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Developing Safety Competencies Among Arctic Nature Guides in Training: An Analysis of Student Experiences

Abstract. This paper reports on a yearlong, longitudinal empirical study conducted in Svalbard that sought to explore safety competency development among tour guides undergoing training. This paper seeks to clarify how tour guide training in the Arctic contributes to enhancing safety and risk management competencies. The data-gathering methods employed in this study included participant observation by a researcher immersing herself in learning process of students participating in Arctic Nature Guide program. The purpose of the study was to explore the use of Experiential Learning theory in tour guide program. The findings from the study indicate that Experiential Learning theory may be an effective tool for developing students' safety and risk management competencies. This study contributes to existing knowledge on safety training for tour guides, providing insight into how training programs can best prepare tour guides for functioning in extreme environments. This study also provides recommendations for further research related to tour guide safety training.

Keywords: tour guide, safety competence, risk management, experiential learning, arctic tourism

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1. Introduction

Safety concerns related to travel in the Arctic is an emerging research topic in tourism and safety studies, especially in the context of field operations (Adumene & Ikue-John, 2022; Kruke & Auestad, 2021; Albrechtsen & Indreiten, 2021; Indreiten, Albrechtsen & Cohen, 2018; Sydnes, Sydnes & Antonsen, 2017). Although remote locations and extreme weather may be attractive for tourists traveling in the Arctic, these attributes make it difficult for adventure guides to ensure the safety of tourists. Research indicates that there is an urgent need to emphasize tour guide training meant to enhance tourist safety (Weiler & Ham, 2002). Risk management

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and safety training for tour guides in high-risk environments teaches the skills needed for effective coordination, especially during emergencies. Tour guides must possess superb leadership, decision-making, and communication skills in order to maintain safety standards. Moreover, both individual and team training should be implemented to enhance knowledge-sharing capacity (Grote, 2012). Tour guide training in the Arctic is intended to enhance tour guides' capacity to lead guests in inhospitable environments, therefore it is important to understand how guides are trained and what learning theories are used to develop safety and risk management skills. This paper addresses the gap in research on training tour guides who work in extreme environments by examining how the Arctic Nature Guide (ANG) program provides students with reliable knowledge that can be applied to manage risk during adventure tours in the Arctic.

This study employs an ethnographic approach to focus on the experiences of guides in training, with an emphasis on integrating their personal perspectives and interpretations of the learning process. The study focused on examining the key factors related to successful safety competency development for tour guide training in the Arctic. Moreover, this paper contributes to the limited body of ethnographic research on nature-based tourism (Rantala, 2011), particularly in the context of tour guide training and safety practices (Rantala & Valkonen, 2011).

The data analysis identified a pattern of reflection on expanding decision-making capacity, which is in line with Kolb's experiential learning (EL) theory. Experiential learning theory is deeply rooted in outdoor education, and it is commonly used for training (Valkanos & Fragoulis, 2007) and education purposes (Lam et al., 2019; Healey & Jenkins, 2000; Fowler, 2008; Kolb & Kolb, 2017). This paper, however, seeks to expand its potential applications by analyzing its utility for tour guide training.

The novelty of this research it twofold: an exploration of the safety skill acquisition process during tour guide training programs in the Arctic by using participant observation method.

Hence, to fulfill the aim of the research, this paper seeks the answer to the following questions:

- How students' experiences during ANG program influence the process of development of safety and risk management competence?
- What strategies can be used to enhance risk management and safety competence acquisition in guide's training?

This paper first summarizes existing knowledge related to safety in the Arctic, tour guide training programs, and EL theory. Next, the paper examines the ANG

program by describing five cases of students' experiences participating in various activities as part of the training program. This discussion highlights the importance of exposing students to real-world environments (in this case, the Arctic) and importance of encouraging students to take on the role of decision-maker when training as a tour guide, as both approaches are crucial to developing target competencies among tour guide trainees. Finally, the conclusion emphasizes potential future applications of EL theory for developing safety and risk management competencies via training programs. It also addresses further avenues of potential research related to training Arctic tour guides.

