the period from 12th March till 20th April 2020 when the survey carried out, the coronavirus outbreak peak happened all around the world in general, and in Norway in particular. It seemed to cause respondents to have no interest in doing unrelated stuff.

One more reason that effects in decreasing sample size are language constraints. The targeted participants were Norwegian, survey questionnaire, therefore, must be established in the Norwegian language. However, the authors' Norwegian language is limited, and the survey

must be translated from English to Norwegian by Norwegian students. Although the questionnaire was translated by two Norwegian students and one museum staff who are native, the confusion in language was inevitable. More so, after completing the interpretation of the findings, the result illustrated that 214 uncomplete answers were excluded. The authors discovered that the measure used to collect the data inhibited the ability to optimize the number of respondents. It was explained that a long survey with many rather academic questions was likely to make participants get tired and surrender their participation.

Another methodological limitation that should be mentioned is pilot testing. Pilot testing is deemed as the stage in survey measurement when the survey questionnaire is tested on participants of the target population, to assess the reliability and validity of the survey instruments prior to their final distribution (Van Teijlingen & Hundley, 2001). Pilot testing is to test the research design and improve data collection for quality-of-life research. Although the pilot test was implemented, the author seemed to disregard the step of testing the reliability and validity of the survey questionnaire in the pilot test. This led to the late detection in problematic research design such as some variables that should be deleted, and some variables that should be added more questions. Consequently, many unreliable and invalid variables were eliminated in the research.

One limitation comes from the over-evaluation of the authors when covering too wide study in a too-small sample size. Be in detail, difficulties in gathering empirical data were unpredictable; therefore, it led to measurement design incompatible with the sample size. Subsequently, the authors could not employ an effective instrument such as Structural Equation Modeling (SEM) that is evaluated as an effective statistical technique used to measure and analyze the complex relationships of variables as the originally intended plan. Furthermore, the right assessment of the research scale is considered important in constructing a measurement model.

Chapter 6. Conclusion

6.1. Implications for further research

The theoretical implications of this dissertation to the literature have contributed to local museum and museum visitor experience insights. This research provides readers with understanding visitors' preferred learning styles and perceptions of service quality in the scope of Rylfyke Museum, and additional research on their visitors' loyalty. The result of this study may also have some practical implications for partly supporting the development of the museum. In other words, it attracts the attention of museum operators about their visitors' needs and what they are satisfied with.

This result of the study demonstrates that it is possible to generate a more complete theoretical model of the correlation between preferred learning styles and perceptions of service quality in the context of the local museum. The analysis indicates that empirical evidence can gain insight into the nature of the conceptions. The result, however, was preliminary and cannot be generalized easily in a very small sample size. One of the major implications of this study is that the initial research model can serve as a foundational framework for further research in different settings with a wider scope.

As for the methodological implication, the result of the current research can be employed to develop the survey questionnaire items for additional research. However, some defections should be improved in the survey to maximize the number of qualified answers. The wording of the questionnaire items could be phrased in practical and simple language consistent with many different research subjects. Additionally, as for the limited scale of the study, the model should be more narrowed down; for example, from four activities to two or one activity and focused on increasing sample size by improving the survey questionnaire. The number of questions concentrated in one or two questions should be increased. It helps to avoid the frustration of respondents while answering the questions; simultaneously, enhance the reliability and validity of measurement in the paper.

6.2. Recommendation for Ryfylke museum management

Sharing dilemma with other museums, Ryfylke seems to have no longer attracted local inhabitants and been becoming an old-style attraction because of the ever-changing attitudes and notions of visitors nowadays. Let's face it: museums without visitors would be like lifeless, empty halls with no purpose. This should remind us that the key role of museums is always to serve its visitors (Waltl, 2006). Following several humble findings, the research would like to propose some suggestions in the marketing–related question of how to retain the current and

attract the potential visitors to the museum. The proposals are divided into two levels, including Marketing strategy and Marketing tactics detailly in the four specific activities of the museum.

At strategic level, it could not be ignorable what Kotler and Kotler (2000) advised in their study which applied thoroughly marketing fundamental theory in the museum context. In addition to, Waltl (2006) introduced Audience Development strategy which target to develop an audience-focused museum where a dynamic relationship between the program activities and the audience. Knowing your audience is key to identify different needs but also to develop niche markets and convince more visitors to become regular museum goers. Appendix D demonstrates these unique marketing theories that Ryfylke museum could take serious consideration. It is regret that due to limitation of time and provided information, the study could not execute specific strategic recommendation for the museum. Then, the researchers would like to propose to develop a different project specialized in marketing perspectives to possibly create a dramatic change in the way doing business of the museum.

