Outdoor Education Fatalities in Canada: A Comparative Case Study

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Abstract
The recent criminal negligence case against an Ontario teacher in the death of a student identified pertinent outdoor education administration and policy issues. This comparative case study examined this case and two additional high profile Canadian outdoor education fatalities, identifying common factors and issues. Using Accimaps to illustrate the multiple contributing factors for each event, the case studies all exhibited contributory administrative factors of undefined risk tolerance, risk creep, lack of oversight, and issues regarding parental consent. Conclusions were drawn as preventative lessons that can inform school or board-level outdoor education policy and practice.

Keywords: outdoor education, risk management, risk, risk play, case study, safety, Canada

Introduction and Literature Review
The recent criminal negligence case against an Ontario teacher in the death of a student identified pertinent outdoor education (OE) administration and policy issues. In July 2017, a 15 year-old student drowned while swimming with his classmates at a remote canoe trip campsite in Algonquin Park. The trip was part of an at-risk student credit course endorsed by C. W. Jefferys Collegiate Institute and the Toronto District School Board (TDSB) OE program. The supervising teacher was charged with criminal negligence causing death, and upon trial was acquitted (*R. v. Mills*, 2021). This tragic death, and the court proceedings that followed, pointed towards (but did not explore) fundamental unresolved administrative and policy issues in OE in Ontario and Canada.

We believe this to be the first such instance of criminal negligence charges against a Canadian teacher essentially for errors made in the line of teaching. This is not, however, the first such instance of a fatality occurring during an OE outing. An environmental scan found 43 student deaths and two adult supervisor deaths related specifically to Canadian school OE activities over the last 100 years (Ritchie et al., in review).

Little has been written on OE administration and policy in this journal or elsewhere. OE itself has received modest academic attention in Canada, primarily around conceptual or philosophical approaches (Asfeldt et al., 2013; Asfeldt et al., 2021; Henderson & Potter, 2001; Passmore, 1972) or measuring student or program outcomes (Breunig et al., 2014; Purc-Stephenson et al., 2019; Ritchie et al., 2015). OE in Canada is cross-disciplinary and wide ranging, covering many areas from environment and ecology to physical education, Indigenous land-based learning, geography, leadership, and "pinnacle" experiences such as wilderness expeditions (Borland, 2011; Henderson & Potter, 2001; Purc-Stephenson et al., 2019). As such, OE falls under several policy umbrellas, yet lacks specific Ministry level direction[1]. Aside from occasional broad government policy goals, such as the Ontario Ministry of Education's (2009) framework that mandated to "enrich and complement students' classroom learning by organizing

[1] Aside from provincial curriculum outlines, such as Alberta's Junior High Environmental and Outdoor Education Course, or Saskatchewan's Physical Education 20 and 30 curriculum that includes Land-based learning.

out-of-classroom experiences and activities" (p. 17), OE policy is a school board-level or school-specific function (Borland, 2014). Tied to these local level OE decisions are anxieties around perceived risk and student safety issues (Heshka, 2006).

The fatality of a minor while involved in any school activity is widely considered by society to be unacceptable (Brookes, 2018; Cloutier, 2003; Heshka, 2006; Ritchie et al., in review). Beyond the grief of the family and school staff involved, the implications of such tragedies often reverberate far beyond those directly involved, and for many years after the fact. Public scrutiny, government policy, administrative risk tolerance, and modifications to teacher practice extend far beyond the school directly involved. This article examined three Canadian school OE fatality events that have had lasting impact and considered their administrative and policy implications.