2. Literature Review

2.1. Tour Guide Training

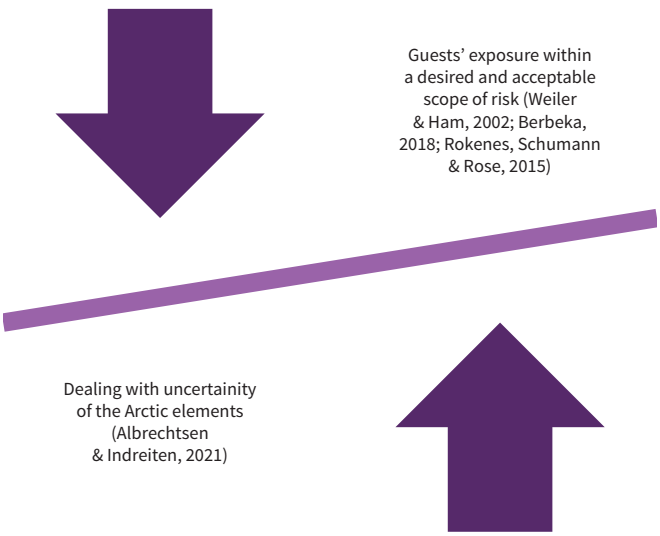
The occupation of tour guide has a long tradition of informal learning, where guides often learn on-the job rather than in the classroom. Despite continuing efforts to gain recognition of the knowledge and responsibilities of tour guides, limited research focused on value of guides education (Weiler & Black, 2015). Most research on tour guide training has been conducted in countries where tourism businesses require some form of official certification, such as tour guide licenses (Dahles, 2002; Esichaikul et al., 2020; Huang & Weiler, 2010; Mason and Christie, 2003). Some forms of certification are also required from businesses involved in high-risk adventure sports, such as white-water rafting, scuba diving, and mountaineering (Hunter, 2007; Wilks and Davis, 2000; Mackenzie & Kerr, 2012). In the research on tour guide training, Mason and Christie (2003) argue "that good guide training should lead to change, not only in terms of knowledge and skills, but also in attitude and behavior" (p. 1). Many existing studies on tour guide education, including Brito (2020), Mason and Christie (2003), and Prakash and Chowdhary (2010), evaluate program curriculums and discuss whether programs produce the desired outcomes. However, these studies only discuss the well-known roles of guides, including mediator (Cohen, 1985), "leader, educator, public relation representative, host, [and] conduit" (Pond, 1993 in Mason & Christie, 2003), as well as "educator, information giver, leader, role model, catalyst, mediator, protector, organizer, company representative, [and] facilitator of access to non-public areas" (Weiler & Black, 2015, p. 23). Although these roles are essential to facilitating guests' experiences, they all lack to prioritize the role of guide safety management. The importance of the tour guide for ensuring safety has been mentioned in several existing studies

on guide training and practices, particularly in the context of risk perception and guest experience facilitation (Cater, 2006; Mackenzie & Kerr, 2012). Although these studies discuss the safety practices of guides, it is imperative to understand how guide training can successfully develop guides' risk management skills and which strategies can be used to enhance safety skills acquisition. Therefore, this paper addresses the gap in the literature on how tour guide training can successfully enhance the safety competency development among tour guides.

2.2. Guiding in the Arctic: Tour Guides' Roles and Safety Competency

Tour guides must continuously balance ensuring tourist safety with delivering experiences (Weiler & Ham, 2002). This tension must be considered when discussing safety procedures, as guides are responsible for meeting the expectations of various stakeholders (Weiler & Black, 2015). Guides working in the Arctic face a twofold challenge: They must ensure that guests' exposure to hazardous environments is within acceptable limits of risk (Berbeka, 2018; Rokenes, Schumann & Rose, 2015) while also coping with environmental uncertainties, such as rapidly changing weather, the risk of avalanches, the dangers posed by glaciers, and the changing availability of search and rescue services (Figure 1).

Figure 1. The Role of Tour Guides in the Arctic



Source: own elaboration based on Albrechtsen & Indreiten, 2021; Weiler & Ham, 2002; Berbeka, 2018; Rokenes, Schumann & Rose, 2015

Arctic safety in an operational context is an emerging research topic in tourism and safety studies. Albrechtsen and Indreiten (2021) have written a comprehensive summary of Arctic safety in operational contexts that addresses several challenges, such as harsh weather conditions, remoteness, limited infrastructure, climate change, and a lack of knowledge and data. In the Arctic climate, guests' wellbeing is dependent on tour guides' sound judgment and decision-making; therefore, it is imperative to understand how tour guides develop their critical thinking and decision-making skills. Tourist safety and accident prevention in the Arctic depend not only on the guide's actions, but also on the organizations where guides are trained and pursue careers.

This paper makes use of the *Arctic guide safety competency framework*, which the author developed as part of her own Ph.D. research. This framework is based on research conducted on tour guides working in Iceland, Svalbard, and Greenland. The findings, summarized in Table 1, reveal that Arctic adventure guides must possess technical, interpersonal, and operational skills as well as situational knowledge to successfully manage environmental risks on trips.

Table 1. Arctic guide safety competency framework

Technical skills	Interpersonal skills	Operational skills	Situational knowledge
First aid, navigation, reading and understanding meteorological data, avalanche, polar bear safety, skills related to specific activities (snowmobiling, sailing, skiing, climbing, and hunting); the ability to correct use of the equipment	Leadership, planning, organizational, teaching, stress and time management, storytelling skills. the ability to assess tourists' skills; confidence and flexibility	Decision-making and communication skills;	Knowledge of specific weather patterns, terrain, language, sociocultural contexts, local people and nature, and customs and traditions

Source: based on own research

Although this proposed safety competency framework builds on existing studies in the field of outdoor adventure education, it is unique for emphasizing situational and local knowledge—in this case, situational and local knowledge about the Arctic. Local knowledge has been identified as a mediating factor in decision-making, and therefore, this paper seeks to understand how situational knowledge is dealt with, if at all, by formal training programs. The findings from mentioned study highlight that knowledge is built on training and experience; therefore, this paper explores the use of EL theory for enhancing safety competency development in training programs.

2.3. Experiential Learning

There is little research on the competence learning process in tour guide training programs. Therefore, to discuss the use of EL, it is crucial to conduct research in situations where learning resemble real-world situations, such as outdoor adventure education, wilderness education, and environmental education (Martin et al., 2017; Ewert & Sibthorp, 2014). This kind of learning, according to Martin et al. (2017, p. 5) should include "teaching and learning activities and experiences usually involving a close interaction with an outdoor natural setting and containing elements of real or perceived danger or risk in which the outcome, although uncertain, can be influenced by the actions of the participants and circumstances."

