

Article

What We Can Learn from Environmental and Outdoor Education during COVID-19: A Lesson in Participatory Risk Management

Thomas Beery

Faculty of Education, Kristianstad University, Elmetorpsvägen 15, 291 39 Kristianstad, Sweden; thomas.beery@hkr.se; Tel.: +46-044-250-34-26

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Abstract: COVID-19 has impacted education on all levels, with many institutions turning to online formats to deal with the global public health crisis. This study aims to carefully consider participatory risk management, given concerns about the specific impact of COVID-19 upon environmental and outdoor education. An environmental and outdoor education expedition-style university-based field course at the Laponia World Heritage Site provided the context for considering environmental and outdoor education's response to COVID-19. Whether or how risk could be effectively managed in the unique setting during the COVID-19 pandemic was explored using action research methodology. A combination of systematic instructor observation, student-instructor communication, and surveys to student participants provided the data to consider the research question. Outcomes underscore the critical role of participatory risk management in environmental and outdoor education settings and highlight the concept of interdependence in environmental and outdoor education risk management. In addition, the research provides support for the action research idea of practitioners as researchers.

Keywords: action research; COVID-19; environmental and outdoor education; participatory risk management; Sweden

1. Introduction

In mid-August 2020, amid the COVID-19 global pandemic, a group of 14 university students and one instructor embarked on an environmental and outdoor educational adventure, a field-based course that required ten days of group travel in the mountain region of Swedish Lapland. The adventure was the field component of a two-course landscape science program from Kristianstad University. The goal of the course is to consider how natural and cultural history is intertwined and has shaped the cultural landscape of Laponia, a United Nations designated World Heritage Program site. In addition to the content of place, the course is designed to help students use outdoor education methods to develop their environmental communication skills. Given the unique setting, the course provides several risk management challenges; a group of students with varying backcountry travel experience come together for ten days of hiking and sharing close living conditions in mountain stations and cabins. The hiking can be strenuous, from 10 to 25 km per day, and the area provides ample other risk management challenges, such as extreme weather concerns. Even the journey to the course start in Jokkmokk requires extensive travel (up to 20 h on an overnight train).

Along with the usual risk management challenges, the precarious situation during summer 2020 due to COVID-19 added another layer. To move forward with course planning in the spring and summer of 2020, a re-examined risk management plan was considered and specific new measures were implemented. An analysis of the overall implementation from the pre-course/on-course/post-course using action research methodology is provided in this article. This study hopes to add to the literature of

how environmental and outdoor education can adapt in light of the COVID-19 challenge. The specific research question to be explored in this article is:

Can risk be managed effectively for a university-based environmental and outdoor education expedition during the global outbreak of COVID-19, and if so, how?

The first yes/no aspect of this question was critical for determining whether or not to proceed with the course. The more interesting question, however, is *how*? What are the action factors that contributed to the decision to move ahead with the course, and what outcomes resulted from that decision?

1.1. A Changing Landscape for Environmental and Outdoor Education

The impact of COVID-19 on higher education has been profound (Murphy, 2020) [1]. In a short time, many professionals across the educational spectrum have become distance educators as online platforms have replaced the physical classroom [2]. This transfer to online delivery has been seen throughout formal education from K-12 to higher education [2,3]. For example, at Kristianstad University in southern Sweden, courses shifted to Zoom or other online platforms with very short notice in March 2020.

Unfortunately, many non-formal educational organizations that provide environmental and outdoor educational experiences have not been able to adapt and transfer to a Zoom-like platform; the whole idea at the foundation of many environmental and outdoor education programs is their ability to provide the active and sensory-rich experiences of outdoor learning. According to a recent study at the Lawrence Hall of Science at the University of California, Berkeley, the COVID-19 pandemic threatens the survival of many organizations providing outdoor educational experiences; the study estimated that four million youth in North America had lost their opportunity to participate in an environmental and outdoor education program since March 2020. Projections indicate the trend will likely continue and deprive 11 million youth of environmental and outdoor education by December 2020 [4]. In addition to the educational loss, this situation is putting many of the organizations that provide such environmental and outdoor education services in financial jeopardy. The temporary closure of many nature centers (naturum) in Sweden during the spring of 2020 was a similar sign of loss of opportunity for school groups and the public [5].