In the direction of tactics level, the research would like to recommend how to retain the existing customers and recruit the new ones specifically in four activities. The implications are based on the audience's evaluation of the museum's service quality and the tendency of learning styles in the individual activity. Still, the researchers insisted that Ryfylke museum should prioritize to preserve the current visitors, especially the regular and member since attracting return visitors is more cost-effective than obtaining profits from the new ones (Jang & Feng, 2007).

According to the survey result of Folk Music on Friday activity, the navigation capability of directional signs for the concert needs an improvement owing to the lowest agreement of the audience assessment. As a result, it is believed that the instant audience will be more willing to refer the activity to others. Besides the main Linguistic learning styles, the customers also express the tendency of the Visual style who remember pictures better than texts and the Logical style who enjoy doing experiments, asking questions, exploring patterns and relationships. Thus, it could consider designing the activity with more desirable visualization and enhance the interaction between audiences and performers, then the audiences can perceive an engagement with the performance. Consequently, these styles could participate the activity regularly and suggest it for their network.

Next is the Experience the farm life at Kolbeinstveit, in order to increase the satisfaction of the present customers, it is possible to upgrade the overall, physical display of the interpretation/ exhibits (size of signs, layout of design, brightness of light) as well-provided

and understandable as exhibit descriptions. To expand further customer segmentation, the museum could examine the Musical learners with characteristic of “learn best by rhythm, melody and music” and the Solitary learners who enjoy working alone, pursuing their own interests. Thus so, the museum might be possible to create some performances with adequate content. For example, the folk music or the musical instruments of the ancient farmers, the farm life sounds and furthermore. However, there are still quiet spaces for those who just want to stay their own worlds and cherry the peace and relaxation of the farm. It could be some ways to attract new kinds of customer to come and discover the activity.

Respecting Café and souvenirs activity, Ryfylke museum should pay attention to the light and sound of the atmosphere and the staff’s willingness in conversing with the visitors if it would like to enrich the experience of the ongoing customers. With the cozy space like now, the visitors possibly expect a home-like environment from the physical decoration to the human connection. Yet, the customer’s needs are always diversified then to magnetize new customers, the museum might create some “me to myself” zones for the Solitary style who compiles the privacy.

The children-oriented activity named the Ice Bear exhibition could need a change in interpreters since it owns a moderate satisfaction from participants. The museum should consider applying various methods consisting of guided walks, talks, drama, staffed stations, displays, signs, labels, artwork, brochures, interactives, audio-guides, and audio-visual media or even some state-of-art technology like virtual reality (VR) or augmented reality (AR). Effective interpretation enables visitors to make connections between the given information and visitor experience and knowledge (Wearing et al., 2008). Possibly, the museum sets a priority for the activity due to one happy child can bring at least one adult (father or mother) or even an extended family to immerse the activity. It could be an interesting idea to design the exhibition as a community place to organize some memorable events for children like birthday party, farewell party and so on. It is undeniable that Ryfylke museum will have chance to welcome numerous customers in various aging groups and different requirements.

Last but not least, the museum should upgrade its membership program since “become a member” is still a reluctance to the present visitors whereas member is not only the regular customers but also the natural salesperson in the method of word of mouth.

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APPENDIX A

RELIABILITY AND VALIDITY

Activity	Constructs	Variables	Lable	Number of items	Cronbach's Alpha
Folk Music on Friday	*Preferred learning styles*	The Kinesthetic Learner	KI_FO	3	.135
	Perception of service quality	Responsiveness	RE_FO	3	-.718
		Empathy	EM_FO	2	-.672
Experience the farm life at Kolbeinstveit	*Preferred learning styles*	The Logical/Mathematical Learner	LO_MK	3	.433
		The Kinesthetic Learner	KI_MK	3	-.11
	Perception of service quality	Tangibles	TA_MK	3	.288
		Empathy	EM_MK	3	.213
Café and souvenirs	*Preferred learning styles*	The Logical/Mathematical Learner	LO_KA	3	.397
		The Kinesthetic Learner	KI_KA	3	-.35
	Perception of service quality	Consumables	CS_KA	3	.587
Ice Bear exhibition	*Preferred learning styles*	The Kinesthetic Learner	KI_BJ	3	-.243
		The Social/Interpersonal Learner	SO_BJ	3	.695
	Perception of service quality	Tangibles	TA_BJ	3	-.039
		Empathy	EM_BJ	3	-.34

Note: LO = The logical/mathematical learner, KI = The kinesthetic learner, SO = The Social/Interpersonal Learner, FO = Folk Music on Friday, MK = Experience the farm life at Kolbeinstveit; KA = Café and souvenirs, BJ= The Ice Bear exhibition, TA = Tangibles; RE = Responsiveness; EM = Empathy.

