

MASTER'S THESIS

The pursuit of achieving the optimal flow experience.

*A case study on backcountry skiers participating in avalanche courses at
Haukeliseter Mountain Lodge*



Picture: Haukeliseter Mountain Lodge. Ida Sandberg®

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Signature administration:

*The moment the tallest peak in the globe has been stood on, the uninhabited montaine, abode
of the gods, can no longer be constructed*

- The accelerated sublime-

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Abstract

Backcountry skiing and ski touring are outdoor leisure activities that have grown in popularity in recent years. It has been argued that these types of activities require high levels of both, mental and physical involvement. An important component in adventure activity is the experience of risk. Individuals that are actively participating in winter adventure activities such as backcountry skiing may be seeking the challenge provided by risk. At the same time, the danger of experiencing the negative side of a risk in form of accidents and injuries is also real. The rising amount of educational programs within the adventure tourism industry may suggest that both providers and individuals are becoming aware of the negative outcomes of risks.

It has been suggested that the incident of an avalanche is the main reason for fatalities in mountains in wintertime. The incidents are mainly caused by a human factor and are often triggered by backcountry activity. Therefore, the offer of avalanche courses has increased in numbers, in winter destinations such as Haukeliseter Mountain Lodge in recent years.

The present study was conducted in the context of the re-invention of traditional mountain activities in form of backcountry skiing and ski touring that is both mentally and physically challenging. This study identifies the main characteristics of an adventurer to develop a better understanding of an individual pursuing the activities of backcountry skiing and ski touring. This study includes investigation of individual's experience with adventure activities, motifs for pursuing backcountry skiing, perceptions of their own skills and challenges associated with activities and participation in educational programs such as avalanche course. This study also identifies main attributes of flow experience and includes an extensive review of risks, challenges and skills associated with adventure activities. The combination of these attributes and their effect on achieving the ultimate flow experience is analyzed.

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Introduction

Travel industry now provides a very wide range of adventure activities to meet customer needs. The ever-growing popularity of these types of activities is becoming interesting also for researchers (Faullant, Matzler, & Mooradian, 2011; Wu & Liang, 2011). Research issues in the field of activity-based tourism involve different theoretical perspectives for better understanding of individuals' motivations and behaviors (Csikszentmihalyi, 2008; Ewert & Hollenhorst, 1994; Faullant, Matzler, & Mooradian, 2011). Traditional definitions of adventure tourism focus on adventure recreation that represents interplay of competence and risk (Weber, 2001). Walle (1997) looks at adventure tourism as a quest for insight and knowledge rather than risk. According to Ewert and Hollenhorst (1994) adventure involves efforts to achieve some tasks in an unpredictable environment and the activity itself is thrilling and exciting.

According to recent research adventure activities in form of backcountry skiing and ski touring in mountains in winter increase in popularity (Furman, Shooter, & Schumann, 2010; Grímsdóttir & McClung, 2006). Backcountry skiing or in other words off-piste skiing is out-of-area skiing in the backcountry on unmarked or unpatrolled areas. The activity can take place both inside or outside a ski resort. . Ski touring on the other hand is done off-piste and outside of ski resorts, without use of ski lifts (Zweifel, Ruez, & Stucki, 2006). The growing popularity of these activities is resulting in bigger activity in mountains wintertime. With the commodification of adventure tourism industry, the mountains become mass-market destinations.

The biggest risk associated with the winter adventure tourism is the risk of an avalanche. According to research the 93% of backcountry users between 1980 and 1993 died in the

avalanche accidents (Furman, Shooter, & Schumann, 2010). Further, Grímsdóttir and McClung (2006) argues that the main cause of avalanche in the mountains in winter are backcountry skiers. The growing number of fatalities in winter backcountry tourism has resulted in promoting avalanche-educating programs (Brattlien, 2015). Avalanche courses expand in numbers and are very often fully booked. It seem, as there is a very big interest for gaining knowledge in how to stay safe in the mountains in wintertime (Haukeliseter Fjellstue, 2017).

The flow theory is one of the perspectives and it can be applied to examine the tourist's experience in activity based tourism such as adventure tourism (Larsen, 2013; Wu & Liang, 2011). There is some research on backcountry skiing from the operator's side but it is difficult to find surveys that include individual's point of view (Grímsdóttir & McClung, 2006; Grímsdóttir, 2004; Zweifel, Raez, & Stucki, 2006). Ski touring can be perceived as an activity involving flow experience. It is an outdoor leisure activity that adventurers find exciting and stimulating. There is also still not enough research within flow experience. The winter tourism could profit from more research in this area

Research objective

The present study was conducted in the context of the re-invention of traditional mountain activities in form of backcountry skiing and ski touring that is both mentally and physically challenging (Johnston & Edwards, 1994). The aim of this paper is to investigate individuals living and practicing winter mountaineering at Haukeliseter Mountain Lodge over two weeks' time in February 2018. The focus of this survey will be on individuals' perspectives and main motives for taking part in winter adventure activities. This study will further investigate the backcountry skiers that take part in the avalanche courses and its influence on achieving the

ultimate flow experience. There is still lack of research that focus on the individual and the flow phenomenon in tourism. This study will try to give more insight into the winter tourism in Norway.

After discussing the subject of an individual, the interests, experience and motifs for practicing backcountry skiing and taking the avalanche course, there will be further assessment of an effect the learning processes and participating in the educational programs have on the individual's experience. In this study, the theory of flow experience is investigated. As argued before Csikszentmihalyi's (2008) flow concept has two dimensions including skills and challenges that characterize an activity and only the equal balance between both will give a flow experience.

The research approach of this study is based on the two main research objectives:

- 1) Developing a better understanding of an individual pursuing the activities of backcountry skiing and ski touring. This objective will include investigating individual's experience with adventure activities, motifs for pursuing backcountry skiing, perceptions of their own skills and challenges associated with activities and participating in educational programs such as avalanche course.
- 2) Exploring the main attributes of flow experience. This objective will include an extensive review of risks, challenges and skills associated with adventure activities. The study will investigate the combination of these attributes and their effect on achieving the ultimate flow experience.

Research questions

The research of adventure tourism has been quite narrow in recent years focusing mostly on the adventure operator and destinations side (Ciesa, Grigolato, & Cavalli, 2015; Heggie & Heggie, Viewing lava safely: an epidemiology of hiker injury and illness in Hawaii Volcanoes National Park, 2004; Page, Bentley, & Walker, 2005; Wild, 2008). The complementary approach where individual's subjective experience and perception is considered, is necessary to be able to get the whole picture. Individuals' perceptions, personalities, motives, previous experiences can have implications for both management and marketing of adventure tourism (Weber, 2001).

Research question:

- 1) Who is the backcountry skier?

Taking part in the learning process can be a "new" adventurer way of influencing own adventure experience by achieving the "flow" state and getting the ultimate experience (Weber, 2001; Wu & Liang, 2011). The previous research include studies of the flow concept and its connection to different activities in adventure tourism. None of the previous studies investigates the flow experience in the ski touring context.

Research question:

- 2) Can participating in educational programs such as avalanche courses influence the experience of flow?

Literature review

Adventure tourism

Major global trends increasingly influence tourism all over the world. As tourism develops, the travel experience is also changing. Internal travel determinants such as desire of the individual for creative expression and self-development are taking over the external ones such as demography and climate (Commission of the European Communities, 2001). It seems that domestic tourism is often overlooked even though it includes the “temporarily leisured person who voluntarily visits a place for the purpose of experiencing a change” (Smith, 1989, p. 1). Tourism can also be defined as a “temporary short-term movement of people to destinations outside the places where they normally live and work, and their activities during their stay at these destinations; it includes movement for all purposes, as well as day visits or excursions” (Sharpley, 2002, p. 8).

Tourists during their both short and long stay are looking for a wide range of activities. The search for new experiences motivates tourists to visit certain destinations. “Activity-based tourism may be defined as a form of tourism, which involves consumers whose holiday choice is inspired by the desire to pursue an activity” (Novelli, 2011, p. 143). Those activities may be either seasonal or vary over time. In some cases might require permits and special skills. Some can be done in one day, others will involve few weeks. Participating in sailing, sightseeing, fishing, hunting and more can vary in level of involvement from the tourist’s part (Novelli, 2011).

Adventure tourism is one type of the activity-based tourism. It can be defined as “a leisure activity that takes place in an unusual, exotic, remote or wilderness destination. It tends to be

associated with high levels of activity by the participants, most of it outdoors” (Novelli, 2011, p. 204). Adventure recreation and tourism in mountain, forest and wilderness has increased in popularity in recent years and is one of the fastest growing sectors of the visitor attraction industry (Faillant, Matzler, & Mooradian, 2011; Page, Bentley, & Walker, 2005). Nearly every adventure activity can provide some form of tourism experience. Previous research show that engaging in such activities is an opportunity for self-fulfillment, a challenge and an opportunity for reflection (Page, Bentley, & Walker, 2005).

Excitement and challenge are the main characteristics that made this type of tourism popular among researchers and industry (Wu & Liang, 2011). Some of the most popular activities rising in number of people involved are mountaineering, rock climbing, skiing, mountain running, mountain biking, backpacking, horseback riding, and mushroom picking (Ciesa, Grigolato, & Cavalli, 2015; Novelli, 2011). Adventure tourism is for tourists with specific interests and can mean different things to different groups of people. An adventure tourist become more demanding and seek more from the visited destination. The demands depend on tourist’s own perception and expectation of what adventure actually is (Novelli, 2011).

Adventure recreation origins in traditional outdoor recreation. They both involve activities and specific skills but they differ in seeking risks and uncertain outcomes that is more associated with adventure tourism (Weber, 2001). The degree of risk is impossible to remove and is a result of both the activities performed and the terrain (Heggie & Heggie, Viewing lava safely: an epidemiology of hiker injury and illness in Hawaii Volcanoes National Park, 2004; Wild, 2008).

Winter adventure tourism

There is a growing number of adventurers using mountains for outdoor recreation. Risk is an inherent part of both activities performed and the natural environment, so mountain incidents are inevitable (Ciesa, Grigolato, & Cavalli, 2015; Heggie & Heggie, Viewing lava safely: an epidemiology of hiker injury and illness in Hawaii Volcanoes National Park, 2004; Wild, 2008). According to research backcountry skiing was the third most common activity at the time of incident. Winter mountain activities such as mountaineering, ice climbing and backcountry skiing require experience and physical fitness and equipment that is more technical compared to other activities. These activities are seen as more risky than summer hiking (Wild, 2008).

According to Wild (2008) slips and falls were main reasons for incidents. Factors such as weather conditions, terrain, slips are not possible to avoid. On the other hand, inexperience and inadequate training knowledge and equipment that are causes in small amount of incidents can be modified and eliminated. Skiing and snowboarding was a main reason for fatality incidents while pursuing activity. Wild (2008) argue that mountain safety education could reduce the amount of incidents. Educating could include the proper use of equipment and evaluation of the trail in relation to the weather conditions (Ciesa, Grigolato, & Cavalli, 2015) Other important factors are unfamiliarity with the area, tendency to ignore or overlook information provided, false perception of safety and individual's judgment in mountain situation (Ciesa, Grigolato, & Cavalli, 2015).

Backcountry skiing and ski touring

Backcountry skiing or in other words off-piste skiing is out-of-area skiing in the backcountry on unmarked or unpatrolled areas. This could be practiced both within and outside a ski resort. This is different from on-piste skiing or alpine skiing, that usually happens within the area of prepared trails. Backcountry skiing can include the use of ski lifts. Ski touring on the other hand is done off-piste and outside of ski resorts, without use of ski lifts. It may also extend over a period of more than one day (Zweifel, Ruez, & Stucki, 2006).