Another aspect of environmental and outdoor education is expedition-based programming; these programs provide learning experiences based on backcountry travel (most often in wild nature settings) as part of the educational methods. Such expeditionary educational experience demands a high level of functional group dynamics, given the challenges, structure, and logistics of courses/programs; not surprisingly, a strong emphasis on positive group dynamics is a hallmark of many outdoor adventure programs [6]. COVID-19 transmission and the call for strict social distancing has had a major impact on such programming. Two well-established expedition-based outdoor adventure programs based in North America, the National Outdoor Leadership School (NOLS) and Outward Bound (OB), have faced a severe reduction in educational programming since the onset of COVID-19. In a notice dated 25 June 2020, the Outward Bound USA Official Position announced a significant reduction in programming for summer 2020 [7], and NOLS reported an 85% reduction in field courses for July and August 2020 in response to COVID-19 risk management [8].

Simultaneously, just as many organizations, such as NOLS, OB, and the environmental and outdoor education centers noted in the report from the Lawrence Hall of Science, face overwhelming challenges to adjust field programming, environmental and outdoor education methodology and practice have been heralded as a way to adjust and adapt to the pandemic. A recent New York Times (NYT) article [9] described open-air responses to the tuberculosis crisis of the early 20th century as an example of creative problem-solving to keep schools open and address students' and teachers' health and safety during that public health crisis. The article urges readers to use inspiration from that history and look outdoors for education during COVID-19. The article highlights a study showing that open-air transmission of COVID-19 is extremely rare, with just one case out of 7000 recorded [10]. While there

are a number of significant differences between tuberculosis and COVID-19, the NYT example of an open-air educational response may be an especially appropriate example given that both diseases have many clinical and epidemiological characteristics in common [11]. As Echeverría et al. note, both diseases primarily attack the lungs and patients show similar clinical symptoms, such as a cough, fever, and shortness of breath. Furthermore, both diseases are transmitted by respiratory aerosols or droplets and spread from person to person through the air via close contact. Both tuberculosis and COVID-19 also share similar drivers for transmission, including crowding and social interaction [11].

Given the intent to reduce the potential for transmission, examples of outdoor settings provide a creative educational response to COVID-19. Numerous news stories have captured the Danish response of moving elementary classrooms outdoors in response to COVID-19 [12] and the New York Times has documented examples of schools across the United States, from inner city to rural, taking advantage of outdoor learning settings as a part of their risk management response to COVID-19 [13]. As a recent article in the Journal of Outdoor and Environmental Education shows us, there is an abundance of thoughtful and innovative responses to COVID-19 going on within the environmental and outdoor education field—from the idea of a quick return to relevant pedagogical practice to creative leaps forward, reshaping environmental and outdoor education based on lessons learned during COVID-19 [14].

1.2. National Response to COVID-19

The global phenomenon of COVID-19 response to the pandemic has primarily been a matter of individual nations developing national policies, with the World Health Organization (WHO) serving in a global coordination role [15]. Given this situation, it is important to consider the Swedish response to COVID-19 as a part of this study, given the Swedish university course context. The national response to COVID-19 has generated a great deal of international interest and scorn [16,17]. Sweden's largely voluntary approach has been seen as an outlier [18], quite different from the strict lockdown approaches seen in many other countries, including significant differences in response compared to the other Nordic nations [19]. The Swedish response to the pandemic has relied heavily upon voluntary social distancing guidelines, for example, the promotion of working from home where possible and avoiding public transport. From the Kristianstad University website, the Swedish national approach to COVID-19 is described:

“Examples of measures taken include forbidding gatherings of more than 50 people, introducing travel restrictions to Sweden, and temporary transitioning higher education studies to distance learning, a ban on visitors to homes for the elderly has also been implemented. In addition, public announcements are made daily, instructing the public how to stay safe and how to best protect the elderly and other at-risk groups. Those who can are asked to work from home ... ” [20].