Table: The unqualified Cronbach alpha variables

APPENDIX B
DESCRIPTIVE STATISTICS

Variable	Label	N	Minimum	Maximum	Mean	Standard Deviation
You enjoy singing, humming, listening to music and playing instruments.	MU_MK1	24	1	7	4.46	2.303
You learn best by rhythm, melody and music.	MU_MK2	24	1	7	3.58	1.909
You easily learn new songs and melodies.	MU_MK3	24	1	7	3.92	2.205
You enjoy working alone, pursuing your own interests.	SY_MK1	24	1	7	4.71	1.805
You learn best by self-learning, reflecting or individual projects.	SY_MK2	24	1	7	4.25	1.359
You prefer doing things by yourself rather than working in group.	SY_MK3	24	1	7	4.67	1.659
You memorize best things by saying, hearing or seeing words.	LI_MK2	24	4	7	5.67	1.129
You feel easy to learn new words.	LI-MK3	24	2	7	4.50	1.383
Staff (the hosts and guides) respond to visitors' requests promptly.	RE_MK1	24	3	7	5.79	1.285
Staff (the hosts and guides) are willing to spend time in helping visitors.	RE_MK2	24	3	7	5.92	1.176
Staff (the hosts and guides) are friendly and warm-welcome	RE_MK3	24	4	7	6.54	.779
Overall, physical display of the interpretation/ exhibits (size of signs, layout of design, brightness of light) is well provided	CM_MK2	24	2	7	5.29	1.459
The guides have good communication skills (e.g., clarity, fluency, interaction with audience, time control, etc)	CM_MK3	24	3	7	5.42	1.100
Exhibit Descriptions are understandable	CM_MK4	24	4	7	5.71	1.083
The meals are good	CS_MK1	24	2	7	5.62	1.527

Note: MK = Experience the farm life at Kolbeinstveit; MU = the Musical learner; SY = the Solitary learner; LI = the Linguistic learner; RE = Responsiveness; CM = Communication; CS = Consumable

Table 1: The Description of learning styles and perceptions of service quality variables of Experience the farm life at Kolbeinstveit

Variable	Label	N	Minimum	Maximum	Mean	Standard Deviation
I will revisit the museum	REV	23	4	7	6.57	.843
I will recommend the museum to others	REC	24	5	7	6.62	.711
I will become a member	MEM	23	1	7	4.13	1.842
I will renew my member card (if any)	REN	23	1	7	4.35	1.898

Table 2: The Description of Loyalty at Experience the farm life at Kolbeinstveit

Variable	Label	N	Minimum	Maximum	Mean	Standard Deviation
You enjoy singing, humming, listening to music and playing instruments.	MU_KA1	21	1	7	5.33	1.880
You learn best by rhythm, melody and music.	MU_KA2	21	1	7	4.43	1.912
You easily learn new songs and melodies.	MU_KA3	21	1	7	4.76	2.119
You enjoy working alone, pursuing your own interests.	SY_KA1	21	1	7	4.19	1.662
You learn best by self-learning, reflecting or individual projects.	SY_KA2	21	1	6	4.24	1.221
You prefer doing things by yourself rather than working in group.	SY_KA3	21	1	7	4.43	1.469
You like to read, write or tell stories in your leisure time.	LI_KA1	21	3	7	5.71	1.384
You memorize best things by saying, hearing or seeing words.	LI_KA2	21	4	7	5.62	1.203
You feel easy to learn new words.	LI_KA3	21	3	7	4.71	1.309
The facilities are well decorated	TA_KA2	21	5	7	6.57	.598
The light and sound are adequate	TA_KA3	21	2	7	6.24	1.179
The atmosphere is cozy	TA_KA4	21	5	7	6.76	.539
Staff responds to visitors' requests promptly	RE_KA1	21	4	7	6.29	.902
Staff is willing to spend time conversing with the visitors	RE_KA2	21	4	7	5.86	1.195
Staff is friendly	RE_KA3	21	3	7	6.00	1.304
The level of noise is acceptable	EM_KA1	21	4	7	6.05	1.161

The facilities for children are sufficient	EM_KA3	21	4	7	5.90	1.044
Directional signs in the Café and souvenirs make them easy to navigate	CM_KA1	21	2	7	6.05	1.499

Note: KA = Café and souvenirs; MU = the Musical learner; SY = the Solitary learner; LI = the Linguistic learner; TA = Tangibles; RE = Responsiveness; EM = Empathy; CM = Communication.