According to recent research backcountry skiing in mountains in winter increases in popularity (Furman, Schooter, & Schumann, 2010; Grímsdóttir & McClung, 2006). Other popular activities include snowboarding, hiking in snowshoes, and riding snowmobiles. The mountain tourism is becoming commodified and the traditional mountain activities such as walking and climbing combine with adventure tourism products. The new re-invented mountain activities appear, for example back country skiing and ski-touring (Beedie & Hudson, 2003). Improved gear, increased accessibility and reduced levels of risk attract more people to the activities in the mountains. The equipment often replace the experience (Johnston & Edwards, 1994).

It has not been fully explained why there is such a fast growing interest in these activities but the availability of better equipment, more convenient access to terrain, or a response to rising costs of skiing at ski resorts could be some of the reasons (Furman, Schooter, & Schumann, 2010).

Snow avalanche

Snow avalanche is a natural winter phenomenon that occurs in the areas with enough snow and a steep enough terrain. In Norway, it is approximately 7% of all the country. An avalanche will occur where there is a dangerous combination of snow, weather and a terrain. Further,

avalanche can be caused by a human activities such as backcountry skiing or ski touring (Norges Geotekniske Institut, 2018). An avalanche happens when the snow is triggered by driving forces that are greater than the stabilizing forces. The relationship between the snow's strength and the snow's load is critical in the case of avalanche (Brattlien, 2015).

The biggest risk associated with the winter adventure tourism is the risk of an avalanche. Research shows that the biggest risk of an avalanche is in high elevation terrain and early in the season. The elevation level is a very important factor in triggering an avalanche. In the alpine terrain, so high above the tree level, there is no forest to stop it from happening. The higher the terrain, the bigger impact of temperatures and wind speed on the stability of the snow-pack. The solar radiation and wind-drifted snow also affects the strength and thickness of the snow cover. It is rare that the avalanche occur naturally (Furman, Shooter, & Schumann, 2010; Grímsdóttir & McClung, 2006).

In about 85-90%, the victim or someone in the victim's company triggers the avalanche (Furman, Shooter, & Schumann, 2010; Grímsdóttir & McClung, 2006). Another research shows the number of 93% backcountry users between 1980 and 1993 died in the avalanche accidents (Furman, Shooter, & Schumann, 2010). According to Grímsdóttir and McClung (2006) the main cause of avalanche in the mountains in winter are backcountry skiers. In countries such as Canada, in the last 20 years, about half of avalanche victims were backcountry skiers. Therefore, the human factor cannot be excluded in this type of research. Other studies confirm that backcountry winter recreation incidents have grown in numbers recently (Furman, Shooter, & Schumann, 2010).

The statistics show that about three to five persons die in the avalanche accidents in Norway every year. The total amount of fatalities caused by an avalanche in the world are about 150-200 every winter. Figure 1 shows both, the amount of people involved in an avalanche and number of fatalities in Norway between 2008 and 2018.

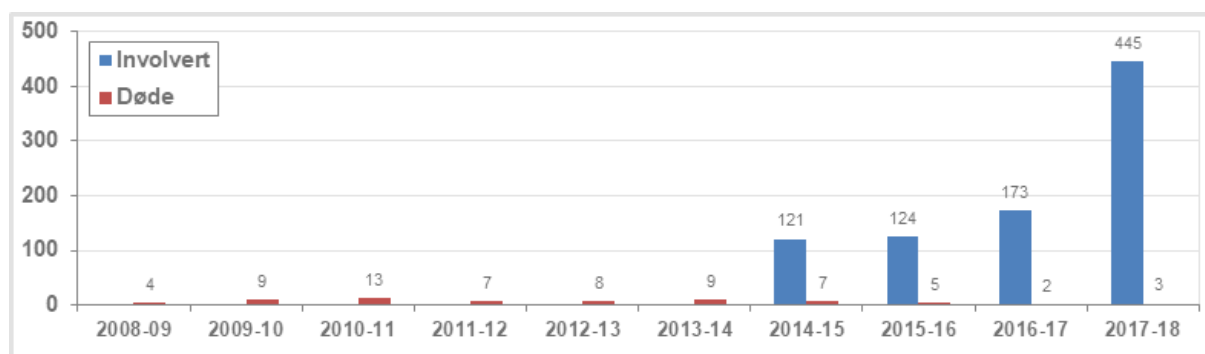


Figure 1. The amount of people involved and fatalities in avalanche incidents between 2008 and 2018 (Varsom.no, 2018).

The blue color presents people involved and the red color shows the fatalities. As we can see in the figure 1, the amount of people involved in the incidents has increased, especially in the last four years. On the other hand, the amount of fatalities decreased.

Figure 2 shows the three main reasons for avalanche fatalities in Norway in the last 10 years.

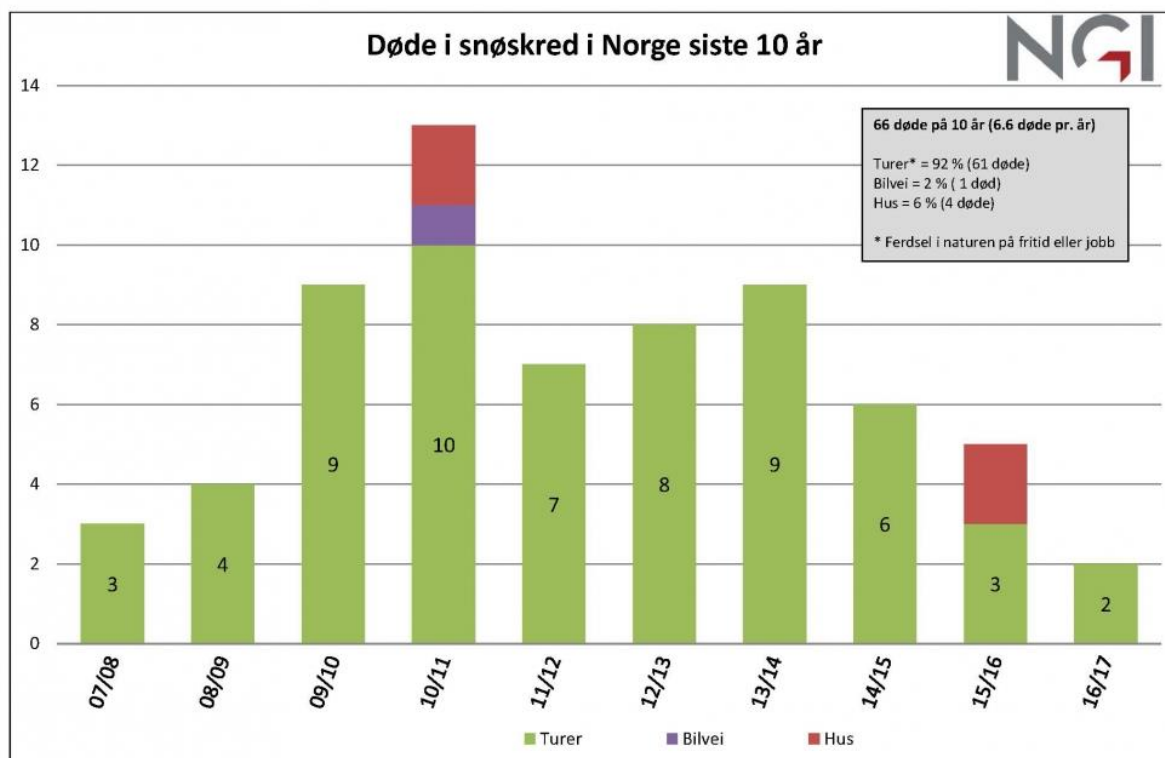


Figure 2. The three main reasons for fatalities in an avalanche in Norway between 2007 and 2017 (National Geotekniske Institut, 2018).

Three colors represent types of fatalities as follows:

- Red – fatalities in the house
- Blue – fatalities on the road
- Green – fatalities while touring.

There is a growing tendency for accidents in connection to outdoor leisure activities (National Geotekniske Institut, 2018). As Brattlien (2015) argues many accidents in recent years were caused by a human factor. According to recent research backcountry tourism in mountains in winter increases in popularity (Furman, Shooter, & Schumann, 2010; Grímsdóttir & McClung, 2006). Inevitably, the amount of accidents in the adventure winter tourism is also growing as it is presented in figure 3.

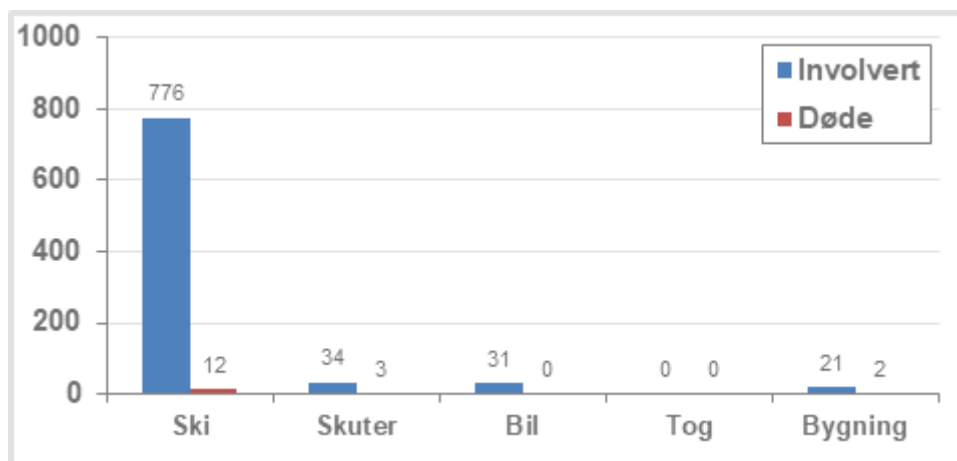


Figure 3. The avalanche accidents divided into categories accordingly skiing (both skiing, snowboard and walking), snow mobile, car (all other vehicles excluding snow mobile), train and building between winter season 2014/15 and 2017/18 (Varsom.no, 2018).

The data in figure 3 includes both, people involved in incidents and fatalities. Taking into consideration results from figure 2 and figure 3 it can be argued that the main reason for avalanche incidents in Norway in recent years is human activity in the mountains. That is why websites such as *Varsom.no* are gaining popularity. There is growing need for snow reports from professionals and experienced individuals. Snow reports include snow forecasts that describe the level of danger for avalanche to occur, what kind of avalanche problem there is and the terrain that is most dangerous (Varsom.no, 2018).

Norwegian Geotechnical Institute prepares accident reports that can be used in future in preventing of incidents that result in injuries or even deaths (Norges Geotekniske Institut, 2018). Individuals in *Varsom.no* also believe that creating awareness and interest around the phenomenon of an avalanche can save lives and avoid most of the incidents. The main target group are individuals actively pursuing outdoor leisure activities (Varsom.no, 2018). The popularity of such snow reports cannot be denied but there are also some that criticize such measures.

Horgen (2018) argues that the snow reports and alerts are questionable and not as effective as safety equipment such as beacons. Further, he states that it is difficult to measure how much effect they actually have on increasing knowledge of avalanche and snow issues. He argues that the focus of educational programs should be on recognizing the dangerous terrain. The majority of fatalities in recent years was a result of staying in the terrain steeper than 30 degrees and that is becoming a trend comparing to previous years (Horgen, 2018).

Backcountry skiers – Winter adventurers

It seems that adventurers involved in the more risky activities are also more aware of dangers involved. They have higher level of fitness and knowledge of the surroundings. It might seem that the accidents among the more experienced adventurers happen are less common but the inherent risk connected to the more advanced and demanding mountain activities make it less popular and attractive. At the same time when incidents happen, they will be more serious. Activities such as mountaineering attracts younger adventurers and the injuries are more severe (Ciesa, Grigolato, & Cavalli, 2015).

In recent years, research in the area of backcountry skiing started to focus on the human factor. According to Brattlien (2015) there are two types of avalanche incidents. The first one are the ones triggered by people that do not know how to act in mountains wintertime. The second group, on the other hand includes people that do know they do something unacceptable and dangerous but do in anyway. The first type of incidents can be eliminated by training and educational courses. The second type is can be explained by the human factor. The human factor can include actions as not seeing danger correctly, overestimating own skills in managing the dangerous situations, being too keen on doing something in spite of dangers involved and ignoring the rational decisions (Brattlien, 2015).