The Swedish government has described the overall Swedish approach as “a marathon not a sprint”, to promote the idea that efforts must be resilient over the long haul, arguing that its measures are designed to last in the long term [21,22]. The national response has generated intense national and international scrutiny; the daily public announcements from the national public health department often generated audiences of 1,000,000 listeners in a nation with a total population of 10 million [23]. While this article does not intend to endorse or evaluate the Swedish response to COVID-19, a core value from Sweden's response is shared with the risk management approach detailed in this article, i.e., participatory risk management. Anders Tegnell, the state epidemiologist at Sweden's Public Health Agency, noted that Swedish laws on communicable diseases are based on voluntary measures and that they clearly state citizen responsibility not to spread disease [22]. This particular aspect of the Swedish response, the emphasis on public responsibility, provides a similarity to the idea of participatory risk management to consider. Simply stated, we all have a responsibility for the well-being of others.

1.3. Participatory Risk Management

The idea of participatory risk management in environmental and outdoor education is derived from participatory safety, described as a way to emphasize the role that individuals may play in the safety of others in outdoor adventure settings and activities [24]. Participatory risk management enlarges the participatory safety idea, specifically considering how we apply participatory safety in an organized and systematic way—for example, the use of risk analysis management systems (RAMS) [25]. The RAMS process helps us better understand risk to avoid loss or injury by creating a systematic process for identifying risk and preparing for response. If RAMS forms are created and used by participants of environmental and outdoor education programs vs. created *for* participants, then it is posited that group and individual safety is a responsibility shared by all, not simply the group leaders, recognizing the inherent interdependence of all group member regarding safety. This approach has the potential to create a broad-based ethic of active engagement in risk management. As noted above, this form of risk management can be compared to the ideas underlying the official Swedish response to COVID-19; namely, we all have a responsibility to one another for health and well-being. We can all participate in the health and well-being of our small outdoor adventure group on an environmental and outdoor education expedition . . . or of the unknown people sitting on the bus with us as we go about our daily lives.

2. Methods

The course at the center of this study is an environmental and outdoor education formal higher education course that uses an expedition-style adventure education methodology. The course is the field component of a two-course sequence. Students study online during the winter and spring and, in part, prepare for the summer field course. The field course, held every August, is designed to be an active exploration of a unique place. Drawing upon theories and ideas from landscape science [26,27], the course attempts to create a more relational conception of landscape, integrating cultural and natural history topics using environmental and outdoor education methodologies [28].

Action research was chosen for this study's inquiry method because of the incredibly dynamic higher education response to COVID-19. An approach was needed that allowed for the exploration of a novel, context-specific situation and would allow for systematic inquiry of field course teaching and leadership as it unfolded with the researcher embedded within [29]. As Stringer (2007) notes, "Action research, however, is based on the proposition that generalized solutions may not fit particular contexts or groups of people and that the purpose of the inquiry is to find an appropriate solution for the particular dynamics at work in a local solution" [29] (p. 5). A method was needed that could be used to consider whether the course would be canceled or how it would be adapted. Moreover, underlying it all, a method was needed that was flexible enough to respond to the uncharted and dynamic nature of the COVID-19 situation.

The basic iterative action research approach of *look/think/act . . . repeat . . .* methodology was used to guide the inquiry [29]. Each of these steps is described in Figure 1.

Data were collected in field notes (instructor journal), policy reviews, course observations, and surveys to students organized using the look/think/act process and pre-course/course/post-course organization. The surveys were short questionnaires provided to all course participants, pre- and post-course. Each survey consisted of a variety of yes/no, multiple-choice, and open-ended questions. Participation in the surveys was not a course requirement; instead, it was a function of student choice and results were all recorded anonymously using the Eva-Sys data collection system. All data forms were organized in a pre-course/course/post-course format. The pre-course data collection included:

1. Pre-course monitoring of Kristianstad University and national-level higher education policy.
2. Pre-course monitoring of COVID-19 transmission in Sweden.
3. Instructor course preparations.
4. Pre-course communication with students, including a questionnaire.