Table 3: The Description of learning styles and perceptions of service quality variables at Café and souvenirs

Variable	Label	N	Minimum	Maximum	Mean	Standard Deviation
I will revisit the museum	REV	20	4	7	6.65	.813
I will recommend the museum to others	REC	21	5	7	6.71	.644
I will become a member	MEM	20	1	7	4.00	1.654
I will renew my member card (if any)	REN	20	1	7	4.45	1.468

Table 4: The Description of loyalty at Café and souvenirs

Variable	Label	N	Minimum	Maximum	Mean	Standard Deviation
You enjoy singing, humming, listening to music and playing instruments.	MU_BJ1	18	2	7	5.67	1.645
You learn best by rhythm, melody and music.	MU_BJ2	18	2	7	4.72	1.526
You easily learn new songs and melodies.	MU_BJ3	18	2	7	5.28	1.841
You are interested in activities relevant to visual style including sketching, graphing, creating charts and mapping out stories.	VI_BJ3	18	1	7	4.94	1.830
You enjoy working alone, pursuing your own interests.	SY_BJ1	18	1	7	4.17	1.886
You learn best by self-learning, reflecting or individual projects.	SY_BJ2	18	1	6	3.89	1.568
You prefer doing things by yourself rather than working in group.	SY_BJ3	18	1	7	4.39	1.577

You like to read, write or tell stories in your leisure time.	LI_BJ1	18	1	7	5.67	1.680
You feel easy to learn new words.	LI_BJ3	18	2	7	4.67	1.609
Staff respond to visitors' requests promptly	RE_BJ1	18	3	7	5.67	1.372
Interpreters are professional (e.g., accessible, knowledgeable of the subjects)	RE_BJ2	18	1	7	4.83	1.823
Staff is willing to spend time in helping visitors	RE_BJ3	18	2	7	5.06	1.589
Staff is friendly	RE_BJ4	18	3	7	6.28	1.179
Interpreters have good communication skills (e.g., clarity, fluency, interaction with audience, time control, etc)	CM_BJ3	18	3	7	5.17	1.383
Exhibit Descriptions are understandable	CM_BJ4	18	4	7	5.83	1.043

Note: BJ = The Ice Bear exhibition; MU = the Musical learner; VI = the Visual learner; SY = the Solitary learner; LI = the Linguistic learner; RE = Responsiveness; CM = Communication.

Table 5: The Description of learning styles and perceptions of service quality variables at The Ice Bear exhibition

Variable	**Label**	**N**	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
I will revisit the museum	REV	17	4	7	6.47	.943
I will recommend the museum to others	REC	18	5	7	6.67	.594
I will become a member	MEM	18	1	7	3.72	1.638
I will renew my member card (if any)	REN	18	1	7	3.83	1.618

Table 6: The Description of loyalty at The Ice Bear exhibition

APPENDIX C

HYPOTHESIS TESTING

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4,162	0,709		5,870	0,000		
	MU_MK3	0,187	0,184	0,380	1,012	0,324	0,248	4,040
	MU_MK2	0,019	0,201	0,033	0,095	0,926	0,279	3,583
	LI_MK3	0,166	0,171	0,212	0,972	0,343	0,735	1,361

a. Dependent Variable: CM_MK4

Note: MK = Experience the farm life at Kolbeinstveit; MU = the Musical leaner; LI = the Liguistic learner; CM = Communication.

Table 1: The Coefficient of CM_MK4 and MU_MK2, MU_MK3, LI_MK3

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4,036	0,698		5,779	0,000		
	LI_MK3	0,225	0,161	0,287	1,399	0,176	0,831	1,204
	MU_MK2	0,184	0,116	0,325	1,585	0,128	0,831	1,204
a. Dependent Variable: CM_MK4								

Note: MK = Experience the farm life at Kolbeinstveit; MU = the Musical learner; LI = the Liguistic learner; CM = Communication.

Table 2: The Coefficient of CM_MK4 and MU_MK2, LI_MK3

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,441	1,266		1,138	0,273		
	MU_BJ2	0,509	0,401	0,426	1,267	0,224	0,387	2,581
	MU_BJ3	0,188	0,333	0,190	0,564	0,581	0,387	2,581
a. Dependent Variable: RE_BJ2								

Note: BJ = The Ice Bear exhibition; MU = the Musical learner; RE = Responsiveness.