Risk as inevitable part of adventure tourism

The central attraction of outdoor adventure activities is actually the risk itself. The previous research shows that participants involving themselves in adventurous activities are interested in feeling of fear and thrills and not the actual risk (Bentley, Cater, & Page, *Adventure and ecotourism safety in Queensland: Operator experiences and practice*, 2010; Cater, 2006; Elsrud, 2001; Wu & Liang, 2011). Participants expect the challenge provided by risk but can also experience the negative side of it in form of injuries and accidents (Johston, 1989). Adventure tourism is a part of a “new” tourism and has a broader societal impact as many of those activities carry an entire lifestyle. To achieve a balance between safety and accepted levels of risk is not easy and it may lead to either dissatisfaction with the experience or unnecessary exposure to the risky situations beyond tourist’s competence and experience (Novelli, 2011). It is argued that “although adventure recreators seek out increasingly difficult and challenging opportunities, they paradoxically do not necessarily seek higher levels of risk” (Ewert & Hollenhorst, 1994, p. 188). On the other hand, if risk will be completely absent, the willingness to participate and satisfaction with the experience will decrease (Novelli, 2011).

Risk dominates not only the adventure activities but is also present in nearly every domain of the human life. People today have a greater knowledge of the risks they did not detect before and human actions can have far-reaching consequences. Johnston and Edwards (1994) argue that risky sports gain more value in the eyes of youth-oriented popular culture. Further Celsi, Rose and Leigh (1993) state that high-risk sports are becoming the fundamental mark of our times. The true adventurer cannot deny the passion that gives a meaning to life and need to act in spite of even possible death. It seems that people in general try to convince themselves that their skills and judgement are enough to overcome accidents (Davidson, 2008).

It is important to mention that there are both positive and negative sides of risk in adventure activities. Participants await only the positive aspects of risk but can also experience the negative ones. It is suggested that adventurers think that a challenge is a positive side of a risk. The negative side appears as danger. The level of control over the expected mountain experience is the dividing line between the negative and positive side of risk. If participants can control the risk, they will find it challenging. If they will not be able to have a control over it, the activity will become dangerous to them (Johston, 1989).

The climate change is the main long-term issue that affects tourism industry. Promotion of the environmental and social responsibility is necessary for maintaining the basic natural resources for tourism. Disappearance of beaches and marginal skiing areas is highly possible and the cost of maintaining winter sports areas or coastal amenities will increase (Commission of the European Communities, 2001). Decrease of skiing areas will result in crowded winter sport areas and will have a serious effect on the safety issues. The more tourists that access a particular area, the higher amount of incidents and injuries in those destination (Heggie, 2005).

Another challenge for adventure tourism industry is commodification of mountain environments, as they become mass-market activities (Page, Bentley, & Walker, 2005). Growing numbers of visitors affect both the environment and safety in mountains, especially in winter season. According to Page, Bentley and Walker (2005) snow sports are the activities with the greatest participants' injury risk. Heggie (Heggie, 2005) states that activities such as skiing and snowboarding are some of the main activities associated with serious injuries among tourists in New Zealand.

Education programs

The growing number of fatalities in winter backcountry tourism has resulted in promoting avalanche-educating programs. Most of them include information about weather systems, observation techniques, and snowpack and terrain analysis. The recent focus has shifted towards including the human factors such as overconfidence and inexperience (Brattlien, 2015). It might seem that people do not want to nor have time to get the expertise themselves so they rely on the industry and hand over a significant part of the responsibility for the risk management to the adventure providers (Cater, 2006). The rising amount of different types of courses inside the tourism industry might suggest otherwise. Rock-climbing, ice-climbing, winter mountaineering, avalanche courses and more are becoming extremely popular among individuals. Learning and getting information are not just side effects of risk and adventure recreation. They are integral parts (Cater, 2006; Weber, 2001).

Researchers suggest that simple introduction classes before pursuing activity can improve participants' perception of their own skills (Wu & Liang, 2011). It is argued that there are two types of adventure: risk taking adventure and gain knowledge and insight adventure (Weber, 2001). Gaining new skills and getting insight through such courses can have an important influence on adventure experience. Every activity can be characterized by skills and accordingly challenges. When a person's skills match the challenges in the activity that person pursuit, the "flow experience" occur. According to theory, the flow happens when competence for the certain and the situational risk for the activity matches. Taking part in the learning process can be a "new" adventurer way of influencing own adventure experience by achieving the "flow" state and getting the ultimate experience (Weber, 2001; Wu & Liang, 2011).

Walle (1997) states that it is a quest for insight and knowledge that is a key aspect in adventure and not risk. There has been quite narrow focus of research on adventure tourism, mostly from the adventure operator or destinations side (Ciesa, Grigolato, & Cavalli, 2015; Heggie & Heggie, 2004; Page, Bentley, & Walker, 2005; Wild, 2008). To be able to get the whole picture, it is important with a complementary approach where individual's subjective experience and perception is considered. Individuals' perceptions, personalities, motives, previous experiences can have implications for both management and marketing of adventure tourism (Weber, 2001). Researchers try to examine the subject from different perspectives for better understanding of tourist motivations and behavior (Wu & Liang, 2011).

According to Håkon Aarthun (2018), the reception manager at Haukeliseter Mountain Lodge, the amount of avalanche courses has grown in recent years. From the amount of seven courses in winter seasons 2014/15 and 2015/16 with still available places to ten courses in the winter season 2017/2018 where all courses were fully booked. The rising amount of interest is also represented by waiting lists as each course has limited amount of places. According to the data, the waiting lists are getting longer in recent years and many of adventurers interested in taking such a course must wait until next season (Aarthun, 2018). Very often courses are taken more than once. It has been argued that one can never be fully educated in the subject of an avalanche. The professionals working with such courses and in the environment that is affected by danger of an avalanche learn something new every year (Brattlien, 2015).

Individual and risk

The safety literature seems to favor individual's error as a main reason for accidents (Davidson, 2008). According to Adams (1995) and Furedi (2006) there are no ordinary accidents and they are often caused by a human error. Accidents can be easily prevented and are usually result of

inexperience and bad judgment from the individual. Unfortunately, the uncertainty is inevitable and it can be reduced nor eliminated. Experience is no guarantee for survival either and it can only improve the odds of being unharmed. The nature does not distinguish between experienced and inexperienced adventurers (Davidson, 2008). Factors such as client experience, equipment and environmental influences affect in high degree level of accidents and safety issues. High degree of physical or sport activity is main characteristic of adventure activities. It is often associated with hobbies, special interest tourism and niche markets. It is a type of recreation where participants engage in sporting activity with nature and the environment (Page, Bentley, & Walker, 2005).

Visitors in the mountains do not expect accidents to happen while they are in the trip but unfortunately, they can experience them also. Accidents are one of the possible negative outcomes while being in the mountains. On the positive side is the much awaited outcome in form of satisfaction with the experience. For some individuals the actual risk connected to the activity is the main attraction of the ultimate experience. For others it is just a necessary condition of the activity. Adventurers prefer to attain risk on the accepted level according to their ability and motivation. If they fail to achieve the acceptable level of risk in the activity, they will correct it in the way to increase or decrease the experienced risk (Johston, 1989).

Previous research has shown that skiing, mountaineering and tramping was about 10 per cent of all visitor injuries in New Zealand. Those activities mainly involved independent adventure activities and not organized, guided trips (Bentley, Meyer, Page, & Chalmers, 2001). Further research shows that unguided and noncommercial adventure activities such as mountaineering, tramping and mountain biking are main injury concerns for adventure tourism in New Zealand (Bentley, Cater, & Page, 2010; Bentley & Page, 2008). Those findings can suggest that the

safety communication should focus on the individual, independent adventurer to reduce injury risk amongst visitors. High-risk travelers between 18 and 35 years of age should be the main target group for messages about the risk levels and the level of experience and skill required for participation (Bentley, Meyer, Page, & Chalmers, 2001). The previous scientific studies show that unintentional injury is the main cause of tourist morbidity and mortality, especially in recreation activities such as skiing (Page, Bentley, & Walker, 2005).

Perceived risk/actual risk

The perception of risk is the important variable in the success of adventure tourism, so it is a goal to heighten the level of perceived risk while reducing the actual risk (Bentley, Cater, & Page, 2010). The previous research shows that the adventure activities with the lower level of perceived risk may have highest actual injury risk (Bentley, Meyer, Page, & Chalmers, 2001). Adventurers that are interested in perceived risk and activities with little actual risk usually pursue soft adventure activities. Hard adventure activities have a high level of risk (Page, Bentley, & Walker, 2005). Participants are willing to accept certain amount of risk but occurring problems may lead to perceived risk of engagement (Page, Bentley, & Walker, 2005).

Experience theories (different perspectives)

Tourists are looking for genuine and deeper experiences within the communities they visit. They are becoming career travelers and expecting a flow of new, different experiences that are more intense. Adventure travel and thrill experiences are consequences of the growing demand for “safe danger”. Tailor-made and personalized products will be more popular (Commission of the European Communities, 2001). Emotions are vital to the experience in adventure tourism and there will be an increase in studies on tourists’ experience and satisfaction (Faullant,

Matzler, & Mooradian, 2011). Selstad (2007) states that tourists also want experiences that are safe and enticing. Further, he argues that experience is referred as events in a flow of activity.

Adventure activities take place in stunningly beautiful and dramatic natural environments and it is not by accident. Adventurers show off their skills and talents. Natural attractions and experiences in nature are commodified and promoted as an escape from everyday life to the amazing nature. Tourists seek experiences in places where they can manifest their own uniqueness and at the same time show their admiration for the powerful nature. Sublime landscape is a value added to adventure tourism and extreme sports. The interaction with the nature in exciting new ways is what adventurers expect now. Nature is not something to look at anymore but something to engage in. It is the most extreme tourism consumption (Bell & Lyall, 2002).

In research literature, there are many theories that describe the tourist's experience. Peak experience is one of them and it can be defined as an intense and highly valued moment. Peak experiences can be described as moments of happiness that are rare, joyful, unexpected and extraordinary. Peak performance on the other hand, is an episode of superior functioning. It can be defined as behavior, which exceeds typical behavior. It is more high level of functioning than form of activity. Both of them represent optimal and subjective experience. Finally, the flow is a pure enjoyable experience. It can include either the enjoyment of the peak experience or the behavior of peak performance and sometimes both of them (Privette & Hogan, 1983).

Emotions such as joy and fear have been applied in a study on mountaineering. The researchers prove that adventurers evaluate those strong emotions in different ways. The mountaineering is intrinsically rewarding activity associated to among other things peak performance. Researcher

argue that every adventure is a result of contrasting emotions. Personality, lifestyle and perception influence that adventure (Pomfret, 2006).

Flow and the ultimate experience

Csikszentmihalyi's (2008) flow concept has two dimensions including skills and challenges that characterize an activity. If challenge is higher than skills, it will cause an anxiety. Possessed skills that are greater than challenge will cause boredom. Only the match between both will give a flow experience. The flow experience occur when, self, self-awareness, behaviour and context meet. In other words, the individuals' competence for the specific activity and the situational risk matches (Weber, 2001). Activities that generate flow require goal setting, and call for skill, challenge, enhanced concentration, a sense of control, and total immersion in the activity (Wu & Liang, 2011).