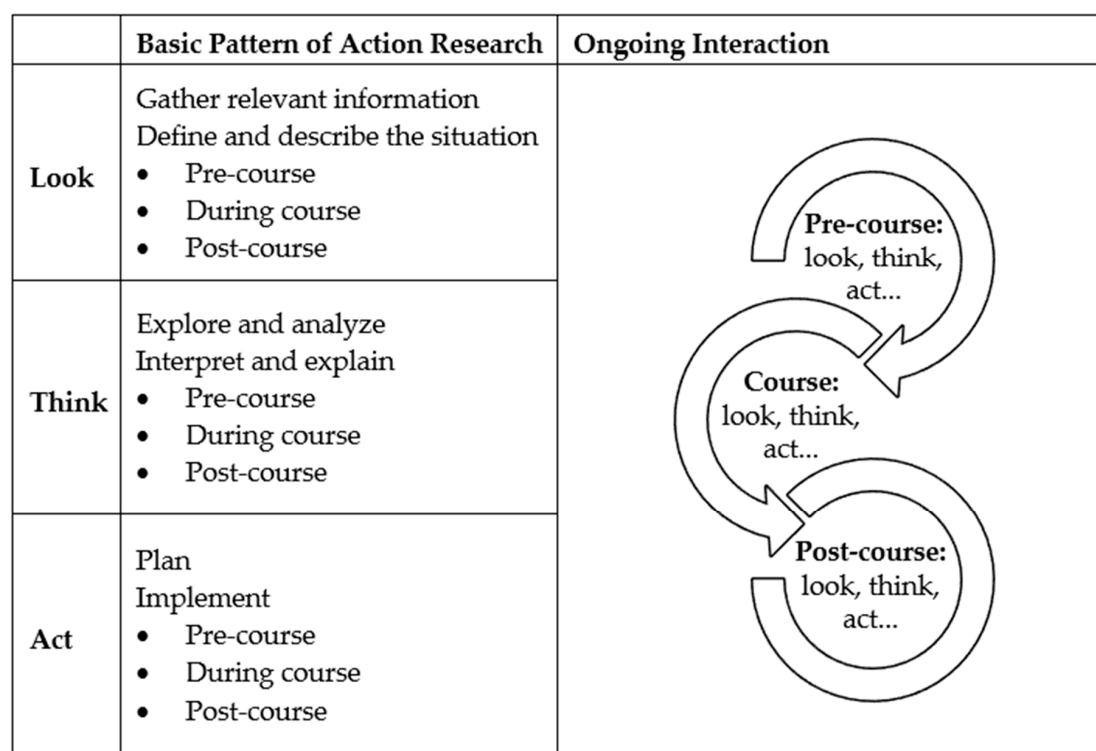


Figure 1. The action research process.

During the course, data were recorded in the form of instructor observations and field notes recorded daily. The post-course data collection involved upon post-course communication with students, including a questionnaire and email correspondence.

The attempt to document the experience from multiple data sources (documentations of preparations, communication with students, observations, and use of pre- and post-course surveys) is, in part, an attempt to strengthen the validity of the study [30]. The reliability of the study is best considered via the qualitative research concept of trustworthiness [31] and consists of the following attributes applied as part of this research [29]:

1. Credibility—the integrity of the study is addressed by providing detailed methods and results.
2. Transferability—the possibility of applying the outcomes to other contexts (as considered in the Discussion).
3. Dependability—much like credibility, specific research procedures have been defined to allow for scrutiny.
4. Confirmability—evidence or means to support that the events recorded took place.

Given the role of practitioner as researcher, a careful consideration of trustworthiness is critical to the integrity of the study.

3. Results

The results are presented using the pre-course/course/post-course periods, emphasizing the ongoing look/think/act process.

3.1. Pre-Course Phase

Pre-course planning included a steady awareness of the ongoing COVID-19 medical situation in Sweden at large and included statistics for new cases and death rates. National statistics showed an overall reduction in new cases between 23 June (1698 new cases) and 24 July (262 new cases) and a steady reduction in death rates from a high of 115 on 15 April to a zero-death count on 30 July [32].