Table 3: The Coefficient of RE_BJ2 and MU_BJ2, MU_BJ3

APPENDIX D

MARKETING STRATEGY FOR MUSEUM

Items	Details
Research and analysis	Researching the environment, including: - SWOT analysis: Market opportunities and competitive threats, organizational assessment, including strengths and weaknesses. - Market and visitor analysis
Segmentation	Identifying different segments of museum audiences, consumers of other recreational activities, and non-visitor groups, and their differing needs and expectations
Targeting	Selecting segments to target for the museum audience (e.g., families with young children, educated adults, senior citizens, young professionals, tourists)
Positioning	Defining an image identity that will differentiate a museum from other comparable organizations and satisfy needs of target segments
Marketing Mix (4P)	- Product: Managing and renewing exhibits, collections, programs creating new offerings and services. - Place: Designing a comfortable museum facility as well as distributing museum offerings to schools, traveling exhibits and websites and other electronic media. - Promotion: Advertising public relations, directing marketing, sales promotion, and integrated communications to audiences, collaborators and competitors. - Price: Pricing admissions, memberships, gift shop merchandise, special events, donor acknowledgment, discounts, to attract visitors in all seasons, including off-season, and to attract under-served constituencies

Table: Marketing tools and techniques for museums (Kotler & Kotler, 2000)

Particularly in segmentation strategy, the museum could scrutinize the Audience Development strategy (Waltl, 2006) which encompasses seven sustainable goals, including (1) to refine and enhance communication with visitors; (2) to achieve an attainable and sustainable audience; (3) to turn non visitors into visitors, visitors into repeat visitors and regular museum goers into supporters; (4) to enhance access; (5) to offer multiple experiences; (6) to engage visitors (hands on & minds on); (7) to establish an active network with special target groups. It requires the museum an extraordinary effort to possess these knowledges and build up its own strategies since it is a totally different point of view for a traditional museum. Yet, it is valuable to take into account, try and learn how to customize and implement them in the real situation of the museum.

APPENDIX E

QUESTIONNAIRE

Hei. Vi er to studenter ved Norsk Hotellhøgskole, Universitetet I Stavanger. Som en del av masteroppgaven vår ønsker vi å se på forholdet mellom læremåter og besøkendes adferd i museet, spesielt de som har besøkt Ryfylkemuseet i Suldal kommune.

Spørreundersøkelsen vil ta 5-8 minutter å gjennomføre. Undersøkelsen er designet for datamaskin og de vil derfor være bedre format på pc enn på telefon. Besvarelsen er anonym og informasjonen vil kun bli brukt i forbindelse med denne oppgaven. De første 100 deltakerne som bor i Suldal kommune og sender inn sin besvarelse før 30. april 2020 vil motta en liten gave som takk for hjelpen.

Først litt generell informasjon

Hvor gammel er du?

- ☐ <18
- ☐ 18-30
- ☐ 31-50
- ☐ 51-70
- ☐ >70

Hva er ditt kjønn?

- ☐ Mann
- ☐ Kvinne
- ☐ Annet

Hvilken utdanning har du?

- ☐ Grunnskole
- ☐ Videregående opplæring
- ☐ Fagskole
- ☐ Bachelorgrad
- ☐ Mastergrad
- ☐ Doktorgrad
- ☐ Annet

Har du barn?

- ☐ Ja
- ☐ Nei

Hvor bor du?

- ☐ Suldal kommune

❑ Annet

Beklager, du ikke er i målgruppen vår. Takk for tiden din!

I den andre delen ønsker vi å utforske hvilken foretrukket type av læring du benytter deg av. Les uttalelsene nøye og velg et nummer som passer med hvordan du vil være. Det er ingen rette eller gale svar.

	1 Helt uenig	2	3	4 Hverken enig eller uenig	5	6	7 Helt enig
Du liker å eksperimentere, stille spørsmål, utforske mønster og forhold.	❑	❑	❑	❑	❑	❑	❑
Du lærer best gjennom klassifisering, ved å jobbe med abstrakte mønster og kategoriseringer av ting.	❑	❑	❑	❑	❑	❑	❑
Du er interessert i spill som krever logisk tenking for eksempel puslespill og tallspill.	❑	❑	❑	❑	❑	❑	❑
Du liker å synge og nynne, lytte til musikk og spille instrumenter.	❑	❑	❑	❑	❑	❑	❑
Du lærer best gjennom rytme, melodi og musikk.	❑	❑	❑	❑	❑	❑	❑
Du lærer enkelt nye sanger og melodier.	❑	❑	❑	❑	❑	❑	❑
Du liker å bevege deg rundt, berøre og snakke.	❑	❑	❑	❑	❑	❑	❑

	1 Helt uenig	2	3	4 Hverken enig eller uenig	5	6	7 Helt enig
Du lærer best ved å berøre, flytte ting og prossesere kunnskap gjennom handling.	❑	❑	❑	❑	❑	❑	❑
Du husker notatene dine best når du skriver de for hånd i stedet for på maskin.	❑	❑	❑	❑	❑	❑	❑
Du liker å være sammen med venner, snakke med folk og være en del av en gruppe.	❑	❑	❑	❑	❑	❑	❑
Du lærer best ved å dele, samarbeide, intervjue eller sammenligne.	❑	❑	❑	❑	❑	❑	❑
Du foretrekker sosiale aktiviteter, fremfor å gjøre dine egne ting.	❑	❑	❑	❑	❑	❑	❑
Du liker å jobbe alene og forfølge egne interesser.	❑	❑	❑	❑	❑	❑	❑
Du lære best ved selvlæring, refleksjon eller individuelle prosjekter.	❑	❑	❑	❑	❑	❑	❑