Outdoor education is perceived as transactive, and it emphasizes interactions between two words: students and the natural environment, which is also referred to as "sense-making of active engagement between the inner world of the person and the outer world of the environment" (Beard & Wilson, 2006, p. 2). Such interaction increases student's awareness to participate in the process, create meaning and reflect upon gained experiences. EL theory, introduced by Kolb as "learning as the process whereby knowledge is created through the transformation of experience" (Kolb, 2014, p. 49) has strong relation to outdoor education.

Experiential learning theory is based on the recognition that learning is a lifelong process, adaptive in nature, and oriented towards a conceptual bridging across life real-world situations. Drawing on the work of Dewey, Piaget, and Lewin, with Kolb concluding that "the knowledge results from the combination of grasping knowledge and transforming experience" (Kolb, 2014, p. 51). Kolb's EL cycle, which describes the process of learning, is composed of the following components: concrete experience (CE), reflective observation (RO), abstract conceptualization (AC), and active implementation (AE; see Figure 2).

When discussing EL theory, other related concepts developed by Kolb must be mentioned, such as grasping and transforming experiences. Kolb includes several dimensions of the learning process within the cycle, including grasping and transforming experiences. In this context, grasping refers to the act of experiencing or comprehending an experience (CE and AC), and transforming includes reflecting upon an experience (RO) and applying that experience to a real-world situation (AE). Both, grasping and transforming processes are equally important and complementary within the learning process.

Experiential learning theory places emphasis on the learner and the process of competence acquisition. The process needs to be carefully designed and facilitated, as low-quality experiences and lack of reflection will result in poor educational value. In EL theory, learning is a continual process that can be initiated during

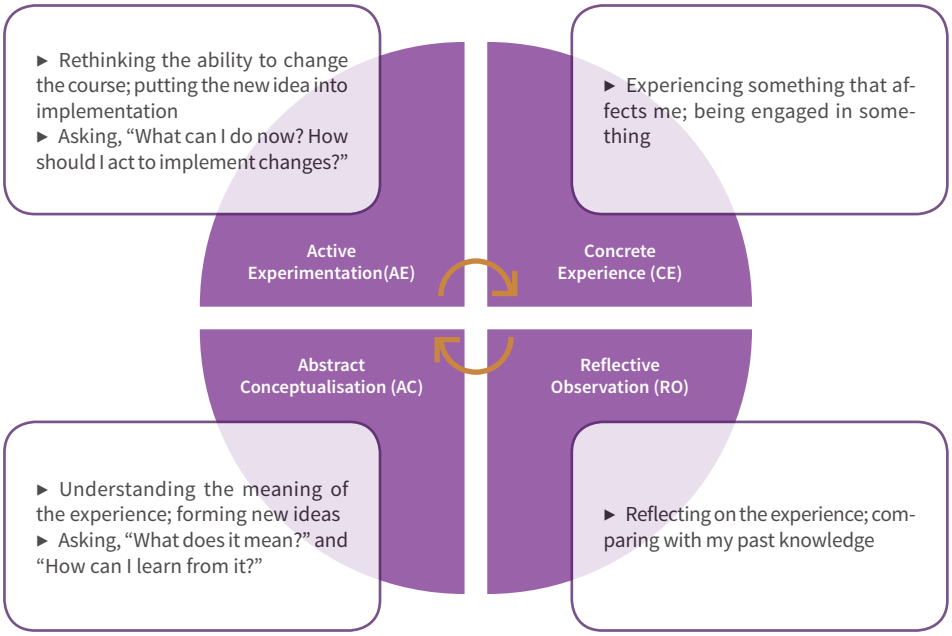


Figure 2. Kolb's Experiential Learning Cycle with Guiding Questions
Source: own elaboration based on Kolb (1984)

any phase of the learning cycle. Consequently, student knowledge acquisition is measured by the student's ability to critically reflect on their knowledge and skills rather than on their ability to achieve tangible program outcomes, such as obtaining technical skills.

Additionally, EL theory emphasizes the processes of adaptation and learning and recognizes knowledge acquisition as a transformational process of creation and recreation. Hence, to fulfill the aim of the research, this paper addresses the process of student's critical reflection on competence development in Arctic Nature Guide program.

2.4. Arctic Nature Guide Program in Svalbard

The ANG program in Svalbard is part of the Arctic Friluftsliv bachelor program at the Arctic University of Norway, which offers 60 credits within the European Credit Transfer and Accumulation System. The program can be completed as a one-year degree or as part of a three-year bachelor's degree. The program at Svalbard is the northernmost specialized tour guide program at the university level in the world. Developed in close cooperation with local tourism industry stakeholders,

the program consists of four main subjects: Arctic safety and field leadership, safe tour guiding in the Arctic, value-based guiding and Arctic nature education, and Svalbard history. The curriculum outlines the main learning objectives as follows:

1. Theoretical knowledge of safe travel in the Arctic, outdoor leadership skills, knowledge of nature-based tourism and outdoor education
2. Skills for safe travel in the Arctic and hostmenship
3. Awareness of the responsibilities, skills, and competencies related to leading guests in demanding arctic environments; the ability to reflect on values related to nature experiences (UiT Norges Arktiske Universitet, 2020)

The curriculum content is taught in the classroom and applied during field trips, and students are required to attend all classes and participate in field trips in order to graduate. Practical skills courses on topics such as glacier guiding, multiday hiking, winter camping, skiing, snowmobiling, sea ice crossing, avalanches, motorboats, and first aid are part of the program. Students must also complete a five-week practice placement, during which students initially follow an experienced guide, to eventually practice guide's role within learning settings. The program also partners with the University Centre of Svalbard, where students take courses on Arctic safety and leadership and receive field assistance during field trips from technical staff. The courses focus on field leadership, as well as technical skills such as Arctic first aid, snowmobile driving, travel on sea ice etc. Each year, approximately 25 to 30 students attend the program, and most are of Norwegian origin. The program is taught in English.