The most thorough analysis of fatalities in outdoor learning to date has been conducted in Australia and has served as a starting model for this article's methodology (Brookes, 2018). Brookes (2003a) inventoried and investigated the contributing circumstances of OE fatalities, with emphases on supervision of the custodial groups and accident response to their fatalities (Brookes, 2003b). Follow-up work examined particular risks and hazards specific to OE (Brookes, 2004, 2007a, 2011). All of this information was collectively summarized in book form aimed at fatality prevention through shared learning from the process and products of fatality analyses in Australia and other nations (Brookes, 2018). From this body of work, Brookes (2018) concluded that OE fatality prevention required a strict aversion toward fatalities, maintained awareness of arising patterns of deadly dangers, and improved judgment to know what could go wrong. All of these demanded learning from past fatal incidents, as any one teacher's or school's experience is limited. As Brookes (2018) summarized, "When an accidental death occurs it is common to assume that there must have been a freak accident, but few OE deaths prove to be caused by misfortune alone. Most involve failures to learn from the past" (p. 1).

To date, Canada has lacked a comprehensive inventory of OE student fatalities; however, some key OE tragedies in this country's past have been publicly scrutinized and thoroughly investigated. These can be retroactively examined in a comparative manner to identify administrative and policy level factors that potentially contributed to their development in a "pragmatic search for whatever insights could be most useful to those best positioned to act" (Brookes, 2018, p. 11). The research questions pursued in this paper are as follows: What school and board administration and policy level factors contributed to these OE fatalities? What factors were common among the cases that can be considered preventative lessons?

Methodology

A passive environmental scan was conducted using publicly available data (Graham et al., 2008; Ritchie et al., in review). Fatalities of minors in Canada participating in OE activities affiliated with a school or part of a custodial group were inventoried. A custodial group was defined as "affiliated with an institution, where at least one person is below the age of majority and that minor is not in the company of his/her parent or legal guardian" (Parks Canada, 2019). This definition included several diverse groups, such as schools, camps, churches, Scouts, Guides, cadets, community, organized youth, clubs, and more. However, it excluded other groups such as friends or families (non-institutional), visiting tourists (commercial operations), or those not engaged directly in the OE activities (transporting, sleeping, eating, or simply not participating).

A total of 34 fatality events were identified over the last century, taking place from 1926 to 2019, for a total of 79 fatalities. Of these 34 events, 26 were singular fatalities while eight involved multiple deaths of two, three (two cases), six, seven (two cases), 11, and 13 people. Eighteen of the events involved students and staff of public and private schools (12 and six, respectively) while the remainder involved camps (five), commercial providers (five), Boy Scouts or Girl Guides (four), a college (one), and one unknown or unreported.

Of the 34 fatality events located, 19 were discovered from media sources that provided little to no detail, in many cases only a brief headline in a local newspaper. Eleven event reports provided sufficient detail from which an event narrative could be assembled, and three further cases stood out for extensive and high-quality source materials. These materials ranged from book-length analysis (Raffan, 2002) and expert investigation (Cloutier, 2003) to judicial decision (*R. v. Mills*, 2021). Based upon the high quality of data, these three cases were selected for further comparative case study analysis.

Brookes (2003a, 2003b, 2004, 2007a, 2007b, 2011, 2018) pioneered a comparative case study model in his comprehensive review of Australian OE fatalities that allowed for in-depth analysis and comparison of events. This approach was combined with the more recently accepted Accimap model of accident analysis, which accounted for multiple system and organizational layers and factors outside of the direct event and presented them in visual format to explain relationships between levels, actors, and contributing factors (Salmon et al., 2017; Salmon et al., 2020). Accimaps allow for open identification of all contributory and system factors - good for single case analysis - but limits cross-case comparisons. Brookes' comparative case study approach allowed for a qualitative bridge between cases.

The three case studies' public documentation and narratives were examined in detail. All causal factors for each case were posted on one of six Accimap contributing hierarchy levels (Salmon et al., 2017):

1. Government policy.
2. Regulatory bodies.
3. School administration (board level and school principal) and parental involvement.
4. Supervisory and management decisions specific to events (e.g., principal or lead teacher).
5. Teacher, leader, and students on scene.
6. Equipment and environment on scene.

Representing each case's causal factors, three Accimaps (Figures 1, 2, and 3) were developed and discussed among the researchers via an iterative process, assessing and linking the various causal factors for placement, relevance, and emergent themes across all three maps. This consensus building addressed and resolved any differences of opinion as part of the analysis process (Campbell et al., 2013) until a causal pathway emerged relative to administrative and policy factors.