	1 Helt uenig	2	3	4 Hverken enig eller uenig	5	6	7 Helt enig
Du liker å gjøre ting selv i stedet for å jobbe i gruppe.	❑	❑	❑	❑	❑	❑	❑
Du liker å bruke bilder og farger for å visualisere eller huske ting.	❑	❑	❑	❑	❑	❑	❑
Du husker bilder bedre enn tekster.	❑	❑	❑	❑	❑	❑	❑
Du er interessert i aktiviteter som er relevante for en							

visuell stil, som skissering, lage grafer, oppretting av diagrammer og kartlegge historier.	❑	❑	❑	❑	❑	❑	❑
Du liker å lese, skrive eller fortelle historier på fritiden.	❑	❑	❑	❑	❑	❑	❑
Du husker ting best ved å si, høre eller se ord.	❑	❑	❑	❑	❑	❑	❑
Du lærer enkelt nye ord.	❑	❑	❑	❑	❑	❑	❑

De følgende aktivitetene blir for tiden gjennomført på Ryfylkemuseet. Velg hvilken aktivitet/aktiviteter du har deltatt på. Du kan velge flere enn ett alternativ.

- ❑ Folk på Fredag: En konsertserie der Folkemusikkarkivet på museet samarbeider med Kulturhuset i Suldal. På programmet står lokale musikerer og folkemusikkfavoritter fra innland og utland.
- ❑ Museumsgarden Kolbeinstveit: I sommersesongen er Kolbeinstveit i Suldal en levende museumsgård med dyr og vertskap som tar imot de besøkende. Museet tilbyr omvisninger, serverer tradisjonsmat og har skiftende utstillinger på gården. I tillegg har de ulike arrangementer som: konserter, aktivitetsdager og marked.
- ❑ Kafé og museumsbutikk: I første etasje i Nesasjøhuset (museets hovedbygning) er det en flott butikk med et godt utvalg av lokal historisk litteratur, lokale håndverksprodukter og smykker av norsk design. Det er også en fin kafé med utsikt over fjorden. Her kan du kjøpe en god kaffe og nylagde vafler med syltetøy og rømme.
- ❑ Utstillinga Kvitebjørnen: Kvitebjørnen er en utstilling rettet mot barn, og bygd på en fortelling av den lokale forfattaren Rasmus Løland. I utstillinga møter publikum en eventyrverd der de kan se, lytte, leke, lese, kle seg ut, og lage sine egne eventyrhistorier.
- ❑ Ingen av de tidligere nevnte aktivitetene

Med aktiviteten/aktivitetene du deltok på i tankene, evaluer kvaliteten på servicen levert av museet.

FOLK PÅ FREDAG

	1 Helt uenig	2	3	4 Hverken enig eller uenig	5	6	7 Helt enig
Parkeringsplass er tilgjengelig.	❑	❑	❑	❑	❑	❑	❑
Fasilitetene (scene, lyd og lyseffekter, sitteplasser for publikum, ...) er godt utstyrt.	❑	❑	❑	❑	❑	❑	❑
Konserttemaene er varierte.	❑	❑	❑	❑	❑	❑	❑
Utøverne er profesjonelle (f.eks. tilgjengelige, kunnskapsrike om temaet).	❑	❑	❑	❑	❑	❑	❑
Utøverne er villig til å bruke tid på forespørsler fra publikum.	❑	❑	❑	❑	❑	❑	❑
Utøverne er vennlige.	❑	❑	❑	❑	❑	❑	❑
Støynivået rundt er på et akseptabelt nivå.	❑	❑	❑	❑	❑	❑	❑

FOLK PÅ FREDAG

	1 Helt uenig	2	3	4 Hverken enig eller uenig	5	6	7 Helt enig
Museet ivaretar behovene til besøkende med funksjonsnedsettelser.	❑	❑	❑	❑	❑	❑	❑
Anvisningsskilt gjør det enkelt å finne frem til konserten.	❑	❑	❑	❑	❑	❑	❑
Konferansier har gode kommunikasjonsevner (f.eks. tydelighet, flyt, interaksjon med publikum, tidskontroll, osv.).	❑	❑	❑	❑	❑	❑	❑
Konferansier gjør publikum fordypet i konsertene.	❑	❑	❑	❑	❑	❑	❑
Konsertenes prising (hvis noen) er akseptabel.	❑	❑	❑	❑	❑	❑	❑

Med aktiviteten/aktivitetene du deltok på i tankene, evaluer kvaliteten på servicen levert av museet.