The ANG program enables students to engage in hands-on activities in order to fulfil the numerous objectives of the program. This paper will now examine the relationship between learning outcomes and EL theory in order to better understand the learning process in the ANG program.

3. Methods

3.1. Research Process

This study is part of the author's larger Ph.D. project, which focuses on the role of Arctic tour guides in managing tourist's safety, as well as the role of training in enhancing safety competency. This research employed an empirical, longitudinal study tracking safety competency development among students of the ANG pro-

gram in Svalbard. Competency development at tour guide training schools occurs mainly through cooperative learning that involves students working together and collaborating on group tasks. This is consistent with a constructivist approach, where "learning occurs when one plays an active role to construct one's knowledge whereas teachers create a platform with challenges and coach them in the learning process" (Chaille, 2008 in Harfitt & Chow, 2020, p. 27). The researcher employed a constructionist approach in order to collect field data on cooperative knowledge creation and classroom interactions and generate meaning upon analyzing observations from the field (Crotty, 1998).

The author, as a participant observer, conducted ethnographic research on a group of students training to become tour guides in the Arctic. The author gathered data by observing and taking field notes on students' behavior during classroom instruction and field trips. The research practices included direct observation, participation in group activities and discussions, note-taking, and self-analysis. Prior to data collection, the researcher identified herself to the group of students and teachers, gained informed consent, and explained her research objective for shadowing the classroom activity. Participant observation involved the following steps: (1) gaining access to the training program upon dialog with the program coordinator; (2) explaining the objectives and methods of the research project to the students and collecting consent from participants; (3) observing classroom activities and collecting data; (5) analyzing data and organizing data into themes; (6) completing the research by drawing an conclusion. The researcher acted as a participant and observer and remained in these roles without taking part in any decision-making processes. During the first few field trips, students approached the researcher seeking advice; however, the researcher explained that she was unable to offer advice as she was simply an observer. The students respected her explanation.

During this yearlong study, various methods of data collection were employed, such as field interviews, photographs, field notes, surveys, and in-depth interviews. For the purpose of this paper, the primary sources for data analysis derived from participant observations, collected as field notes.

3.2. Data Analysis

Ethnographers do not always specify their research questions before entering the field; indeed, they sometimes observe their study subjects while employing an inductive and integrative approach (Reeves et al., 2013). Likewise, the research questions for this study were formalized during the time spent in the field conducting observation. The notes taken by the researcher consisted of six 48-page field notebooks, 28 memos, and several field voice recordings. ATLAS.ti software

was used to organize the digitalized data, while the notes in the notebooks were analyzed manually. It is while observing the students that the author formulated the following research questions:

- How student's experiences during ANG program influence the process of development of safety and risk management competence?
- What strategies can be used to enhance risk management and safety competence acquisition in guide's training?

These questions motivated the researcher to focus her observations on students' interaction with potential tour guide environments and discussions that focused on reflecting on those interactions. By exploring this relationship, the researcher sought to identify patterns of how students discussed their skills and knowledge. In the following analysis patterns are presented as cases, each representing learning context- student's milestones in gaining knowledge and experience, including reflective sessions upon skill acquisition.

4. Results

4.1. Identification of Student Experiences During the ANG Program

In the process of data analysis of students' descriptions of the *experiences* during the ANG program, following themes were identified: opportunity and activity. After the initial selection of themes, examples of students' experiences (*further referred as cases*) observed by the researcher were selected and analyzed in the context of codes (action, discussion, exposure, experience, and reflection) as factors influencing the understanding of the elements of the development process. As re-organizing, searching, and re-linking are part of the research process (Reeves et al., 2013), Table 2 was designed as a tool for illustrating the relationship between the themes, codes, and cases. Table 2 also provides a rigorous explanation of the process of safety competence acquisition over time. Activity 1 occurred at the beginning of the study, and Activity 5 occurred at the end of the study.

The findings are summarised in the form of five activities in which students gained experiences during the ANG programme. Each activity (consisting of description of learning environment, learning content, discussion set up and skill development represents an EL cycle, while all experiences (activities 1–5) make up

a yearlong learning cycle (where each consecutive activity builds on the knowledge gained from the previous one).