The flow concept is often applied to investigate the experience of tourists participating in adventure tourism activities (Larsen, 2013). Flow is also described as "the state in which people are so involved in an activity that nothing else seems to matter; the experience is so enjoyable that people will do it even at great cost, for the sheer sake of doing it" (Csikszentmihalyi, 2008, p. 4). The participation in the activity is reward itself (Csikszentmihalyi, 2008). Positive efficiency and performance in an activity lead to the optimal flow experience. People enjoy it and wish to participate in it over longer period of time (Wu & Liang, 2011). The flow is often described as just pure fun, intrinsically rewarding experience. People seek flow for itself, just to enjoy it (Privette & Hogan, 1983). The flow theory states that the quality of experience occur when there is a correlation between the level of challenge and the level of individual's ability, skills and knowledge to overcome the challenge (Larsen, 2013).

According to researchers, the skills required and the challenge involved are creating the feeling of playfulness in the activities within adventure tourism. They can affect and shape individuals flow experience in a positive way (Wu & Liang, 2011). The theory of flow was the main aspect in research of wilderness experiences and other recreational activities. For the flow experience to occur, the participation in then activity must be voluntary. It is argued that the higher levels of flow occur when the activity is chosen freely (Ryan, 1997). A series of good experiences turn into pleasure through moments of arousal from the external factors such as surroundings that meet or even exceed person's expectations. Individuals can create their own challenge in boring situations just to pleasurable experiences (Larsen, 2013).

According to the theory of flow, both skills and challenges are important and the flow will not occur, if they are not in balance. Further, the risk is also a critical factor closely linked to competence and an important variable in all adventure activities. The previous research has also proved that person's personality has a positive effect on the occurring flow experience (Wu & Liang, 2011). Csikszentmihalyi (2008) argues that occasionally flow can occur by chance with help of internal and external conditions. It is much more likely that a structured activity will result in flow because of individual's ability to make it occur.

The flow concept in the adventure tourism is applied in studies of different adventure activities. Pomfret (2006) has used it to describe the flow phenomenon in mountaineering where the participant experience both intense positive and negative emotions according to the level of balance between challenge and competences. Adventure activities such as rock climbing, ski touring and more are according to Csikszentmihalyi (2008) designed to make optimal experineces. "They have rules that require the learning of skills, they set up goals, they provide

feedback, they make control possible” (Csikszentmihalyi, 2008, p. 72). Flow activities help participants achieve the state of enjoyment.

Flow activity independent of different dimensions has common characteristics. “It provided a sense of discovery, a creative feeling of transporting the person into a new reality. It pushed the person to higher levels of performance, and led to previously undreamed-of states of consciousness” (Csikszentmihalyi, 2008, p. 74).

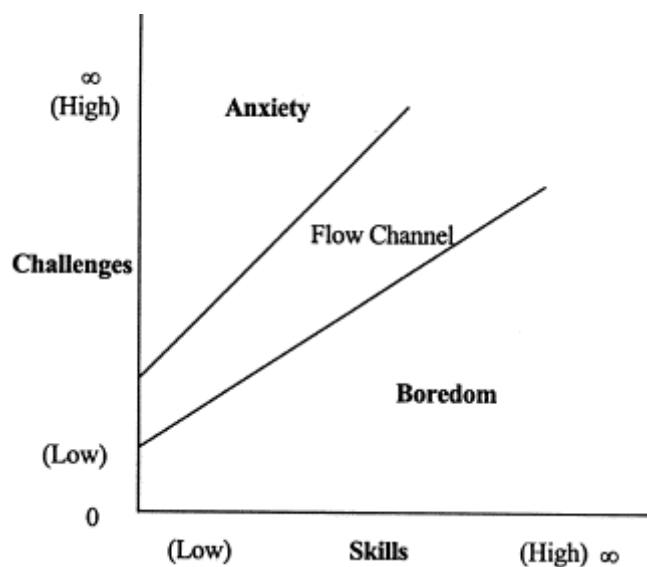


Figure 4. Flow concept (Weber, 2001).

Method of research

This study is conducted to develop a better understanding of an individual's experience while pursuing an activity. Prior to constructing a survey instrument, an extensive review of secondary data sources was prepared. According to Page, Bentley and Walker (2005; 2004) (Bentley, Page, & Walker, 2004) it is necessary for establishing a more precise scope of a studied phenomenon. Exploratory research in the field is conducted to gain a better understanding of motives to those who seek thrills of backcountry skiing but will stay safe at the same time. At conducting a field research study, the small group of people is observed over a length of time, in this case over two weeks period (Neuman, Understanding research, 2014).

The main purposes of the exploratory research are to become familiar with basic facts, to create a general mental picture of conditions, formulate questions for the future research and to generate new ideas (Neuman, 2013). To gain an in-depth inquiry into the complex and specific phenomenon within its real-world context the classic case study has been implemented. For this case study design, the most suitable is qualitative data collection method. The use of qualitative methods can be helpful in ruling out alternative explanations (Yin, 2013).

Data collection

The setting for this study is a cabin in Telemark called Haukeliseter mountain lodge. It belongs to the Norwegian Trekking Association and is the biggest cabin in the Stavanger Trekking Association with approximately 20.000 overnight guests a year. It is placed about 1000 meters above the sea level at the entrance to Hardangervidda National Park. Haukeliseter mountain lodge has become in recent years one of the favorite places for adventurers interested in ski touring. Data collection was undertaken at the site during two weeks period in February 2018.

The study site was chosen for data collection because of growing popularity among skiers interested in backcountry skiing and ski touring. The researcher approached the respondents asking if they are backcountry skiers, also interested in ski touring and if they have taken the avalanche course before. After receiving a positive answer, they were asked about filling in a questionnaire concerning key aspects in this study.



Figure 5. Haukeliseter Mountain Lodge (**Haukeliseter Fjellstue, n.d.**).

Research design

The case study design was chosen for this study because the area of tourism knowledge has been mainly characterized by case studies (Yin, 2013). The importance of doing one case designs is unarguable and it can be concluded that case study is a highly useful and needed approach in tourism research. The use of case study method has been increasing over the years in the research of social sciences. Case study is a research approach that has gone beyond its methodological traditions of both qualitative and quantitative theory approaches and the logic of experimental designs (Xiao & Smith, 2006). It is necessary to examine an interaction

between a case and its context, to develop an understanding of a case as a phenomenon. Case study method is a viable alternative for addressing complex and contextual conditions (Yin, 2013). It is argued that researcher's values and perspectives are reflected by a learning process from particular case (Xiao & Smith, 2006).

The desired questions for case study evaluations should include 'how' or 'why' question that point towards events and actions over time including causal processes (Yin, 2013). These types of questions were also chosen for this study. Case study method can refine general theory and apply effective interventions in complex situations. It has been noted that case study applications cover different types of contexts such as decision-making, individual behaviour, organizational operations, processes as well as current events (Xiao & Smith, 2006). The case study can investigate phenomenon within its real-life context. When the boundaries between phenomenon and context are not clear, the case study can be used to investigate the phenomenon in its real-life context. The case study can also be described as a comprehensive research, strategy and framework (Xiao & Smith, 2006).

Case study focuses on details but shows a bigger picture and tells a larger story. Therefore, they can produce important theories. It allows us to link abstract ideas to the specific cases we observe. It is noted that researchers can adjust the measures of abstract concepts to real experiences (Neuman, 2013). Case study research is building new theories by generating novel theories, testing its emergent hypotheses and using the empirical validation of resultant theories. Evidence through case study research is crucial to scientific evaluation because its theory building is primarily associated with qualitative methodologies such as the grounded theory approach (Xiao & Smith, 2006).

Research method

The qualitative studies involve cases and contexts. It is argued that qualitative methods are used to examine social life from multiple points of view. They also help in examining social processes and cases in their social context and understanding how individuals construct identities. Therefore, qualitative data are meaningful because it is used in examining motifs, themes, distinctions and perspectives instead of variables. The qualitative data includes real events, records of what people say, observations of specific behaviours, studies of visual images and analysis of written documents (Neuman, 2013).

A case study may adopt several collection of methods such as a combination of secondary data with surveys, interviews and/or on-site observations. This is likely to strengthen the validity of a case study evaluation. Mixed methods such as triangulation can involve a combination of two or more methods and provide more confidence in the findings. The possibility of triangulation occurs, when the methods of research are designed to collect overlapping data (Xiao & Smith, 2006). For this study the multiple measurements method was chosen, including review of secondary data, self-developed questionnaires, on-site observation and a logical model.

The theory review and a secondary data analysis such as statistics were used as a foundation for this study. The empirical findings and theoretical relationships can be compared with collected data in a case study research. The analysis that result in match between the empirical and the theoretical adds to the support for explaining how an intervention produced (or not) its outcomes (Xiao & Smith, 2006). The evaluative approach of this study includes also self-developed questionnaires distributed on-site and direct observations of the events and actions as they actually occur in a local setting. Case study evaluations frequently use logic models,

initially to express the theoretical causal relationships between an intervention and its outcomes, and then to guide data collection on the same topics (Xiao & Smith, 2006).

Questionnaires

The questionnaires (surveys) are the most used data-collecting technique. They are established to investigate the patterns among the data and test multiple hypotheses (Neuman, 2014). For the current study, a self-developed questionnaire was distributed on-site of the study. The questionnaire was comprising three sections including a section with questions about the avalanche course, a section containing challenge and risk questions, and the last part included individual's own perception of the obtained skills. Questions were open-ended, since the sample for this study was quite small. These kind of questionnaire is useful for exploratory research, when there is little known about the issue (Neuman, 2014). The full questionnaire can be found under Appendix C.

Observations

A clear definition of observation is difficult to find in the research literature. It can be defined as systematic recording of observable phenomena or behaviour in a natural setting or by using a broader context of ethnography or the narrower one of participation observation. Main purpose with the observation study method is to observe people in their natural environments. It is argued that the status of observation has changed in recent years. It could be a research method on its own or in combination with other methods. In the method of observation, researcher to collect data plays a number of roles and uses different techniques. This makes the observation a very complex method (Baker, 2006). It is a researcher, who is a data collection instrument. The data collection depends on skills of careful observing and listening, short-term memory and writing (Neuman, 2014).

Researcher must be focused on his/her primary role as a researcher and must remain detached while collecting the data to be able to collect only the relevant data under investigation. The observer participates in the daily life, observe things, listening and questioning the people under study. There are a variety of roles researchers can chose from, while observing people in their natural settings. One of the roles is *complete participation* role that is the ultimate level of involvement. The researcher studies a group he/she is already a member. The researcher in this case acts not as a researcher anymore but as a member. This role is ideal for developing a very good understanding of the insiders. Statements against this form of involvement can be noticed. The main critics of this method include problematics with unknown identity of the researcher and feeling that the researcher is violating his observer role (Baker, 2006).

In spite of critical meanings, this method was used for this study. The critics of this method agree that the more the researcher knows about the situation, the more difficult it is to study. In this case, it was not applicable, because respondent knew about the researcher's role and identity. The researcher is an active member of the studied group. The purpose of this method of study is to describe in some depth the individuals that are actively pursuing the winter adventure activities. The gaining the most inside information is necessary to be able to develop full understanding of the studied group.

Logical model

The self-developed logical model is also used for analysing the data in this study, as argued before this method of evaluation is frequently used initially to express the theoretical causal relationships between an intervention and its outcomes, and then to guide data collection on the same topics (Xiao & Smith, 2006).