Pre-course monitoring of university policy included awareness of a 29 May Swedish government announcement that universities and other higher education institutions could plan to return to more regular educational activities as of 15 June 2020 [33]. In addition, summer field courses at the University of Kristianstad (June and July) were monitored for experiences that might inform the August course. Biology instructors at Kristianstad University had made several summer field course adjustments, including, but not limited to, fewer students in each field group, separation of students by time and room, and large classroom use to provide more space during indoor instructions [34].

Food, first aid, and lodging for the field course were all reconsidered in the pre-course phase in light of disease transmission concerns and adjustments to planning were made, including:

1. Food was packaged to eliminate as much student-to-student sharing as possible. This effort included individualized snack bags (nuts and dried fruit), individualized dinner packets with minimal cooking required, individualized dried-milk packets, and individualized packaging of energy bars. Approximately 75% of participant food was individualized (a food package to be carried, cooked, and eaten by each individual student). The other 25% were primarily lunch items, such as hard bread and cheese spreads.
2. The first aid kit was bolstered by the inclusion of extra hand sanitizer, masks, and gloves. A ready package was prepared for each student so that students would have immediate access to these supplies. A check of the thermometer was made to confirm its usefulness in the event of possible participant fever on course.
3. Two nights at the Sitojaure cabin were booked to assure our group space (in addition to the required overnight bookings at the mountain stations). Note that in previous years, overnight booking of the mountain cabins was not required as the organization responsible (Svenskaturistförening or STF) had a policy of providing space for all arrivals. However, with COVID-19 concerns about crowding, a pre-booking policy was instituted for summer 2020.

E-mail communication with students included reminders regarding the booking of refundable tickets in the event of course cancellation. Communication also included reminders about safety during travel, such as the encouragement of mask and hand sanitizer use during transport to Jokkmokk (our meet-up destination). In addition, communication with numerous students unsure about participation was ongoing. For example, two students living outside of Sweden (within the EU) sought help deciding whether or not to attend the course, primarily given travel concerns. One of these students joined the course while the other decided that travel and participation uncertainties were too significant and ultimately declined participation.

Thirteen of the 14 students on the course agreed to complete the short questionnaire before the course start. Only two survey participants did not report COVID-19 concerns before the course, with 11 indicating “concern” or at least “a little concern”; none of the students noted being “very concerned”. Relatedly, seven out of the 13 survey participants indicated that COVID-19 concerns factored into their decision to participate in the course. Survey participants reported engaging in numerous COVID-19 transmission avoidance behaviors before the course. Over 70% of the students indicated that they avoided crowds, avoided collective transport (bus or train), practiced social distancing, and used hand sanitizer during June and July 2020. A full 100% reported that they used hand washing as a preventative behavior. Only two students indicated the use of masks and no students reported the use of gloves before the course. All of the reporting students indicated that they had received adequate COVID-19 related information from the instructor during the pre-course phase. Figure 2 provides a snapshot of some of the preparations students took before the course. Note the term social distancing can mean many things, overlapping some of the other action items.

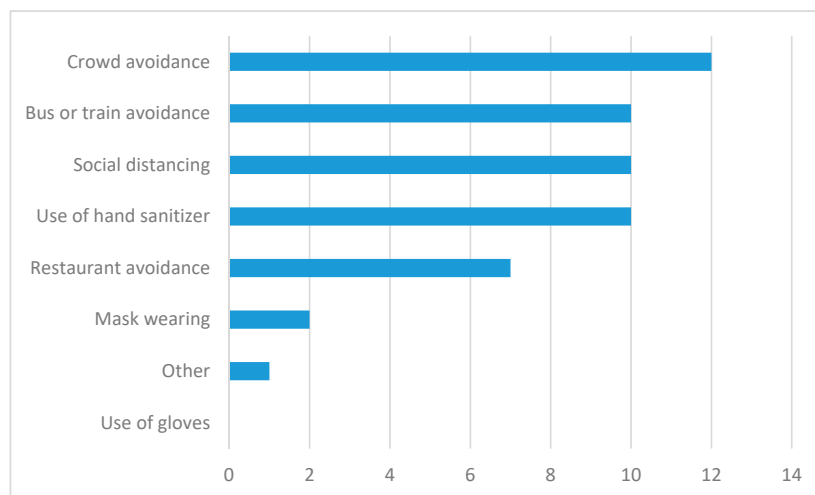


Figure 2. COVID-19 pre-course (spring–summer 2020) preparations taken by participants (n = 13).