Table 2. Student Experiences During the ANG Program

	Case 1	Case 2	Case 3	Case 4	Case 5
Activity	Hiking	Glacier rescue training	First aid and leadership course	Final skiing trip	Classroom discussion
Learning environment	Polar bear territory, exposure to leadership and decision making	Harsh weather, unfamiliar terrain, exposure to social interaction	Remoteness, exposure to leadership role	Guiding guests in the Arctic terrain, being a team member, situational leadership	Reflection on learning environment (leadership role in the Arctic including technical, interpersonal, operational and skills and situational knowledge)
Learning content	Issues related to lack or limited knowledge and experience on Arctic safety	Various experiences and background between group members, glacier travel, hiking; interpersonal skills	Technical and operational skills; leadership role	Planning and facilitation of the trip; guide's role in experience creation; interpersonal skills	Performing leadership role, active participation in course as group member; decision making in Arctic environment
Discussion set-up	Small group	Small group	Whole class	Small groups and guests	Whole class
Skill development area and strategy for improvement	Need for more experience and input from others for better decision-making, improving leadership style	Integrating various experiences and time management in harsh environment	Acquiring skills related to the ability to sustain life in a remote and cold environment; situational leadership	Recognizing the learning process, including role-play and exposure to the elements of Arctic safety and guiding as important in developing competence	Maintaining *competence toolbox* for decisionmaking based on obtained experience and skills related to guiding groups in the Arctic

Source: own research

Before each trip, students were divided into groups. Once in groups, students planned and prepared for the upcoming activity: They identified group challenges, mapped the various needs and competencies of each group member, and decided

on the group rules. After being divided into smaller groups, the student left the campsite. They hiked different routes during the day but met at the same location to set up camp. This was done primarily so that they could share responsibility for the polar bear watch, which lasted from arrival until departure the next day. Each morning, the "guide of the day" took the lead until lunch, when another person was appointed leader and guided the group to the camp. The purpose of this arrangement was to enable students to practice different roles, solve problem and make decision as guides. Each trip typically lasted five to six days. Each trip typically lasted five to six days. Students were accompanied by teachers for the first four days. After four days, the teachers left the students alone after ensuring that they had established safe camp and hiking routines.

After the activity was over, the group engaged in a discussion, which included presenting their work to the class. As the year progressed, the students became increasingly independent in their planning. They organized a final skiing trip with guests, identified and planned a route, maintained relationships with guests, and solved problems during the trip. The various activities were as follows: a multiday hike (September), glacier travel — rescue practice (October), a first aid and leadership course (late October), a final skiing trip (May), and a final debriefing at the end of the program (June).

4.2. Activity 1: Multiday Hiking Trip

Description: After breakfast on day four, the teachers left the field trip location with students who were unable to continue the trip due to health reasons. The remaining students were left to make their own decisions. While some students had already worked as tour guides, for others it was a first-time experience and an opportunity to practice their decision-making and problem-solving skills as guides. The group that the researcher followed was the last one to leave the camp, and the guide in charge displayed a relaxed attitude. Guides can delegate tasks to other group members, and this guide had sent someone else to walk in the front of the group while himself chatted with the group members in the middle. During breaks to adjust clothing or drink water, some students looked confused; they somewhat expected to be given clear instructions from the guide about time and group management during the hike. Such issues eventually escalated into a bigger discussion during lunchtime. Some students who were in Svalbard for the first time were worried that their safety skills were not adequate to travel in polar bear territory. One student recounted a polar bear encounter from the first camping trip two weeks prior to the hiking trip. On that occasion, students guarded their campsite against a polar bear for several hours.

Reflection: One of the guides for the day initiated a discussion on leadership style and decision-making. Some students expressed their concerns regarding different leadership styles in relation to specific safety threats, such as polar bears.

One of them criticised the choice of the lunch location: although it a patch of hollow ground, which offered protection from the wind, it made it difficult to spot polar bears. This remark was acknowledged by the guide in charge, who described the situation as a "difficult Svalbard choice" between a location with good visibility or one that provides protection from the wind and cold. The decision was evaluated as being the result of "forgetting about the Arctic environment," and was used to highlight the need for guides to gain proper experience and knowledge so that their decision-making skills could improve. According to another student, a decision, such as where to stop for lunch, must be made after consulting with all group members. She said: "If nobody speaks up, then the rest of the group will be unaware of the issue, and it cannot be expected that the problem will be fixed."

4.3. Activity 2: Glacier Rescue Practice

Description: Students practiced glacier rescue on a glacier in outskirts of Longyearbyen town, the place where students live and study. The exercise required preparation, practice, and documentation of group work, and group members worked together before, during, and after the exercise. In the morning, before heading to the glacier, students gathered at the designated meeting place. Some members were late, and therefore, the group was not ready to leave on time. Once on the glacier, the groups worked together in the roped team (technique used for traveling as group on the glacier) taking part in a "crevasse rescue operation." Once the exercise was over, the followed group prepared to leave the glacier. Some students were taking longer to pack their belongings, making other students impatient and concerned about the unpleasant cold weather and wind. There was a lack of transparent communication between group members; some were left behind, posing a safety risk associated with polar bears. Because the snow was deep, walking back was strenuous and became more challenging, causing gaps between group members to increase. Once back in town, the group decided to discuss the tension between group members.

Reflection: Since the discussion was to be held in the kitchen of the house inhabited by some of the students, the group agreed to eat first and then conduct the discussion. The conversation began with addressing the different expectations of group members. This led to a discussion on differences between team members, their previous experiences, especially in relation to safety in the inhospitable Arctic environment. This helped the group to become aware of differences between each member's physical and mental abilities and their previous background. Time

management, especially in the context of upcoming winter trips, was mentioned as a crucial factor contributing to safety. The group did not reach a conclusion; however, the discussion was described by one of the student as "not nice, but needed".