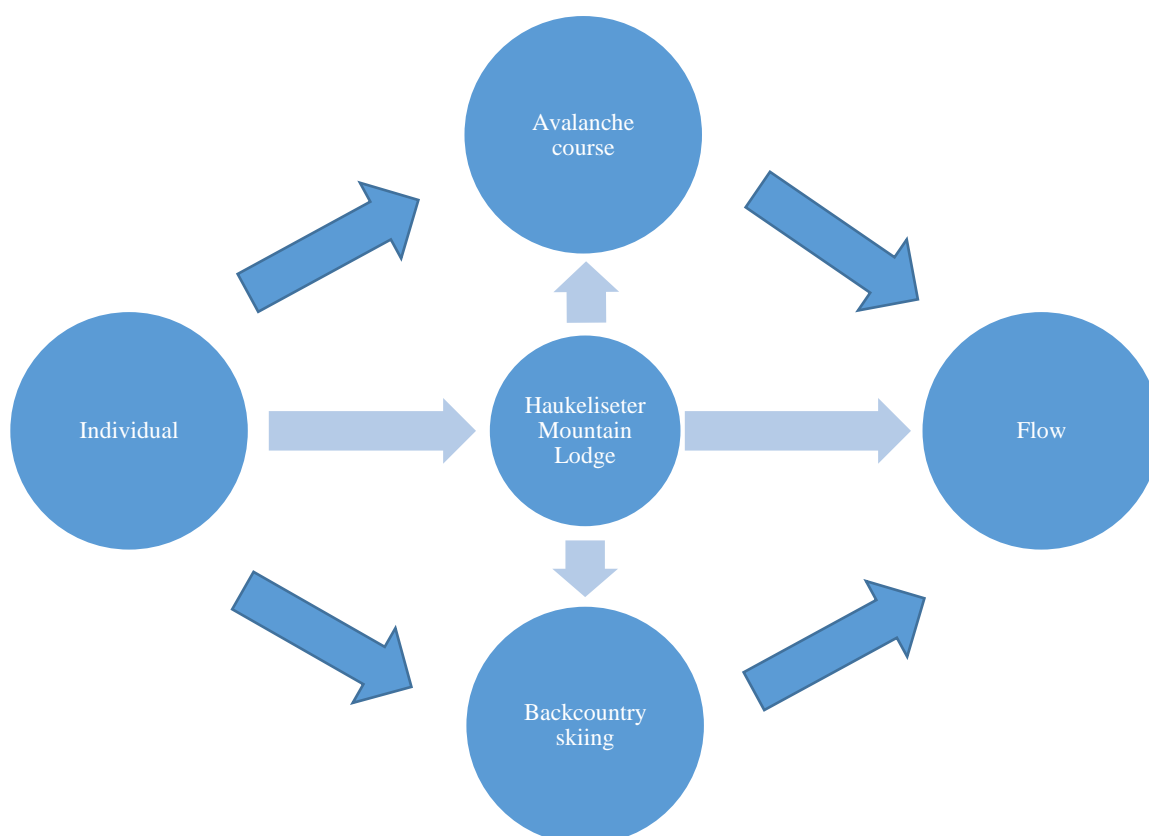


Figure 6. Theoretical model examining the relationship between the avalanche course and the optimal flow experience in activity of backcountry skiing.

Measurements

This study examines the relationship between the avalanche courses and the pursuit of gaining the optimal flow experience in activity of backcountry skiing. This investigation establishes a

theoretical model that is presented in figure 6. It is considered that perceptions of risk, possessed skills and experienced challenge have in an adventure activity will influence the flow experience in backcountry skiing and ski touring.

To investigate whom respondents are and how active in winter adventure tourism they are, they have been asked general questions about activities and their skiing/snowboard experience. To be able to develop a better understanding of individuals - the adventurers, the data collected from the observations was included in the analysis. Secondly, for establishing main motifs for taking the avalanche course, questions about skills before and after taking the course have been asked. Lastly, for better understanding of the relationship between taking such courses and flow experience, respondents have been asked questions about challenging oneself and perceptions of their own skills now while backcountry skiing.

Sample

All of the respondents in this study have participated in the avalanche course before and are actively practicing ski touring. All approached respondents agreed to complete a self-administered questionnaire. The questionnaire was in English but the answers could be delivered in Norwegian, Swedish and Danish (as nearly all of them are Scandinavian). This was established in case it could help the participants to be more precise and detailed in their answers.

Data analysis

Ski touring is a form for adventure tourism and a highly engaging experience. It can involve the activities on many levels of physical challenge (Furman, Shooter, & Schumann, 2010). The present study was conducted in the context of the re-invention of traditional mountain activities in form of ski touring that is both mentally and physically challenging (Johnston & Edwards, 1994). Previous research show that engaging in such activities is an opportunity for self-fulfillment, a challenge and an opportunity for reflection (Page, Bentley, & Walker, 2005).

Obtained sample

The total of 17 adventurers that are actively participating in winter adventure tourism responded to the paper questionnaire. Although this figure is low, the achieving a higher rate would be not possible as there is a limited amount of people at the research site. From the total sample, 65% was female. The age of the participants was ranging from 22 to 38 years of age. The obtained sample consisted of four different nationalities mostly from Scandinavia, of which 52% Norwegian, 29% Danish, 11% Swedish and one person from Poland. Almost all respondents at the time of filling the questionnaire was residing in Norway with to persons being residents of Denmark and one person of New Zealand. All respondents were highly educated of which 23% have completed secondary education and 76% high education with mainly bachelor degrees. Overall, all respondents actively participate in winter adventure tourism on a daily basis. As they have been living at the site over different seasons, they all have a knowledge and an experience of both summer and winter activities in the area.

Who is the typical backcountry skier?

Observation

For this study, the method of observation was implemented. The role chosen for this research was *complete participation* role that is the ultimate level of involvement. The researcher studies a group he/she is already a member. This role is ideal for developing a very good understanding of the insiders (Baker, 2006). The researcher was living at the study site and participating in some single tours and in one avalanche course. This had an implications on the type of obtained data.

Respondents in this study are all living and working at the Haukeliseter Mountain Lodge and are actively participating in outdoor activities all year round. In winter season winter adventure activities such as cross-country skiing, snowboarding, backcountry skiing, ski touring, ice climbing and snow kiting are practiced. Overall interest in different types of activities is expressed and single courses in some of those activities have been taken. They are all in general very positive towards being outside in the nature in spite of the weather conditions. There is at least one trip a day of different type and including at least two people.

It was observed that they all have a lot of equipment of different type. Their winter clothes are of the highest quality made of Gore-Tex and other type of technical fabrics. The quilted jackets with feather, wool jumpers and underwear and technical fleeces. The skiing/snowboarding equipment is mostly just last season and it has very good quality. It includes very light skis and advanced bindings. The same apply to goggles, helmets and backpacks. In addition, nearly all of the backcountry enthusiasts own the specialized avalanche equipment such as beacons, avalanche searching rods and snow shovels.

To summarize, it seems that living in this environment is a choice of a lifestyle for all respondents in the study. It is voluntarily to live there and participate in outdoor activities. There is a lot of exchange of information about trips, terrain, weather conditions and choice of routes.. They all are willing to learn from others and are thankful for given advices. Discussions about planned tours and routes that are more challenging fill in their free time. The level of expertise between all of them is very high but in the same time they are often questioning each other choices. There is a lot of knowledge within a small group of people.

Outdoor leisure activities

To gain the better understanding of who the respondents in this study are and what are their motivations and behavior in pursuing activities, I used one part of the questionnaire to find out what are their interests. As argued before adventure, activities are growing in popularity and it becomes interesting also for researchers (Faullant, Matzler, & Mooradian, 2011; Wu & Liang, 2011). Novelli (2011) argues that activity-based tourism includes outdoors activities with participant's high involvement. As adventure tourism is an activity for participants with special interests, it was important to investigate what type of activities respondents actively pursue.

Respondents in this study mentioned outdoor leisure activities as the most common thing to do in their free time. Among them can be found both summer and winter activities. The ones that were mentioned mostly were winter activities such as skiing, snowboarding and ski touring and summer activities such as hiking and climbing. Activities that are also of interest were mountain biking, running and paddling. It should not be surprising as many studies have investigated adventure tourism and stated that some of the most popular activities rising in number of people involved are mountaineering, rock climbing, skiing, mountain running, mountain biking, backpacking, horseback riding, and mushroom picking (Ciesa, Grigolato, & Cavalli, 2015;

Novelli, 2011). It can be argued that respondents are actively living individuals that like to spend their time outdoors.

To elaborate the subject of adventure activities of each individual, respondents have been asked about participation in the most popular of them. The results are in the table 1.

Table 1. The most popular adventure activities among the respondents.

Activity	Percentage of respondents
Ski touring	100%
Rock climbing	88%
On-piste skiing	100%
Off-piste skiing	94%
Mountain running	82%
Mountain biking	53%
Backpacking	88%
Snowboarding	41%
Mountaineering	76%

As it can be stated according to the results, all of the respondents have tried both ski touring and on-piste skiing and snowboarding was the least popular activity. These results confirm that the group is actively participating in different adventure activities.

Learning activities

For better understanding of the learning curve and participation in the adventure activities, respondents had to answer questions about the learning process of activities mentioned in Table 1. It might seem that adventurers do not want to nor have time to get the expertise of different activities themselves. It is argued that they would prefer to rely on the industry in risk management in the adventure tourism (Cater, 2006). The rising amount of different types of courses inside the tourism industry might suggest otherwise. Researchers investigate learning and getting information processes and prove that they are not just side effects of risk and adventure recreation. They are integral parts (Cater, 2006; Weber, 2001).

When asked if they have taken any course to learn any of the activities shown in Table 1, 76% of the respondents answered positively. Among the main reasons for doing so, were safety, learning new skills and gaining new knowledge dominating. Respondents who did not participate in the activity courses all agreed that it would definitely improve their skills in those activities. So it can be agreed with Weber (2001) that gaining new skills and getting insight through such courses can have an important influence on adventure experience. Further, taking part in the learning process can be a “new” adventurer way of influencing own adventure experience (Weber, 2001; Wu & Liang, 2011).

Skiing/snowboarding experience

For developing a better understanding of individuals experience in winter activities, respondents have been asked questions about details in their skiing/snowboarding preferences and own perceptions about their abilities. It seems that adventurers involved in the more risky activities are also more aware of dangers involved. They have higher level of fitness and knowledge of the surroundings (Ciesa, Grigolato, & Cavalli, 2015). Therefore, respondents

have been asked about the length of practicing actively skiing or snowboarding. Most of the answers stated the length of active skiing or snowboarding between 10 and 30 years. Some single answers included more specific and personal statements. The examples can be found in Table 2.

Table 2. The length of skiing/snowboarding experience.

Nr 5, Female, 29 years old
<i>“Since I was a child, ca. 2-3 years old” (author’s own translation)</i>
Nr 9, Female, 25 years old
<i>“On and off since childhood”</i>
Nr 12, Female, 29 years old
<i>“Since I was a child, probably for 25 years”</i>

People today have a greater knowledge of the risks they did not detect before and human actions can have far-reaching consequences (Johnston & Edwards, 1994). On the other hand it is argued that people in general try to convince themselves that their skills and judgement are enough to overcome accidents (Davidson, 2008). To elaborate this statement respondents have been asked about their perceived skills in skiing or snowboarding: *“How would you describe in your own words your skiing/snowboarding skills?”* Most of the answers included words such as *medium, ok, good, intermediate* and *in between*. The few exceptions are presented in Table 3.

Table 3. Perceived skiing/snowboarding skills.

Nr 8, Female, 23 years old
<i>“Advanced in piste and off-piste. I especially enjoy steep terrain, chutes and dropping cliffs”</i>
Nr 10, Female, 25 years old
<i>“It’s pretty good, but not exceptional. I have control, but I fear very steep hills though”</i>
Nr 12, Female, 29 year old
<i>“Good. Capable of skiing the parts I want to ski (confident of going up and down slopes)”</i>
Nr 14, Female, 23 years old
<i>“Confident on snowboard, master the most of terrain, both steep and hilly”(author’s own translation)</i>
Nr 16, Male, 30 years old
<i>“Was skiing about 100 days/year for 5 years, but less for the last years. Advanced skier.</i>

In recent years the new re-invented mountain activities appear, for example back country skiing and ski-touring (Beedie & Hudson, 2003). Those activities are closely connected and growing in popularity (Furman, Shooter, & Schumann, 2010). Therefore, respondents have been asked about on- and off-piste skiing preferences and 94% of adventurers asked in the survey prefer off-piste skiing (in other words backcountry skiing). The frequency of skiing or snowboarding in winter season 2017-2018 according to this study was as followed: 59% few times a week and. 29% was doing it at least once a week, 1% few times a month and 1% once a month. It is possible to state that 98% of respondents were actively participating in winter leisure activities such as skiing and snowboarding in winter season 2017-2018.