MUSEUMSGARDEN KOLBEINSTVEIT

	1 Helt uenig	2	3	4 Hverken enig eller uenig	5	6	7 Helt enig
Parkeringsplass er tilgjengelig.	❑	❑	❑	❑	❑	❑	❑
Utstillingene er godt vedlikeholdt.	❑	❑	❑	❑	❑	❑	❑
Utstillingstemaene er varierte.	❑	❑	❑	❑	❑	❑	❑
Ansatte (vertskapet og guider) svarer raskt på besøkendes forespørsler.	❑	❑	❑	❑	❑	❑	❑
Ansatte (vertene og guidene) bruker tid på å hjelpe besøkende.	❑	❑	❑	❑	❑	❑	❑
Ansatte (vertene og guider) er vennlige og ønsker gjestene hjertelig velkommen.	❑	❑	❑	❑	❑	❑	❑
Guidene er profesjonelle (f.eks. tilgjengelige, kunnskapsrike om fagene).	❑	❑	❑	❑	❑	❑	❑
Støynivået fra transport er akseptabelt.	❑	❑	❑	❑	❑	❑	❑

MUSEUMSGARDEN KOLBEINSTVEIT

	1 Helt uenig	2	3	4 Hverken enig eller uenig	5	6	7 Helt enig
Museet ivaretar behovene til besøkende med nedsatt funksjonsevne.	❑	❑	❑	❑	❑	❑	❑
Fasilitetene for barn er tilfredsstillende.	❑	❑	❑	❑	❑	❑	❑
Retningsskilt på gården gjør det enkelt å finne frem.	❑	❑	❑	❑	❑	❑	❑
Overordnet inntrykk av fasilitetene (feks. størrelse på skilt, utforming av design, lysstyrke» er godt tilrettelagt.	❑	❑	❑	❑	❑	❑	❑
Guidene har gode kommunikasjonsevner (f.eks. tydelig, flyt, interaksjon med publikum, tidskontroll, osv.).	❑	❑	❑	❑	❑	❑	❑
Utstillingsbeskrivelser er forståelige.	❑	❑	❑	❑	❑	❑	❑
Maten er god.	❑	❑	❑	❑	❑	❑	❑
Markedsdagene tilbyr et variert utvalg av varer.	❑	❑	❑	❑	❑	❑	❑
Markedsdagene tilbyr kvalitetsvarer.	❑	❑	❑	❑	❑	❑	❑

Med aktiviteten/aktivitetene du deltok på i tankene, evaluer kvaliteten på servicen levert av museet.

KAFÉ OG MUSEUMSBUTIKK

	1 Helt uenig	2	3	4 Hverken enig eller uenig	5	6	7 Helt enig
Parkeringsplass er tilgjengelig.	☐	☐	☐	☐	☐	☐	☐
Fasilitetene ser fine ut.	☐	☐	☐	☐	☐	☐	☐
Utforming av lys og lyd er tilfredstillende.	☐	☐	☐	☐	☐	☐	☐
Stemningen er koselig.	☐	☐	☐	☐	☐	☐	☐
Ansatte svarer raskt på forespørsler fra besøkende.	☐	☐	☐	☐	☐	☐	☐
Ansatte er villige til å bruke tid på snakke med de besøkende.	☐	☐	☐	☐	☐	☐	☐
Ansatte er vennlige og ønsker gjestene hjertelig velkommen.	☐	☐	☐	☐	☐	☐	☐
Støynivået er akseptabelt.	☐	☐	☐	☐	☐	☐	☐
Museet ivaretar behovene til besøkende med funksjonsnedsettelse.	☐	☐	☐	☐	☐	☐	☐
Fasilitetene for barn er tilfredsstillende.	☐	☐	☐	☐	☐	☐	☐
Retningsskilt til kaféen og museumsbutikken gjør det enkelt å finne frem.	☐	☐	☐	☐	☐	☐	☐
Kaféansatte gir effektiv service.	☐	☐	☐	☐	☐	☐	☐
Butikkene tilbyr forskjellige utvalg av varer.	☐	☐	☐	☐	☐	☐	☐
Butikkene tilbyr kvalitetsvarer.	☐	☐	☐	☐	☐	☐	☐

Med aktiviteten/aktivitetene du deltok på i tankene, evaluer kvaliteten på servicen levert av museet.