For the reader, the Accimap shows at its upper level the most distal of background factors (government policy). Each lower level shows further factors or causes and the relationships that emerge between them. The fifth and sixth level factors – teacher, leader and students on scene, and the equipment and environment – present the most proximal factors and causes. An Accimap elucidates how these proximal causes have distal sources – conditions in place that allow an event to unfold. The Accimaps in Figures 1, 2, and 3 have the actual event highlighted in red in the fifth hierarchal level, the source and multiple administrative and policy causes of which can be traced back through the various actors and layers.

Findings

The findings are presented as three brief descriptive case summaries with three accompanying Accimaps that highlight the multiple causal factors and relationships among them. The Accimaps have key factors highlighted in shadowed boxes as these factors created pathways through the multiple actors and layers that contributed to the events, which are discussed further in the discussion section.

St. John's School Canoe Fatalities, 1978

On June 3, 1978, 12 students and one adult supervisor died of hypothermia after their canoes capsized in the wind and cold water of Lake Timiskaming located on the Ontario/Quebec border (Raffan, 2002). The students were part of a Grade 7 year-end trip from the St. John's School, a religious school in Peterborough, Ontario. The group was on the first day of a month-long expedition, traveling in four new (and untested) "voyageur" style 8-person canoes (Dery, 1978). One canoe capsized in the wind, and within minutes the other three canoes overturned trying to rescue the first. All participants were wearing lifejackets; however, they were told by the inexperienced adult trip leaders to stay in the water with the overturned canoes. Of the group of 27 students and four adults, 13 died of hypothermia. Some students swam for shore and spent a cold night alone. They were rescued the next day when a passing helicopter spotted the overturned canoes and called for help (Sorenson, 1999).

The event became known as the Timiskaming Tragedy and was an international sensation at the time (Sorenson, 1999). The St. John's School had previously been in the news for its strict religious doctrine and uncompromising "character development" mandate that included marathon snowshoe treks in the heart of winter, in which one student had previously died. The school had a strong "learn by doing" ethos, which included both teachers and staff, so that the canoe expedition purposely had little preparation or training and no emergency plan. None of the staff had any substantial canoe experience or trip

leading knowledge. This was all considered part of the learning process (Raffan, 2002).