3.2. Course Phase

In each previous course (this was the fourth time the course had been held), the first night session included icebreaker and initiative activities designed to help students get to know each other and begin to prepare for an active and interactive course. Many of these activities are physical and do not conform to social distancing; thus, a deliberate change in the 2020 introduction was made to eliminate these activities. In addition, the course introduction included a focus on COVID-19 in an attempt to highlight the concern and maintain awareness. To emphasize this point, the instructor made the initial welcome introduction with a mask on.

Instructor notes from the beginning of the course indicated a concern for inadequate social distancing space in the building used at the start of the course in Jokkmokk. A room in the building was used for some of the early full group introductory activities, from food distribution to risk management planning. Instructor notes also included a recap of a discussion from the risk management activity on the second night of the course; the question of what would happen if one of us were to develop COVID-19 symptoms was addressed and discussed. Instructor notes indicated this question seemed to be indicative of underlying student concerns.

Early in the course, discussions and activities highlighting outdoor ethics, including consideration of *allemansrätt* (the Swedish universal access tradition and practice) [35], and the seven principles of Leave No Trace [36] were used to consider participant responsibility during travel in Lapponia. These discussions considered the responsibility of group members to one another and the place of our travels. This discussion provided an avenue to consider participant responsibilities, including the link between our ongoing responsibility as a part of nature and our ongoing responsibility to each other. As the course progressed, instructor field notes indicated the following COVID-19 related response details:

- Student awareness of caution around food and regular use of hand sanitizer—for example, caution and repeated use of hand sanitizer during lunch—was observed regularly. Exclusive individual access to one's own lunch food provisions was maintained as much as possible; however, food sharing increased as the course progressed.
- An inability to maintain good social distancing within the cabins and especially during the overnight times with small rooms and bunk-style beds.
- Active instructor adjustments early in the course to reduce group size or increase distancing on certain activities, provide behavioral reminders, and role-model hand sanitizer use.
- Strong growth in comfort, interaction, and support within the group, as evidenced by participants assisting one another regularly and in various contexts.

Overall, despite ongoing anti-transmission efforts throughout the course, the instructor notes indicated a slow break-down of precautions during the course—for example a break-down of social distancing. This “break-down” was observed and discussed as participants articulated reduced concern for on-course COVID-19 transmission.

3.3. Post Course Phase

The post-course questionnaire was provided immediately at the end of the course. Thirteen of the 14 students completed the survey. All participants self-reported a high compliance level with COVID-19 precautionary behavior while on course. Furthermore, 100% of survey participants (13) indicated that they participated in COVID-19 risk management behavior, with four indicating that they did this “always” while on the course. The specific behaviors in this compliance are seen in Figure 3. Note that while the group did not experience crowds per se, the Saltolukta Mountain Station is a busy hub for hikers entering the area. Two of the three “other” responses were noted to be toilet cleaning before use.