It has not been fully explained why there is such a fast growing interest in these activities but the availability of better equipment, more convenient access to terrain, or a response to rising

costs of skiing at ski resorts could be some of the reasons (Furman, Schooter, & Schumann, 2010). Improved gear, increased accessibility and reduced levels of risk attract more people to the activities in the mountains (Johnston & Edwards, 1994). To elaborate the growing interest in off-piste (backcountry skiing) even more respondents that prefer off-piste skiing/snowboarding have been asked: *Why did you chose off-piste skiing/snowboarding?* The answers included five main subjects that were very clear such as:

- Freedom
- Challenge
- Less people
- Nature
- Fresh snow

Individuals are looking for genuine and deeper experiences and emotions are vital to the experience in adventure tourism (Faullant, Matzler, & Mooradian, 2011). Respondents in the study mention different feelings at different levels of engagement. Further, they point out importance of connecting to the nature in a unique way. It is concerning previous research about adventure activities that take place in stunningly beautiful and dramatic natural environments that is not by accident. Tourists seek experiences in places where they can manifest their own uniqueness and at the same time show their admiration for the powerful nature (Bell & Lyall, 2002). In table three are pointed out the most interesting and engaged statements from respondents.

Table 4. Reasons for choosing off-piste skiing (backcountry skiing).

Nr 1, Female, 24 years old	<i>“It gives another type of freedom feeling, and you are able to go places no others have been”</i> <i>(author’s own translation)</i>
Nr 4, Female, 25 years old	<i>“More challenging and nice with trees and nature” (author’s own translation)</i>
Nr 7, Female, 38 years old	<i>“Better snow, Better ride down, closer to nature, overall total experience”</i>
Nr 8, Female 23 years old	<i>“Because of the interesting terrain and sometimes fresh snow. You can be creative and feel the flow”</i>
Nr 10, Female, 25 years old	<i>“I love pow-pow. A good feeling and you usually have the place for yourself. More challenging”</i>
Nr 11, Male, 22 years old	<i>“Powder = ultimate freedom”</i>
Nr 12, Female, 29 years old	<i>“More freedom to go wherever I want + better snow (for the most parts)!”</i>
Nr 14, Female, 23 years old	<i>“More variation, more creativity, more flow and more excitement” (author’s own translation)</i>
Nr 17, Female, 35 years old	<i>“It is a different feeling and experience, a lot of space, not too many people. On-piste is not challenging anymore”</i>

Avalanche course

It is argued that an individual can never be fully trained in avalanche education. Experts, course instructors, teachers, lecturers, course providers experience and learn new techniques and issues every year. According to Brattlien (2015) it is important to be open to new knowledge and skills. Theory and practice are important in the subject of avalanche and both need to be included in the learning process of staying safe in the mountains in wintertime. Theory can be learned from books, avalanche courses and discussions with experienced people. Practice is mostly focusing on and going out in the avalanche terrain (Brattlien, 2015).

It is argued that there is growing amount of adventurers that are looking for steep and dangerous terrain to get more extreme experiences. In spite of better equipment and more knowledge, the amount of accidents is growing (Varsom.no, 2018). The question could be then: *How can people be better educated in avoiding the incident of an avalanche?* To investigate this issue respondents have been asked questions about the avalanche and the avalanche course. Skiers that practice backcountry skiing and ski touring are the ones that should try to learn more about avalanche and the dangerous terrain. It is recommended to challenge individuals and others own knowledge and thinking.

All of the respondents have participated in an avalanche course before. More than 50% of respondents answered negatively to the question about avalanche knowledge from before the course. The importance of taking such a course is unarguable but the reasons for doing it can vary. To be able to investigate the connection of learning about an avalanche and gaining more satisfying experience, respondent have been asked about the main reasons for taking the avalanche course. Over half of the respondents have taken the course as a part of their school

education or it was offered by the working place (Haukeliseter Mountain Lodge). Some of the answers are shown in table 5.

Table 5. Main reason 1 – part of an education or offered at the working place.

Nr 3, Male, 27 years old

“I got it for free through work. It’s good to have so you and your friends are less likely to die”

Nr 7, Female, 38 years old

“Part of my education, and chose avalanche instead of other courses. Because of interest”

Nr 10, Female, 25 years old

“An opportunity at my working place. It’s good know how to read the snow, and understand the risk”

Nr 16, Male, 30 years old

“Got the first one through education, but have taken two more to keep me updated”

The second most mentioned reason for taking an avalanche course was safety. Respondents specifically pointed out learning about snow and safe touring.

Table 6. Main reason 2 – safety.

Nr 1, Female, 24 years old
<i>“To learn a little bit more and feel safe to be in the mountains, and then maybe alone too”</i>
Nr 8, Female, 23 years old
<i>“(…) something I wanted to do for a long time, to be able to evaluate avalanche risk myself and not just blindly trust my touring buddies”</i>
Nr 14, Female, 23 years old
<i>“ To learn more, and to be able to be in the mountains in a safer way”</i>

Researchers suggest that simple introduction classes before pursuing activity can improve participants perception of their own skills (Wu & Liang, 2011). It is argued that there are two types of adventure: risk taking adventure and gain knowledge and insight adventure (Weber, 2001). Respondents have been asked: *What did you benefit from taking that course? Do you feel that you have learned new skills?* Most of the answers were positive and stated that respondents have learned new, useful skills in the subject of avalanche. Many positive comments were connected to learning of the practical skills such as using beacon, digging snow profiles and understanding the snow better. Table 7 presents some of the answers.

Table 7. Respondents' description of benefits after the avalanche course.

Nr 1, Female, 24 years old

“Yes, learned a lot about affect weather has on the snow and avalanche danger, to make a snow profile and to use a beacon and probe (an avalanche search probe)” (author’s own translation)

Nr 7, Female, 38 years old

“To recognize different types of terrain, layers in snow. How snow impact snow. Yes learned new skills”

Nr 10, Female, 25 years old

“I know how to take a snow profile. Also what you need to be cautious about when there has been varied temp and precipitations”

Nr 12, Female, 29 years old

“Awarness and better understanding of the terrain, snow and potential danger (how to avoid it) Yes.”

It is argued by Brattlien (2015) that people in general do things they basically wish to do often in spite of consequences. The more an individual wish to do something, the blinder that individual is for arguments against it. In such situations, we overestimate our skills and knowledge and believe only in positive turn outs of the event. According to an American research of 41 fatalities, only 17% was caused by inexperience and not enough knowledge. The rest was explained by human factors such as bad communication, over optimism, attitudes and group dynamics (Brattlien, 2015).

The growing number of fatalities in winter backcountry tourism has resulted in promoting avalanche-educating programs. Most of them include information about weather systems,

observation techniques, and snowpack and terrain analysis (Furman, Shooter, & Schumann, 2010). The recent focus has shifted towards including the human factors such as overconfidence and inexperience (Brattlien, 2015), so the respondents in this study were asked about their perceived skills after taking the course. Participants in the survey were asked: *How would you describe your skills in recognizing the danger of avalanche after taking the course?* The answers included statements such as “*medium*”, “*could be better*” and “*not good enough*”.

Many of respondents have communicated wish to take more courses after that one and a need for more practice in the field of recognizing an avalanche to gain more experience. Statements such as “*one can never learn enough about the danger of an avalanche*” was also recorded. Sample of skills description is presented in table 8.

Table 8. Individual’s own perception about skills after the avalanche course.

Nr 1, Female, 24 years old

“It has become much better after the course but I feel always there is more to learn. One can never learn enough about the danger of avalanche” (author’s own translation)

Nr 8, Female, 23 years old

“After the weekend course which was pretty basic I mainly felt that there was lots I still didn't know and it made me want to learn more”

Nr 15, Female, 35 years old

“Better, but something that need to be practiced after taking the course. Important to use and discuss when skiing”

Challenge and skills

According to Wild (2008) winter mountain activities such as mountaineering, ice climbing and backcountry skiing require experience and physical fitness and equipment that is more technical compared to other activities and they involve also more risk (Wild, 2008). As mentioned before the degree of risk is impossible to remove and is a result of both the activities performed and the terrain (Heggie & Heggie, 2004; Wild, 2008). Participants expect the challenge provided by risk but can also experience the negative side of it in form of injuries and accidents (Johston, 1989).

It has already been stated, that participants involving themselves in adventurous activities are interested in feeling of fear and thrills and not the actual risk (Bentley, Cater, & Page, 2010; Cater, 2006; Elsrud, 2001; Wu & Liang, 2011). Accordingly, respondents have been asked about:

- 1) *If they like to challenge themselves?*
- 2) *If they like to have a control over situation when challenging themselves?*

All respondents answered positively to question number one. Some of the respondents were more precise and used words such as “*to a certain degree*”, “*depending on situation*” and “*every now and then*”. Further, 88% of the respondents agreed that they like to have a control over the situation when challenging themselves. Walle (1997) states that it is a quest for insight and knowledge that is a key aspect in adventure and not risks.

Excitement and challenge are the main characteristics that made this type of tourism popular among researchers and industry (Wu & Liang, 2011). The level of control over the expected mountain experience is the dividing line between the negative and positive side of risk. If participants can control the risk, they will find it challenging. If they will not be able to have a

control over it, the activity will become dangerous to them (Johston, 1989). In the further part of the questionnaire, respondents have been asked:

- 1) *Would you perceive yourself as a person who likes to take risks?*
- 2) *Did the fact that you have taken the avalanche course make you take the more challenging ski/snowboard touring trips?*

About 53% of the respondents answered negatively to the question number one. The amount of participants that answered positively was 24%. The fact that respondents have taken the avalanche course made them take trips that are more challenging according to 29% of the respondents. The 71% of participants in the study answered negatively with comments such as: “*made me more careful*”, “*I take less risks now*” and “*I am still not confident enough*”.

It seems that people in general try to convince themselves that their skills and judgement are enough to overcome accidents (Davidson, 2008). Adventurers prefer to attain risk on the accepted level according to their ability and motivation. If they fail to achieve this in the activity, they will try to increase or decrease the experienced risk (Johston, 1989). As stated before there are two types of accidents in the mountains in wintertime. People without knowledge about the dangers trigger the first type. People that do know about the dangers but decide to ignore it cause the second type. Overestimating own skills in managing the dangerous situations, being too keen on doing something in spite of dangers involved and ignoring the rational decisions is considered human factors (Brattlien, 2015).

To investigate the issues respondents have been asked about their own perceptions on skills they have obtained by taking the course. Respondents were asked the following question: *Do you feel that you have enough knowledge/skills about the danger of the avalanche to be able to go on ski/snowboard touring on your own (without another person as a guide)?* The majority

of the respondents issued positive answers. Among them 35%, that stated “yes” and others answered positively but only under special conditions. Some examples of those conditions are stated in table 9.

Table 9. Special conditions for taking ski/snowboard touring trip without another person as a guide.

Nr 5, Female, 29 years old

“Yes, but I never go touring alone (always at least two persons) in avalanche dangerous terrain“ (author’s own translation)

Nr 7, Female, 38 years old

“Yes, but I prefer company”

Nr 9, Female, 25 years old

“Could still need another person with me on challenging trips”

Nr 10, Female, 25 years old

“Yes, as long as I feel I know the area”

Nr 12, Female, 29 years old

“Yes, but choose to go where it’s safe (far away from 30 degrees)”

Following, respondents have been asked about using obtained skills in practice. The amount of 88% of the respondents answered positively to a question: *Have you been ski/snowboard touring on your own (without another person as a guide) since the avalanche course?* The group of 53% of respondents confirmed ski/snowboard touring at least once or more times in a week. The group of 24% of respondents have been ski/snowboard touring at least once or more times in a month. It might seem that people do not want to nor have time to get the expertise

themselves so they rely on the industry and hand over a significant part of the responsibility for the risk management to the adventure providers (Cater, 2006).