4.4. The First Aid Course and Leadership

Description: Students took part in a three-week course on risk analysis, situational leadership, and first aid. Each part of the course consisted of lectures followed by practical exercises. During the week of first aid course, students were able to practice emergency medical cases indoors and outdoors, often working in cold and windy conditions. The discussion took place at the end of the 40-hour first aid course. It was a summary of an outdoor exercise day outdoors, with case scenarios. The debriefing took place in a classroom in the presence of the instructors involved in the first aid course.

Reflection: Students were asked to reflect on the experiences and explain their tasks and roles. Students mentioned experiencing difficulties communicating with rescue services via a satellite telephone. They also experienced stress when reading coordinates from a map and had challenges with decision-making. Students also reported feeling frustrated when the arrival of outside help was postponed. However, they appreciated the exercise as an opportunity to be exposed to "real environment," such as cold and isolated environments which can affect leadership performance and decision-making. Each exercise involved a few hours of exposure to the environment, which helped make students aware of the "seriousness" of the situation. This also highlighted the need for better leadership skills when leading a group.

4.5. Activity 4: Final Skiing Trip

Description: The last field trip was a six-day skiing trip that involved students guiding groups of guests. The trip began indoors with an explanation of the plan for the ski trip. Next, members of each group introduced themselves. Afterward, each group went skiing on the mountain and gathered at the joint campsite at the end of the day with other groups. Finally, all of the groups returned to town. At the first pre-departure meeting for each small group, the students asked the guests to introduce themselves and describe their expectations regarding the trip. These included things like wanting to explore Svalbard nature, ski on glaciers, or learn how to camp in the winter. Some group members, who possessed an extensive background in winter sports, mentioned that they had never gone on a multiday skiing trip and had never tried winter camping. This trip provided students with

many opportunities to talk to guests, as everyone gathered for meals in the afternoon and evenings when they talked and got to know each other. In the middle of the trip, especially during the long skiing days, the difference between guests with more skiing experience and those with less experience became more noticeable. However, frustrations of individual tourists had no effect on social interactions between them. During the last two days, the groups spent many hours chatting and discussing their experiences during the trip. The discussions took place after dinner when students served cake and coffee. The groups gathered in the "lunch pit," which was a circular structure made of snow that had walls to lean on. While openly sharing their experiences, the group members sat comfortably next to each other with a clear view of the mountains and the fjord.

Reflection: The discussion started with one of the student asking guests what they had learned during the trip. While many expressed their gratitude for being able to take part in the experience of skiing in Svalbard, a few focused on the personal challenges they encountered during the trip. Two of the comments are worth mentioning: one was made by a person with broad experience in skiing and winter traveling who stated that he was "okay with not reaching the goal but enjoyed learning about different people in the group on the trip and felt part of the group." The other comment came from a guest with less experience in winter camping and skiing and focus on her physical condition, expressing her satisfaction with being able to camp on the glacier and ski in such consistently cold weather.

Then, the guests asked the students what they had learned during the year. One of the students stated "learning how to be more comfortable with the winter in Svalbard." Another mentioned, "to work with others and trust my group." The student emphasized that by working with students from a previous trip, they had developed a mutual understanding and respect for each other's space and leadership style while working toward the same goal. Having been able to guide "real guests" instead of just their peers was cited as an important opportunity for applying the knowledge they had learned in the classroom to a real-world scenario.

One student stated that previously she had not been interested in guiding but developed a better understanding of the role of a tour guide due to the training program. She mentioned that being given the responsibility of ensuring the wellbeing of other people and dogs enabled her to see "the bigger picture." She also mentioned that she is considering working as a tour guide after she graduates. Another student mentioned that "being able to make mistakes and learn from them" was crucial to developing his tour guide skills.

4.6. Activity 5: The Final End-of-Year Debrief

Description: The last discussion of the year involved the entire student's group and was conducted indoors, upon finishing the exam trip. Students discussed the skiing trip and reflected on their experiences over the past year. Students were situated in a U shape, with the teachers in the front of the group, forming a shape resembling a circle. The discussion started with the teachers reflecting on the logistics and organization of the skiing trip. At the end of the discussion one of the teachers said that the students had accomplished a lot.

Reflection: Reflecting on their working and living environments, especially during their experiences as guides during practice placement, students mentioned becoming familiar with the elements of the Arctic environment. Students mentioned the interplay between the hazard of Svalbard—that is, cold temperatures, darkness, and polar bears—and their responsibility as guides to protect guests from the elements while exploring the Arctic environment. They particularly benefited from opportunities to practice crevasse rescue, use navigation skills, and look after the safety and well-being of the group members by preventing blisters and ensuring they were hydrated; they learned how important these skills were in preventing the escalation of safety issues. One student stated that her perception of safety in the Arctic environment changed over the course of the year: "First, you think that everything can go wrong, then you learn that maybe only some things can go wrong, but at the end [of the program] you realise that you have the skills to travel in different areas and deal with those challenges."

When discussing the topic of competency, students expressed what they considered important, highlighting the combination of various skill sets, which can be described as a kind of *competence toolbox* including:

- hard skills related to safety, e.g. knowing how to use the glacier equipment, and
- soft skills necessary to interact with customers or guests, because without them, it is more difficult to ensure safety; this includes the ability to convey knowledge.

"You need a foundation of hard skills, and then soft skills take you further; you cannot have one without the other" he said.