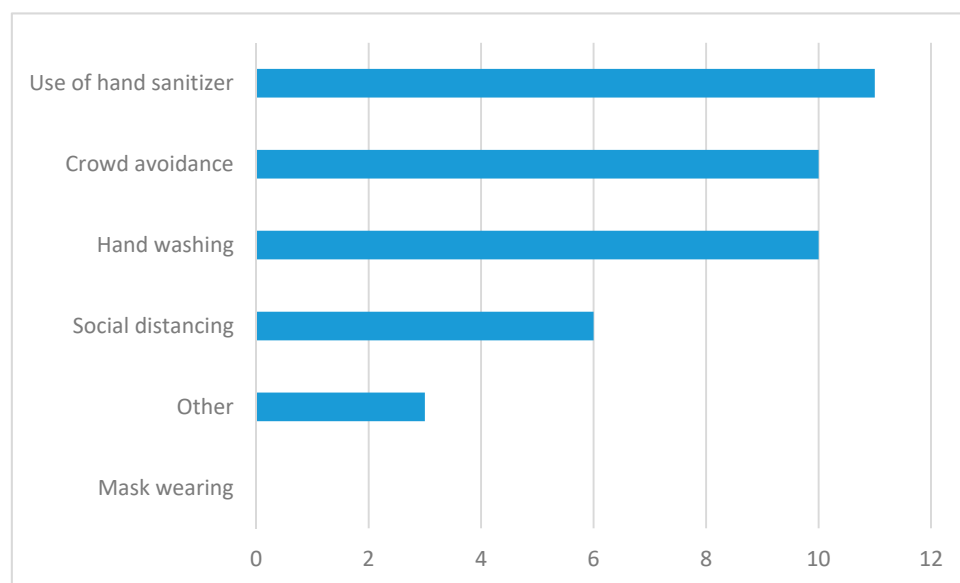


Figure 3. COVID-19 risk management behavior on-course; student self-report (n = 13).

Twelve of the thirteen survey participants perceived that the group engaged in moderate to high COVID-19 risk management behavior levels. Ten survey participants perceived a moderate to high COVID-19 risk management behavior level by the public encountered while on the course. Twelve of the participants felt that the course provided a high level of guidance regarding COVID-19 risk management. Eleven participants on the course indicated that the conceptual idea of participatory risk management was useful for considering COVID-19 risk management efforts, while two were unsure. Many of the open-ended responses provided specific examples of how participatory risk management was useful; for example, consider these participant comments (translated from the Swedish): “It reminded me about how we should think and take action so as not to become a risk for oneself or others” and “Made us all think about our risk behavior and how we could protect ourselves and others”.

One month after the course, all students were asked to report if they had experienced any COVID-19 symptoms or a positive COVID-19 antibody test. None of the students indicated that they had contracted COVID-19. Comments back were positive and included rather specific reflections by some of the students; for example, one student wrote: “I have not been hit by COVID-19, and the safety measures from the course have hopefully contributed to me being able to stay healthy. The biggest risk factor was the train journey, which I think should have required face masks”.

4. Discussion

This discussion will analyze the risk management conducted on this course to reflect briefly on the course progression, address the research question, and consider the concept of participatory risk management more broadly. The use of action research methodology allowed for ongoing analysis of the risk management in context. Action research was especially important given the novel, dynamic, and context-dependent situation. The study included one course period, one instructor, and 14+ students (the plus is a reminder that instructor communication pre-course extended to potential students who ultimately decided not to participate); thus, caution must be exercised in generalizing any of the data. Nonetheless, the environmental and outdoor education expedition course context, along with a systematic and careful approach to data collection, may allow for consideration of the transferability to other similar educational settings.

A quick overview of the data provides a picture of the development of heightened care and concern pre- and early in the course to one of diminished concern over the course's progression. Initial concern was noted regarding travel and subsequent travel plan changes due to COVID-19; such concern and subsequent travel pattern changes have been documented in the research literature [37]. It may be that the group's isolation (the group was primarily removed from others and had minimal interaction with other people) contributed to a sense of safety; it may also be that once a certain amount of time had passed, the group felt safe from COVID-19. Thus, this low level of interaction with others, steady growth in participant comfort, and the lack of any symptom-based concerns created a situation where course participants and the instructor appeared to relax and articulated a re-evaluation of the risk and accompanying behaviors. The progression revealed a diminishing concern for COVID-19 transmission. Note that at no time in the course was there a complete breakdown of COVID-19 prevention behaviors; for example, hand washing (when available) and use of hand sanitizer were ongoing and ever-present.