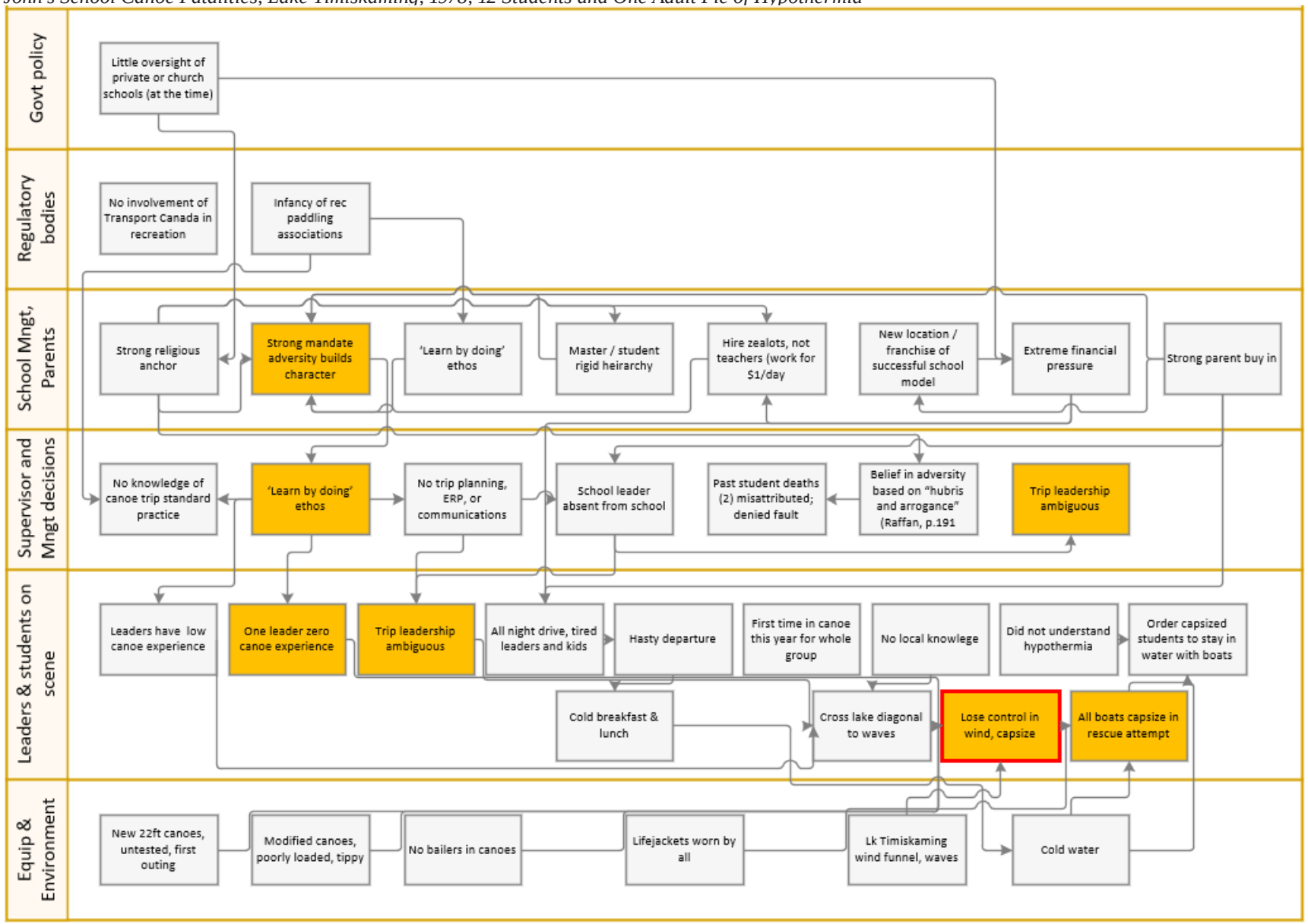
The primary source for this case was the book-length analysis of the school and event by Raffan (2002) entitled *Deep Waters: Courage, Character, and the Lake Timiskaming Canoeing Tragedy.* This book included extensive interviews with survivors and discussion of the administrative factors leading up to the tragedy. Beyond the direct risk that cold water canoeing presented, the first Accimap (Figure 1) shows several contributory factors at the regulatory body level, at the school administration and parental level, and at the supervisory level.

The strong institutional mandate that "adversity builds character" (third hierarchical level) created conditions in which exposing students to risk was unexamined and seen as useful without a clear understanding of how it could be valuable. It also allowed for staffing a major expedition with inexperienced teachers and adult supervisors (fourth hierarchical level), which was consistent with its learn by doing ethos. These beliefs also justified fourth and fifth hierarchical level factors of little pre-trip training or practice, launching the trip in brand new, untested canoes, no trip planning and route investigation (to understand the locally well-known fact that the wind abruptly arises on Lake Timiskaming every afternoon), nor even greater knowledge of canoe safety and canoe history. For example, in 1926, a nearly identical incident claimed 11 lives at a religious camp at Balsam Lake after a large war canoe overturned in cold water (Raffan, 2002). The Coroner's Report for the Timiskaming Tragedy concluded "this entire expedition constituted an exaggerated and pointless challenge" and "it does not seem an exaggeration to state that, without some unlikely stroke of luck, this expedition would have struck disaster sooner or later" (Dery, 1978, p. 15).

A second factor was an ambiguous leadership structure. According to Raffan (2002), since the school administrator was absent in the time leading up to the trip, he remotely assigned the "leader" role to a junior teacher. The staff met prior to the trip only once over the phone, with no practical planning taking place. In practice, the group looked to the senior teacher on the trip rather than the designated lead. When the canoes overturned, the leadership structure disintegrated, with tragic consequences.