The rising amount of different types of courses inside the tourism industry might suggest otherwise. Researchers suggest that simple introduction classes before pursuing activity can improve participants perception of their own skills (Wu & Liang, 2011). Therefore, respondents have been asked if they would be willing to take a guided ski/snowboard touring trip after fulfilling the avalanche course. Results showed that 59% of the respondents would participate in the touring trips with another person as a guide and 18% answered “*maybe*”. Among the main reasons for willing to do so were interest in new areas and possibility to learn something new. In table 10, are presented some of the comments from the respondents.

Table 10. Reasons for choosing guided trip.

Nr 1, Female, 24 years old

“To learn more and to be even more confident in traveling in the winter mountains” (author’s own translation)

Nr 7, Female, 38 years old

“Always interesting to see other people’s perspective, and learn from others with some education but experience from other parts in Norway, e.g.”

Nr 10, Female, 25 years old

“If there are any cool and very challenging areas, it would be cool to try with a guide. Would make me feel more safe”

Nr 15, Female, 35 years old

“Going abroad, f. exp. France and Italy where I have no knowledge of the weather systems and terrain”

Nr 16, Male, 30 years old

“ Maybe if I go to new areas, to find good snow”

Discussion and assessment of the research objective

Backcountry skiing is a highly engaging experience and it can involve the activities on many levels of physical challenge (Furman, Shooter, & Schumann, 2010). The present study was conducted in the context of the re-invention of traditional mountain activities in form of backcountry skiing and ski touring that is both mentally and physically challenging (Johnston & Edwards, 1994). Previous research shows that engaging in such activities is an opportunity for self-fulfillment, a challenge and an opportunity for reflection (Page, Bentley, & Walker, 2005). At the same time, backcountry skiing was the third most common activity at the time of incident of an avalanche. Winter mountain activities such as mountaineering, ice climbing and backcountry skiing require experience and physical fitness and equipment that is more technical compared to other activities. These activities are seen as more risky than summer adventure activities (Wild, 2008).

The growing number of fatalities in winter backcountry tourism has resulted in promoting avalanche-educating programs. Improved gear, increased accessibility and reduced levels of risk attract more people to the activities in the mountains. The equipment often replace the experience (Johnston & Edwards, 1994). For some individuals the risk connected to the activity is the main attraction of the ultimate experience. Individuals perceive challenges and risks differently and they approach them differently. The reason for it are variations in individuals' personalities and previous experiences (Weber, 2001). To investigate an individual's experience, it is vital to develop first a better understanding of whom the individual actually is.

After discussing the subject of an individual, the interests, experience and motifs back taking the avalanche course, there will be further assessment of the affect of learning processes and

participating in the educational programs on the individual's experience. In this study, the theory of flow experience is investigated. As argued before Csikszentmihalyi's (2008) flow concept has two dimensions including skills and challenges that characterize an activity and only the equal balance between both will give a flow experience.

The discussion will be based on the two main research objectives:

- 1) Who is the backcountry skier? Developing a better understanding of an individual pursuing the activities of backcountry skiing and ski touring.
- 2) Exploring the flow experience. Can participating in educational programs such as avalanche courses influence the experience of flow?

Individual – The backcountry skier

The focus on a tourism experience needs to be shifted from providers and destinations towards the individual and his/hers perception. Individuals' subjective experience and perceptions will complement a better understanding and have implications for both management and marketing of adventure tourism. One of the main attributes of adventure activity is exploration and it involves more seeking scientific knowledge than searching for individual's personal desires. Level of risk while participating in the adventure may vary among the individuals. It is connected to the views of what adventure actually means to an individual. The perceptions on this subject will differentiate between members of the studied group (Weber, 2001).

According to this study, outdoor leisure activities are the most common thing respondents do in their free time. Mostly mentioned were winter activities such as skiing, snowboarding and ski touring. It can be argued that respondents are actively living individuals that like to spend

their time outdoors. Further, the analysis has shown that all of the respondents have tried both ski touring and, on-piste skiing. The snowboarding was the least popular activity among all. These results confirm that the group is actively participating in different adventure activities and that respondents are actively living individuals that like to spend their time outdoors. It is also worth mentioning that all of the respondents have been actively skiing/snowboarding for at least 10 to 30 years. It could be argued that the level of skiing/snowboarding skills among the participants in the study is quite high. It is interesting to notice that respondents own perceptions of their skiing/snowboarding skills differ from the observations. Skills are described as *medium*, *ok*, *good* and *in between*.

Further, results in this study show that 94% of respondents prefer off-piste skiing before on-piste skiing. These results are important as they indicate that the respondents are a main target group for the avalanche educational programs. As mentioned above they are active individuals and they were participating in the off-piste skiing/snowboarding in winter season 2017/2018 quite frequently. As argued before adventurers pursuit activities according to their interests and experience. They prefer activities that are unique, thrilling and give them feeling of enjoyment. The results presented five main reason for choosing backcountry skiing such as **freedom**, **challenge**, **less people**, **nature** and **fresh snow**. Respondents in the study mention different feelings at different levels of engagement. Further, they point out importance of connecting to the nature in a unique way. It is concerning previous research about adventure activities that take place in stunningly beautiful and dramatic natural environments that is not by accident.

Traditional definitions of adventure tourism focus on adventure recreation that represents interplay of competence and risk (Weber, 2001). Walle (1997) looks at adventure tourism as a quest for insight and knowledge rather than risk. According to results, 76% of the respondents

have taken the educational courses to learn other adventure activities such as rock climbing for example. Among the main reasons for doing so, were safety, learning new skills and gaining new knowledge. Respondents who did not participate in the activity courses agreed that it would definitely improve their skills in those activities. It can be argued that adventurers do not rely on the tourism industry and providers for taking the responsibility as stated before. Adventure tourists seek to gain knowledge and search for competence with evaluation of risk and danger.

Many of the respondents have taken the avalanche course as a part of their education or at the working place. This also proves that respondents are adventurer by nature, choosing the education and working place according to their interests. One can argue that it is a choice on a lifestyle. The previous research shows that adventurers seek risk for emotional rewards and its own sake but are much concerned about safety. This has been confirmed in this study as respondents mentioned safety as a second main reason for taking the avalanche course. Further, respondents have learned new, useful skills in the subject of avalanche. Many positive comments were connected to learning of the practical skills such as using beacon, digging snow profiles and understanding the snow better. This is in connection with previous research where preparation of the equipment and examination of environmental conditions need to match with competence and skills (Brattlien, 2015).

Surprisingly most of the respondents in this study perceived their own skills after taking the as *“medium”*, *“could be better”* and *“not good enough”*. Further, many of respondents have communicated wish to take more courses after that one and a need for more practice in the field of recognizing an avalanche to gain more experience. Statements such as *“one can never learn enough about the danger of an avalanche”* was also recorded. As Brattlien (2015) argued before, the human factor includes characteristics such as overconfidence, not seeing danger

correctly, overestimating own skills in managing the dangerous situations, being too keen on doing something in spite of dangers involved and ignoring the rational decisions. It is interesting that the results from this study do not confirm the previous statement that many avalanche incidents in mountains in wintertime are caused by a human factor.

Exploring the attributes of flow

It is argued that flow activities lead to growth and discovery. The activity cannot be enjoyed on the same level for a long period. After a while, an individual will become either bored or frustrated. The desire to feel enjoyment and thrills will result in stretching skills or in discovery of new opportunities. The challenges that that matter are the ones we are aware of. Equivalent, the skills that have an influence on our emotions are the ones we think we have and not the ones we actually have (Csikszentmihalyi, 2008).

According to flow theory, the level of challenge and skills while pursuing the activity must be in balance for achieving the optimal flow experience. Results in this study show that all participants like to challenge themselves but at the same time like to have a control over the situation while challenging themselves. It is in relation with previous research that states that it is a quest for insight and knowledge and feeling of fear and thrills that is a key aspect in adventure and not risks (Walle A. H., 1997; Bentley, Cater, & Page, 2010; Cater, 2006; Elsrud, 2001; Wu & Liang, 2011). The level of control over the expected mountain experience is the dividing line between the negative and positive side of risk. If participants can control the risk, they will find it challenging. If they will not be able to have a control over it, the activity will become dangerous to them (Johston, 1989). Further, it can be argued that respondents are looking for challenging experiences but are not interested in dangerous activities.

As mentioned before the risk is an inevitable part of the adventure experience. For most of the adventurers, it is a main reason for participating in the winter adventure activities. According to the results, over half of the respondents do not like to take risks. It was both interesting and surprising, since the risk seem to be an inherent part of an adventure activity. It could be argued that taking the avalanche course could make the respondents more aware of the dangers. Adventurers in this study did not start to take more challenging backcountry trips after taking the course. Even more, they became more aware of the challenges and dangers. They commented this by using words such as *“made me more careful”*, *“I take less risks now”* and *“I am still not confident enough”*. It has been argued before that people in general try to convince himself or herself that their skills and judgement are enough to overcome accidents (Davidson, 2008). The results presented above argue with this statement. Adventurers prefer to attain risk on the accepted level according to their ability and motivation (Johston, 1989).

As stated before individuals trigger two types of accidents. Adventurers without knowledge about the dangers cause some of the incidents and others cause the accidents knowing about the dangers but deciding to ignore them anyway. Overestimating own skills in managing the dangerous situations, being too keen on doing something in spite of dangers involved and ignoring the rational decisions is considered human factors (Brattlien, 2015). The majority of respondents have positive perceptions about their knowledge and skills about the avalanche after taking the course. They all are also positive about the fact that they can take now ski/snowboard touring trips on their own (without another person as a guide). Further, most of them have been using their new skills in practice.

Even though respondents have positive perceptions of their own skills in recognizing the dangers of avalanche, over half of them would be willing to take the guided

skiing/snowboarding tour with another person as a guide. It is an interesting finding for the adventure tourism providers. Among the main reasons for willing to participate in the guided trips were interest in new areas and possibility to learn something new. Taking part in the educational programs do not necessary means that the adventurers will never choose the organized trips again.

How to achieve the ultimate flow?

Taking part in the learning process can be a “new” adventurer way of influencing own adventure experience by achieving the “flow” state and getting the ultimate experience (Weber, 2001; Wu & Liang, 2011). Many researchers have studied the flow concept and its connection to different activities in adventure tourism. None of the previous studies investigates the flow experience in the ski touring context. The group of backcountry skiers can add a lot of new knowledge to the research of flow phenomenon. They are physically active group that strive towards achieving ultimate experiences. They are practicing winter adventure activities all year round, on a daily basis. There are possibilities of further research in this area of studies.

Ski touring might be more dangerous because the risks cannot be controlled as well as in other activities. There are factors that are difficult to manage such as weather conditions, terrain, mental and physical condition of participants. In spite of the challenges that cannot be controlled, there are other factors that can add to the achieving the flow. Improved and advanced gear in form of beacons, air bags, the avalanche search probes and snow shovels are some of them. It is argued that equipment often replace the experience (Johnston & Edwards, 1994) but this study proves that backcountry skiers do also want to rely on their own judgements. It is not

without a reason that some of the respondents underlined the wish for taking another avalanche course after this one.

Unfortunately, increased accessibility and reduced levels of risk attract more people to the activities in the mountains. As stated before the global warming causes melting of ice and snow, that will be followed by disappearing of available skiing areas. This will result in bigger groups of skiers in the reduced areas. The accidents will be inevitable. The importance of implementing educational programs such as avalanche courses is therefore a necessity. Some argue that this will not be enough. As mentioned before one can never learn enough about the subject of an avalanche.