The discussion was summarized by one of the teachers who said that being able to recognize things before they happen, as well as going out, sharing, discussing, and learning from each with an open and honest attitude is what really matters and what helps to create a good atmosphere among fellow guides.

5. Discussion

This paper explored how the experiences of students participating in the ANG program were transformed into reliable knowledge that was applicable to working as a tour guide in the Arctic. This paper addressed the gap in the literature regarding safety and risk management skills development by observing learning processes at a tour guide training program using EL theory with a focus on the EL cycle of grasping and transforming experience. The findings presented in the previous section show that the program helped the students to develop their critical thinking skills and ability to make decisions as leaders of the respective groups. While tour guiding need reflective practitioners (Mason & Christie, 2003), it is important to acknowledge the role of students in the learning process. Therefore, EL may be an effective method for tour guide programs to develop safety competency, since it treat's students' experiences as essential to the learning process.

5.1. The Experiential Learning Cycle

During the training program, students participated in field trips that required preparation, active participation, and debriefing in both small and large group settings. Moreover, self-reflection allowed students to process their experiences and relate them to previously acquired knowledge. Group discussions, in which students shared their subjective narratives enhanced their safety awareness and motivated them to seek other solutions and implementing them in the next phase. Through various experiences, students went through all four stages identified in Kolb's EL cycle: preparation (Active Experimentation — AE), participation in a trip (Concrete Experience — CE), group and class reflection (Reflective Observation — RO), and knowledge formation (Abstract Conceptualization — AC).

The first trip, during which students encountered a polar bear, had a strong impact on students' perceptions of the risk of conducting tours in the Arctic. Indeed, this trip influenced their awareness and behaviors in the field, and other experiences (exposure to various elements of the Arctic environment) influenced students' perceptions of self-preparedness regarding handling safety and risk when conducting tours in the Arctic. The students realized they needed to master a set of specific skills, which one student described as competence toolbox. This is consistent with Healey and Jenkins' (2000, p. 190) view that "the central practical applications of the EL theory include how a session, or a course, can be developed in a way that takes students systematically through the whole cycle, as well as the consideration of the teaching methods that are particularly valuable at certain stages of the cycle."

5.2. Grasping and Transforming Experiences

Students used reflection as the key to understand their experiences during activities. Through discussion, they re-evaluated their existing knowledge and then applied what they had learned during following trips.

This transformation of experiences occurred during the reflection phase (RO), in which students focused on the inclusion of the previous experiences including social and environmental settings, which allowed students to better prepare (AE) for upcoming trips. The findings show that students' reflections during multiday hikes indicated a lack of or limited experience with Arctic environments and a limited understanding of safety when traveling in polar bear territory. The importance of transforming experiences (RO and AE) is also recognized in a studies by Rokenes & Andersen, 2016 (p. 750) on decision-making among skiing guides, highlighting that the "important part of *friluftsliv* [outdoor education] competence is for the guide to constantly and instinctively analyze the situational risks and consequences." As students progressed in their studies, gained more exposure in the Arctic environment (harsh weather, remoteness) and tour guiding (including technical, operational and interpersonal skillset), they were encouraged to develop their competencies in processing and applying new information (grasping experience).

Exposure of being a guide and taking a different role (CE), enhanced students ability to understand (AC) the situation of tourists during guided trips and their own responsibility as guides. This is especially important in the Arctic environment, where guests with various backgrounds rely on the guide's technical competence and ability to strike a good balance between the level of risk and quality of tourist experience (Figure 1). This was most evident at the beginning of the year, when students had the least amount of trust for one another. Exposure to the Arctic conditions that tour guides must work in and opportunities to practice leadership skills are elements that contribute to knowledge transfer. According to Sibthorp et al., (2011, p.113) "learning should involve characteristics of the environment in which learning is applied or to which learning is transferred".

5.3. Safety Competency and Experiential Learning

The findings demonstrate that students reflected on their technical, interpersonal, and operational skills and enhanced their understanding of local nature. The activities covered here included discussions of polar bear safety, first aid skills, planning, organization, leadership, time management, decision-making, and communication.

In particular, in discussions, students mentioned that their exposure to real-life tour guide situations and decision-making scenarios increased their confidence and leadership skills. For them, the field trips served as learning environment in which they were faced with new challenges (CE) and could learn from their own experiences (RO, AC, and AE) before engaging in another activity (CE). In other words, this element of the training program included the complete EL cycle. Figure 3 shows student's activity at each stage of the EL cycle and the type of environment (social and geographical) in which they practiced different skills that a tour guide must possess.