Figure 1

St. John's School Canoe Fatalities, Lake Timiskaming, 1978, 12 Students and One Adult Fie of Hypothermia



Strathcona Tweedsmuir School Avalanche Fatalities, 2003

On February 3, 2003, an avalanche struck a Grade 10 Strathcona Tweedsmuir School (STS) group from Alberta while on an OE backcountry ski trip in British Columbia. The accident involved 17 individuals: one OE teacher, one assisting teacher, one adult volunteer supervisor, and 14 students. While 14 of those were buried, seven were extricated alive, but seven students died. The tragedy made national headlines. The avalanche occurred in Rogers Pass, British Columbia, a popular and easily accessible backcountry ski area commonly used by commercially guided trips. This was a well-known avalanche area. The week prior to this event, seven guided backcountry skiers died in an avalanche in the nearby Selkirk mountain range (Cloutier, 2003).

Parks Canada (2019) required commercial guides to be licensed, but this requirement did not apply to school groups. The student group was well-trained and the teacher had suitable backcountry ski qualifications. However, the larger-than-typical group was traveling in high end "technical" avalanche terrain when the avalanche conditions were rated "considerable"; and the teacher had relatively little experience with the area compared to the licensed guides who frequented that mountain route. The trip was mandatory for students, and many parents after the fact expressed fear of a grade penalty by not allowing their child to participate (Cloutier, 2003).

The primary source for an expert evaluation of the school's OE program and analysis of this incident was Cloutier's (2003) *Review of the Strathcona-Tweedsmuir School Outdoor Education Program*. Beyond the direct risk of skiing in avalanche terrain, the second Accimap (Figure 2) shows several contributory factors at the regulatory body level, at the school administration and parent level, and at the supervisory level.