UTSTILLINGA KVITEBJØRNEN

	1 Helt uenig	2	3	4 Hverken enig eller uenig	5	6	7 Helt enig
Parkeringsplass er tilgjengelig.	❑	❑	❑	❑	❑	❑	❑
Teknologien er av god kvalitet.	❑	❑	❑	❑	❑	❑	❑
Utstillingsfasilitetene (bøker, kjoler, kostymer, ...) er tilfredsstillende.	❑	❑	❑	❑	❑	❑	❑
Ansatte svarer raskt på forespørsler fra besøkende.	❑	❑	❑	❑	❑	❑	❑
Vertene/guidene er profesjonelle (f.eks. tilgjengelige og kunnskapsrike om fagene).	❑	❑	❑	❑	❑	❑	❑
Ansatte er villig til å bruke tid på å hjelpe besøkende.	❑	❑	❑	❑	❑	❑	❑
Personalet er vennlig.	❑	❑	❑	❑	❑	❑	❑

Støynivået er akseptabelt.	❑	❑	❑	❑	❑	❑	❑
Museet ivaretar behovene til besøkende med funksjonsnedsettelser.	❑	❑	❑	❑	❑	❑	❑
Fasilitetene for barn er tilfredsstillende.	❑	❑	❑	❑	❑	❑	❑
Retningsskilt i museet gjør det enkelt å finne frem.	❑	❑	❑	❑	❑	❑	❑
Overordnet er fasilitetene (feks. størrelse på skilt, utforming av design, lysstyrke) godt tilrettelagt og barnevennlig.	❑	❑	❑	❑	❑	❑	❑
Vertene/guidene har gode kommunikasjonsevner (f.eks. tydelig, flyt, interaksjon med publikum, tidskontroll, osv.).	❑	❑	❑	❑	❑	❑	❑
Utstillingsbeskrivelser er forståelige.	❑	❑	❑	❑	❑	❑	❑

INGEN - Hvis du ikke har sjanse til å delta på noen aktiviteter i Ryfylke museum, kan du dele forventningen om en museumstjenestekvalitet.

	1 Ikke viktig i det hele tatt	2	3	4 Verken viktig eller ikke viktig	5	6	7 Svært viktig
Parkeringsplass er tilgjengelig.	❑	❑	❑	❑	❑	❑	❑
Utstillingen er godt vedlikeholdt.	❑	❑	❑	❑	❑	❑	❑
Utstillingstemaene er varierte.	❑	❑	❑	❑	❑	❑	❑
Ansatte svarer raskt på forespørsler fra besøkende.	❑	❑	❑	❑	❑	❑	❑
Tolker er profesjonelle (f.eks. Tilgjengelige, kunnskapsrike om fagene).	❑	❑	❑	❑	❑	❑	❑
Ansatte er villig til å bruke tid på å hjelpe besøkende.	❑	❑	❑	❑	❑	❑	❑
Ansatte er vennlig.	❑	❑	❑	❑	❑	❑	❑
Støynivået er akseptabelt.	❑	❑	❑	❑	❑	❑	❑
Museet ivaretar behovene til besøkende med funksjonsnedsettelser.	❑	❑	❑	❑	❑	❑	❑

INGEN - Hvis du ikke har sjanse til å delta på noen aktiviteter i Ryfylke museum, kan du dele forventningen om en museumstjenestekvalitet.

	1 Ikke viktig i det hele tatt	2	3	4 Verken viktig eller ikke viktig	5	6	7 Svært viktig
Fasilitetene for barn er tilfredsstillende.	❑	❑	❑	❑	❑	❑	❑
Retningsskilt i museet gjør det enkelt å finne frem.	❑	❑	❑	❑	❑	❑	❑
Totalt, fysisk display av tolkningen / utstillinger (størrelse på skilt, utforming av design, lysstyrke) godt utformet og barnevennlig.	❑	❑	❑	❑	❑	❑	❑
Tolker har gode kommunikasjonsevner (f.eks.	❑	❑	❑	❑	❑	❑	❑

Etter å ha opplevd hva museet kan tilby av aktiviteter vil vi gjerne vite hvilke grad av lojalitet du har til museet. Under er noen utsagn, ranger de ifølge din egen oppfattelse.

	1 Helt uenig	2	3	4 Hverken enig eller uenig	5	6	7 Helt enig
Jeg vil besøke museet igjen.	❑	❑	❑	❑	❑	❑	❑
Jeg vil anbefale museet til andre.	❑	❑	❑	❑	❑	❑	❑
Jeg vil bli medlem.	❑	❑	❑	❑	❑	❑	❑
Jeg vil fornye medlemskapet mitt (om jeg har et).	❑	❑	❑	❑	❑	❑	❑

Legg igjen ditt norske nummer om du vil motta en liten takk for deltagelsen. Venninglist å huske at de første 100 deltakerne som sender inn sin besvarelse før 5. april 2020 vil motta det.

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Tusen hjertelig takk!