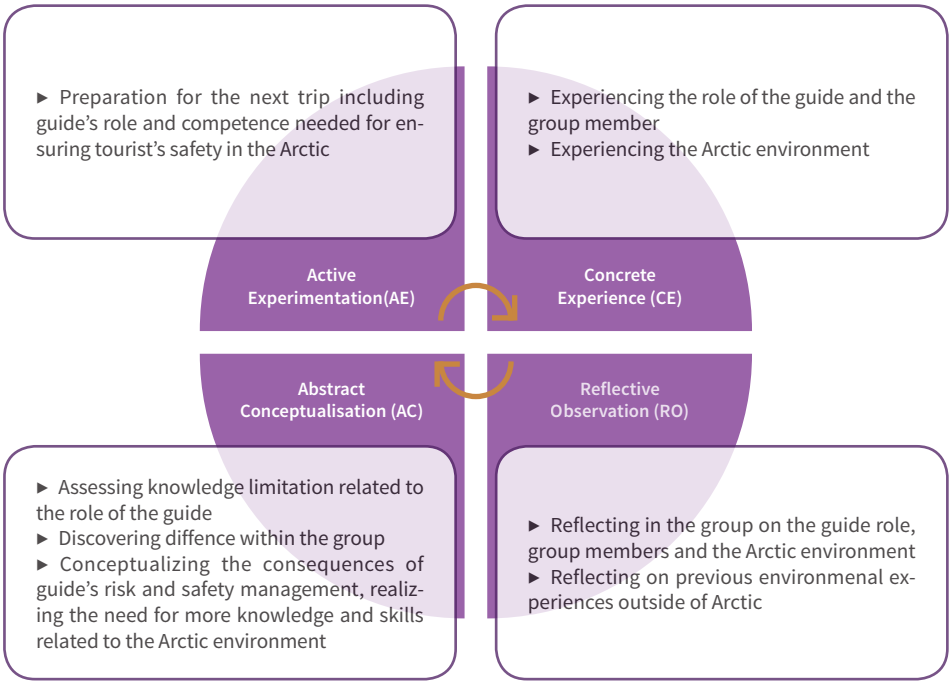


Figure 3. The Use of the Experiential Learning Cycle for Analyzing the Experiences of Students During the ANG Training Program
Source: own research

6. Conclusions

These research findings indicate that tour guide training programs should include various activities and experiences that enable students to evaluate their own knowledge and reflect over decision-making process. By striking a balance between grasping and transforming experiences, the teaching process can address

various learning objectives, including the development of technical, operational and interpersonal skills, while expanding local and situational knowledge, in this case concerning the Arctic environment. Students exposed to the various activities and experiences can engage in continuous and increasingly complex knowledge creation (re-creation), which corresponds with EL premises.

While many tour guide training programs attempt to develop key competencies during short course, it is necessary to appreciate the value of students becoming aware of the process of the competence acquisition during such programs. Student's ability to learn from their own experiences gained in real settings resembling their future work environment plays a key role in developing their safety competence. While certain technical skills, such as using glacier equipment, interpreting weather forecasts, and driving a snowmobile, can be taught over a relatively short period, the acquisition of knowledge that serves as a mediating factor between competence and decision-making requires process of reflection.

Students' exposure to situational problem-solving, real-time scenarios, and real-life tour guide experiences should be included in training programs. By shadowing another guide and then taking on the actual role of guiding tourists' student have a much better change to develop their critical thinking together with key skills required in their job.

To conclude, this study contributes to existing research within outdoor education by providing an initial exploration of the use of EL in tour guide training programs. While the findings of this study indicate that the EL cycle can be used to evaluate students' safety competency development, more research is needed to better understand the curriculums of current tour guide programs, as well as their design and implementation. Follow-up studies on existing programs are also needed. This paper explores the use of EL theory and provides a foundation for future exploration of the use of EL as an analytical strategy for evaluating tour guide training programs. In this way, this study enables researchers to better understand the process of competence acquisition and retention and enhances knowledge transfer strategies.

7. Research Limitations

Given the scope of this article, it does not include all aspects of existing research on outdoor education. Experiential learning is often criticized for its lack of clear positioning: some consider it as a philosophy, others as a method of teaching, still others, as a field of science. Similar ambiguity exists in the Norwegian literature

on outdoor education, which is referred to as *frilustliv*. There are few publications in English that discuss *friluftsliv* and the development of safety competence, especially in the context of formal education. Some authors call for more integrated and in-depth research on program facilitation (Dahl et al., 2016; Dahl, Leirhaug & Moe, 2023).

The training activities described in this article are subjective ethnographic investigations of how safety competence develops. In addition to inherent subjectivity of participant observation, the presented findings reflect the subjective nature of data analysis, which was influenced by the author's personal beliefs and experiences, both as a former student of the program, an active tour guide and outdoor teacher in the Arctic region. While these shortcomings cannot be ignored when analyzing the findings of the study, it is the author's unique background that made it possible to include these various perspectives in her research.

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Rozwój kompetencji przewodników w zakresie bezpieczeństwa arktycznego: analiza doświadczeń uczestników programu Arctic Nature Guide

Streszczenie. W artykule przedstawiono wyniki badania przeprowadzonego na Svalbardzie, którego celem było zbadanie rozwoju kompetencji przewodników wycieczek w zakresie bezpieczeństwa na terenach arktycznych. Na podstawie obserwacji zebranych podczas jednorocznego programu szkoleniowego Arctic Nature Guide autorka opisuje, w jaki sposób program ten przyczynia się do rozwoju kompetencji kursantów w zakresie bezpieczeństwa arktycznego. Szczególną uwagę zwrócono na rolę uczenia się przez doświadczenie. Uzyskane wyniki wskazują, że ten rodzaj uczenia się może być skutecznym narzędziem rozwijania kompetencji w zakresie bezpieczeństwa. Niniejsze badanie zawiera wskazówki na temat tego, w jaki sposób organizować szkolenia z zakresu bezpieczeństwa, aby jak najlepiej przygotować przewodników wycieczek do pracy w ekstremalnych warunkach.

Słowa kluczowe: przewodnik turystyczny, kompetencje w zakresie bezpieczeństwa, uczenie się przez doświadczenie, turystyka arktyczna