Data generated and analyzed in this study were able to address the research question, *Can risk be managed effectively for a university-based environmental and outdoor education expedition during the global outbreak of COVID-19, and if so, how?* This first part of this question has been answered affirmatively through the systematic and iterative planning process presented via the action research methodology. From an overall analysis of all of the data points, the following factors have emerged as useful themes for a better understanding of the how question:

1. Communication and awareness: The combination of heightened pre-course awareness and instructor–student communication appeared to support course risk-management success.
2. Logistics: Logistics planning de-emphasizing or eliminating shared food and shared food preparation may be able to contribute to reduced potential for disease transmission.
3. Equipment and tools: Safety equipment, such as hand sanitizer, masks, gloves, and thermometers, was used and/or made accessible for course use, was an essential part of risk management, and contributed to reduced potential for disease transmission.
4. Risk analysis: Deliberate risk assessment that includes students in the risk analysis, discussion, and preparation for risk response may be able to raise student awareness and understanding. Involvement of students in risk analysis is useful as it puts actions or behavior as a step toward awareness and understanding. Instead of simply hoping that awareness and understanding may contribute to behavior, the focus on behavior to support awareness is valuable in risk-management situations.
5. Iterative process: Ongoing awareness, discussion, and presence of risk management throughout the entire outdoor education experience reminded us that risk management is not a one-time activity but ongoing and dynamic.

Number four in the list above is a reminder that pandemic or not, the inclusion of all students, regardless of experience level, provides a broad base for risk management. As Waters noted, participants of different experience levels involved in outdoor education and adventure pursuits

see/experience situations differently [24]; quality risk management demands multiple perspectives. It was significant that 11 participants on the course indicated that the conceptual idea of participatory risk management was useful for considering COVID-19 risk management efforts. Observations supported the idea that students actively engaged in participatory risk management, providing support, guidance, and care to one another in various course situations. Furthermore, the idea that one leader can manage the health and well-being of an entire group of 15 diminishes the idea of positive group dynamics, i.e., the interdependence of all group members [38]. The experience documented in this article reminds us that participants saw a role for themselves and value in their participation in course risk management.

While the author is not aware of COVID-19 transmission as a result of the course, and by all indications, the course was successful and well received by students (based upon a review of instructor and student course evaluations), the reality of transmission was always a factor. Was holding the course irresponsible or unethical, given the possibility of transmission and spread? Was it luck that no one contracted COVID-19 on the long train journey to Jokkmokk or home again, or merely timing, a function of the outbreak's recession? If a transmission had occurred, would it have spread within the group? Would evacuation have been dangerous or costly? Would all of the students been negatively impacted by a course forced to end early due to COVID-19 transmissions? These are the questions that emerged in the course planning and again during the course, which brings us back to the foundation of risk management. Outdoor leaders make decisions based on the information that they have, via their training, experienced observation, scientific inquiry, or trusted sourcing. Outdoor leaders make plans to reduce or minimize risks while simultaneously embracing the idea that all risks cannot be eliminated and that both real and perceived risks provide valuable educational opportunities [39]. In this case, the decision to hold the course was based on careful monitoring of the situation, careful pre-course communication, and significant course-planning adjustments. These actions do not necessarily make it the right decision but they provide a detailed view of the systematic decision-making. Actions taken in this process as outlined may be useful for other outdoor educators considering expeditionary environmental and outdoor education during uncertain times. It is hoped that this process of careful review can serve as a model for other educators. Moreover, this research reinforces the idea that outdoor leaders should enlist their student participants in participatory risk management as they wrestle with challenges and uncertainty.

5. Conclusions

In environmental and outdoor education, we often attempt to use our rich outdoor experiences and adventures as metaphors in our daily lives. What is it that we have learned "on the trail" that we can take with us and apply in our everyday lives? Participatory risk management is one of those lessons. A heightened awareness of the collective responsibility for the well-being of the people around us can guide ethics in course settings. Can the same be said for communities and societies? This aspect of risk management brings us back to the Swedish national response to COVID-19. The Swedish response and participatory risk management are grounded, in part, in the awareness and concern for the well-being of others as a guide for behavior. The Swedish national response to COVID-19, however, is complex and well beyond the scope of this article; furthermore, it can be argued, from the perspective of infection and mortality rates, that the Swedish approach was not an adequate response. However, the pandemic is not over, and more scientific review is needed to evaluate national response to COVID-19 adequately. Nonetheless, the simple idea that we all have a role in our communities' health and well-being is of great value on whatever scale we define community. Participatory risk management reminds us of an essential collective responsibility. This small study supports deeper reflection on how participatory risk management from environmental and outdoor education may have a valuable societal role to play.

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