According to Brattlien (2015) it can help to reduce the negative consequences but not to eliminate them. To reduce the possibility of an incident in mountains in the winter it is important to go touring with other people and talk to others that also have an experience in the field. Questioning each other's choices and decisions and discussing it can reduce the consequences of the human factor (Brattlien, 2015). The results from the observation was positive in relation to these statements. Backcountry skiers in this study go rarely alone ski touring and they discuss the choices of routes and the terrain with at least one person before going on the trip.

Conclusion

To conclude, the results of this study conducted, that the research of tourist experience from individual's perspective can develop a better understanding of an overall experience. Individual's own perceptions, behaviors, motivations and meanings are important factors in analysis of activity-based tourism. Previous experiences and possessed skills influence the choice of the accepted and suitable level of challenge in the pursued activity. Adventurers are interested in feeling of thrills and enjoyment but at the same time want to have a control over risks involved. Adventurers seem to strive towards an ultimate experience but are also concerned about safety issues. Considering the high level of fitness among the backcountry skiers, the challenges lay not within the individual's physical condition or the difficulty of the terrain. The challenges are more associated with the natural environment and unpredicted weather conditions. An individual cannot control these issues. Therefore, it is so important to gain as much knowledge and skills as one may need on the tour in winter landscape. One can never learn enough about the phenomenon of the avalanche and it is necessary with constant updates in this area of knowledge.

To summarize, the results of the study suggest that participating in the avalanche course can have positive effect on achieving an ultimate flow experience but is not necessary. As argued before the flow occur under a combination of different factors that have to be present. These attributes include high enough level of challenge that is in the balance with the possessed skills. The acceptable level of risk is also an important factor and should be present for thrill and enjoyment to occur. It seems that respondent group have ability to control all factors of flow experiment. They choose the more challenging trips when they know they have enough skills to perform it. On the other hand, they can adjust the level of skills and knowledge according to

level of danger expected on the trip. They are using the high quality and newest avalanche equipment and expertise of more experienced tour mates but always questioning and discussing the choices of routes and the terrain.

The limitations of the study and the future recommendations

There are a few uncertain sources when analyzing the data and they should be thought of when looking at the results. Some of them as the snow and weather conditions may change over the years. Dynamic of the individual human behavior is also a factor that cannot be stable over the longer period. The analysis is based on very limited data and it should be considered with caution. Respondents do not always return questionnaires, so the biggest problem is a low response rate. That is what happened in this case study. The small group of respondents will unlikely be representative. The characteristics, such as education, income, age, and opinions may not reflect the entire sample. This and the lack a control over conditions questionnaire is completed in can create a distortions. There is no one there to clarify the questions and language differences as well as difficult words. Further, the author's own translation might lack of precision and small nuances that could be important in overall response. However, it is still a valid information about the phenomenon and gives some general indications. All aspects of the study cannot be equally applied to all backcountry skiers, as they are a group of individuals with different perceptions and behavior. The human factors and individuals influences have an impact on the results and will not give the accurate scientific explanations. This research is also limited by the nature of the data that is specific for ski touring activity. Case study evaluations need to continue to confront the challenge of strengthening validity (Yin, 2013).

There is definitely possibility for further research in this area that can affect the tourism industry, tourism destinations and tourism providers. Implications for the industry could be in

form of including educational introduction programs in different areas of adventure activity tourism. The individuals taking part in such programs and improving their own skills by adjusting them to the challenges they want to experience could be a new group of adventurers. The ability of controlling the attributes in achieving the ultimate flow experience could be a new area for further research.

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Figure 6. Theoretical model examining the relationship between the avalanche course and the optimal flow experience in activity of backcountry skiing.

Appendix

Appendix A. Questionnaire used in this study.

Nr

INTRODUCTION				
<p>This questionnaire is for you who have taken an avalanche course and likes to go ski touring. The questionnaire is in English but you can also answer in Norwegian/Swedish/Danish if it makes you feel more comfortable and will help you formulate your answers better.</p> <p>Ski touring is skiing in the backcountry on unmarked or unpatrolled areas. It is similar to backcountry skiing. Typically is done off-piste and outside of ski resorts, and may extend over a period of more than one day.</p>				
DEMOGRAPHICS				
Gender: M / F	Country of origin:	Country of residence:	Nationality:	Occupation:
Age:				
Completed Education				
<input type="checkbox"/> Grunnskole/Primary school <input type="checkbox"/> Videregående skole/ Secondary or High school				
<input type="checkbox"/> College / University: Associate's / Bachelor / Master / Doctorate or PhD / Other				
GENERAL INFORMATION				
1. What do you usually like to do in your free time?				
<hr/>				
2. Did you try any of those adventure activities? If yes, circle the ones you did try:				
Ski touring / Rock climbing / On-piste Skiing / Off-piste skiing / Mountain running /Mountain biking /Backpacking /Snowboarding / Mountaineering				
3. Did you take any courses to learn any of the activities mentioned above?				
3a. If yes, why?				
<hr/>				
3b. If not, why?				
<hr/>				
3c. Do you think taking part in such a course would improve your skills in the activity you have tried?				

SKIING / SNOWBOARDING EXPERIENCE	
4.	For how many years have you been skiing/snowboarding now?
5.	Do you prefer to ski/snowboard: <input type="checkbox"/> On-piste <input type="checkbox"/> Off-piste
5a.	If off-piste, why? <hr/> <hr/>
6.	How would you describe in your own words your skiing / snowboarding skills? <hr/> <hr/>
7.	How many times have you been skiing/ snowboarding touring in winter season 2017-2018? <input type="checkbox"/> Few times a week <input type="checkbox"/> Once a week <input type="checkbox"/> Other <input type="checkbox"/> Few times a month <input type="checkbox"/> Once a month
AVALANCHE COURSE	
8.	Why did you decide to take an avalanche course? <hr/> <hr/>
9.	Did you have any knowledge about the avalanche from before you had taken the course? <hr/> <hr/>
10.	What did you benefit from taking that course? Do you feel that you have learned new skills? <hr/> <hr/>
11.	How would you describe your skills in recognizing the danger of avalanche after taking the course? <hr/> <hr/>
CHALLENGE PART	
12.	Do you like to challenge yourself?
13.	Do you like to have a control over situation when challenging yourself?
14.	Would you perceive yourself as a person who likes to take risks?
15.	Did the fact that you have taken the avalanche course make you take the more challenging ski touring / snowboard touring trips?

SKILLS PART

16. Do you feel that you have enough knowledge / skills about the danger of avalanche to be able to go on ski touring / snowboard touring on your own (without another person as a guide)?

17. Have you been ski touring/snowboard touring on your own (without another person as a guide) since the avalanche course?

17a. If yes, how often?

Few times a week

Once a week

Other

Few times a month

Once a month

17b. If NOT, why?

18. Would you take a guided ski / snowboard touring trip after taking the avalanche course?

18a. If yes, why?

18a. If NOT, why?

Appendix B. The list over fatalities caused by an avalanche between 2002 and 2018.

Vinter Dødsulykker

- 2017/2018 3 døde
 29.03.18: Skuterfører, Kildalen, Nord-Troms
 01.04.18: Skikjører, Sydalsfjellet, Lofoten
 12.04.18: Skikjører, Russelvfjellet, Lyngen
- 2016/2017 2 døde
 16.03.17: Skikjører, Kavringtinden, Lyngen
 09.04.17: Skikjører, Litlskjorta, Møre og Romsdal
- 2015/2016 5 døde
 19.12.15: To beboere i hus, Longyearbyen, Svalbard
 27.03.16: Skikjører, Russelvfjellet, Lyngen
 24.04.16: Skikjører, Aurland
 30.04.16: Skikjører, Kyrkjetaket, Møre og Romsdal
- 2014/2015 6 døde
 24.01.15: Skuterfører, Fardalen, Svalbard
 10.02.15: Skuterfører, Reisdalen i Nord-Troms
 17.02.15: Skikjører, Fastdalstinden, Troms
 20.04.15: Skikjører, Tjønnholstind, Jotunheimen
 31.05.15: To turgåere (på bena), Merraflestinden Lofoten
- 2013/2014 9 døde
 28.11.13: Skuterfører, Bjørnfjell, Nordland
 22.02.14: Snøbrettkjører, Uvdal, Buskerud
 16.03.14: Skuterfører, Brennmotind Troms
 24.03.14: Skikjører, Kroktindan, Vågan, Lofoten
 05.04.14: Skuterfører, Kistefjell, Alta
 14.04.14: Fire skikjørere, Øksendal, Møre og Romsdal
- 2012/2013 8 døde
 24.12.12: Snøbrettkjører Totten Hemsedal
 03.01.13: Klatrer Skogshorn Hemsedal
 17.03.13: Snøbrettkjører, Kattfjordeidet, Troms
 24.03.13: Skikjører, Kroken, Troms

- 26.03.13: [Tre snøskuterførere, Senja, Troms](#)
 21.04.13: [Skikjørere, Storhaugen Troms](#)
- 2011/2012 7 døde
 18.02.12: [Skikjørere, Middagstind, Troms, 2 døde](#)
 19.03.12: [Skikjørere, Kåfjord i Troms, 5 døde](#)
- 2010/2011 13 døde
 18.12.10: [Skikjørere, Tromsø](#)
 16.01.11: [Brøytebilsjåfør, Gyavatnet, Rogaland](#)
 16.01.11: [Til fots, Kvittingen, Hordaland](#)
 11.02.11: [Snøbrettkjørere, Eikedalen, Hordaland, 2 døde](#)
 20.02.11: [Skikjørere, Sortland, Nordland](#)
 05.03.11: [Skuterførere, Tana, Finnmark](#)
 05.03.11: [Skikjørere, Rauland, Telemark](#)
 21.03.11: [Hus, Balestrand, Sogn og Fjordane, 2 døde](#)
 24.03.11: [Skuterførere, Hammerfest, Finnmark](#)
 07.04.11: [Skikjørere, Sykkylven, Møre og Romsdal](#)
 23.04.11: [Skikjørere, Breidalen, Oppland](#)
- 2009/2010 9 døde
 26.12.09: [Skikjørere, Rauland](#)
 03.03.10: [Skikjørere, Tuddal](#)
 10.03.10: [Skigåere, Tana](#)
 01.04.10: [Skikjørere, Kvaløya Tromsø \(2 døde\)](#)
 16.05.10: [Skigåere, Vefsn Mosjøen \(4 døde\)](#)
- 2008/2009 4 døde
 26.02.09: [Skikjørere, Kroken Tromsø](#)
 13.03.09: [Skikjørere, Kirketaket Romsdalen](#)
 15.03.09: [Snøskuter, Hiorthfjellet Svalbard](#)
 17.05.09: [På bena, Tromsdalstind Tromsø](#)
- 2007/2008 3 døde - [les samlerapport](#)
 05.01.08: Skikjørere, Kyrkjetinden Ørsta
 21.03.08: Snøskuter, Stavadalen Setesdal
 21.04.08: Skikjørere, Uløya Lyngen
- 2006/2007 3 døde - [les samlerapport](#)
 04.03.07: Skikjørere, Sølvkallen Sunnmøre

04.03.07: Snøskuter, Åse Andøya
23.03.07: Snøskuter, Kvalvikfjellet Lyngen

2005/2006 2 døde - [les samlerapport](#)
08.04.06: skikjører, Hamneidet Lyngen
28.04.06: skikjører, Råna Sunnmøre

2004/2005 3 døde - [les samlerapport](#)
27.02.05: klatrer, Kongstind Svolvær
12.03.05: skigåer, Jondal Hardanger
03.04.05: på bena, Tromsdalstind Tromsø

2003/2004 4 døde - [les samlerapport](#)
02.01.04: klatrer, Torfinnstind Jotunheimen
15.02.04: jeger, Måselv Troms
13.03.04: skigåer, Grovabreen Jølster
22.03.04: snøskuter, Malardalen Svalbard

2002/2003 2 døde - [les samlerapport](#)
20.11.02: Skikjører, Tronfjell Alvdal
12.01.03: [Turgåer på truger, Bispen Romsdalen](#)