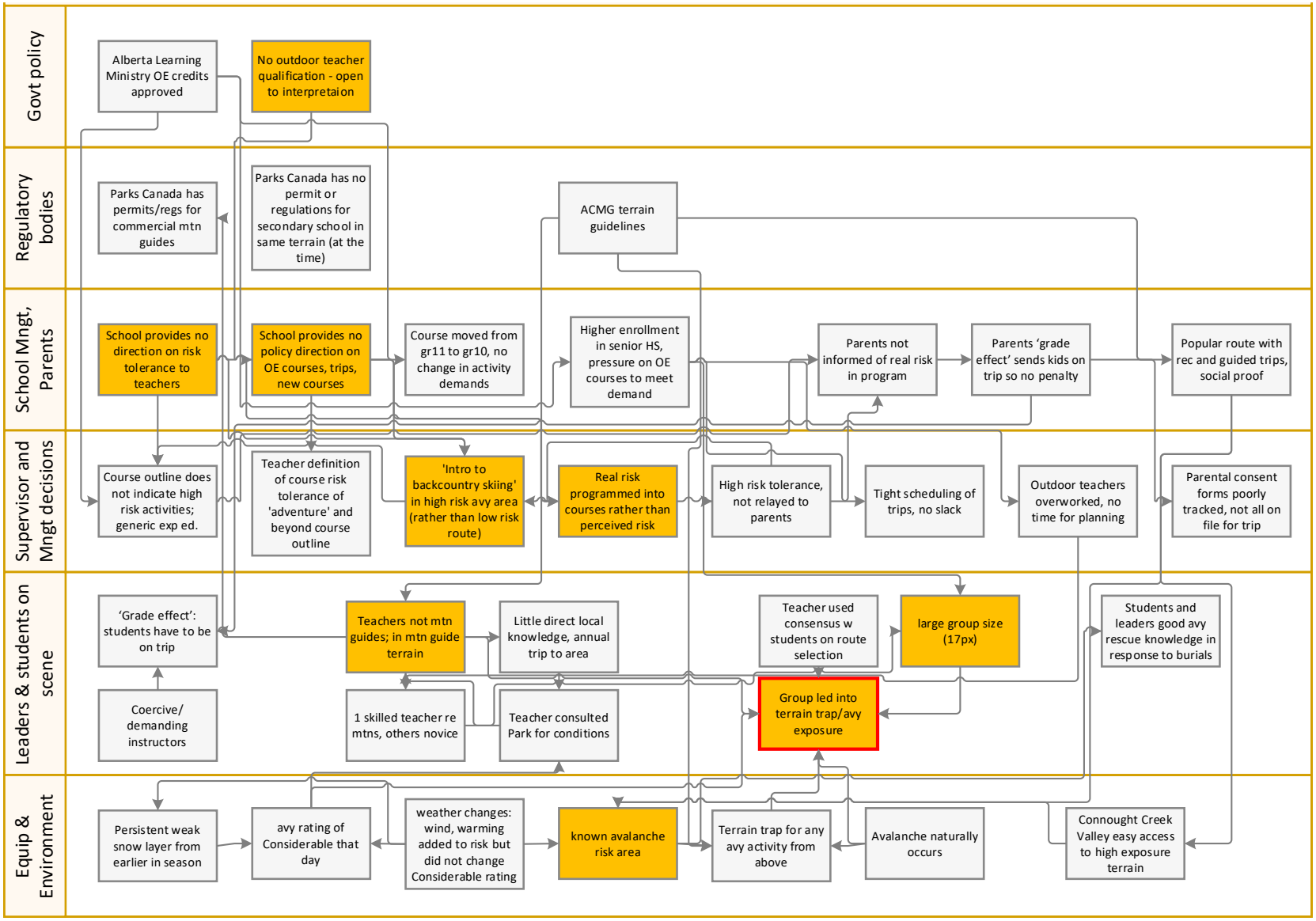
Alberta Learning (top hierarchical level) approved the STS Grade 10 OE course outline that used terms such as "developing leadership skills," "increasing self-awareness," and "development of personal qualities such as co-operation and trust" (Cloutier, 2003, p. 13). It said nothing of backcountry skiing, avalanches, or risk of injury or death. The STS administration (third hierarchical level) provided no direction to its teachers on risk tolerance or what was acceptable risk and what was not. The school had no OE policy to direct new courses, trip activities, or locations. That left the OE staff (fourth hierarchical level) to establish for themselves how much risk was appropriate to the extent that a Grade 10 Introduction to Backcountry Ski course took place in high-end, technically challenging avalanche terrain. Real risk and real consequence were programmed into STS OE courses, with no supervisory oversight or alignment with original course outline intentions. The STS OE course had recently moved from a Grade 11 credit to Grade 10, with no change in curriculum or expectations.

In parallel, Alberta Learning provided no direction regarding OE teacher qualifications. As such, the OE teacher pursued some of the certifications and qualifications available to the commercial mountain guide sector (second hierarchical level) but was the only trained person in a very large group of 17. This led to the sole OE staff leading Grade 10 students into avalanche and mountain guide terrain; yet, the OE teacher was not trained and experienced to the level of a mountain guide. While the location of the excursion in Rogers Pass was popular and well traveled, it was still dangerous terrain requiring extensive technical knowledge. Compounding this, the OE teacher involved the well-trained but novice students in route decision-making, eventually leading the group into a "terrain trap" where they were struck by the avalanche. The risks inherent in this terrain were incompatible with the partial skill set of the leader, the educational process adopted by involving the novice student group, and the large group size. In the end, Cloutier (2003) resolved that commercially guided avalanche terrain was not a suitable location for a teacher-led school group. In additional commentary, Heshka (2006) concluded:

The exposure to catastrophic risk should be eliminated as a goal and the likelihood of a mass casualty incident should approach nil. This is not to be interpreted as a backlash against outdoor education programming but rather as a reality check or wake-up call. It does not matter that guides were also skiing in Connaught Creek or that the Executive Director of the Canadian Avalanche Association would have made the same decision to ski that route. What matters is that a trip intended to expose students to the wonders of backcountry skiing crossed some three dozen avalanche slide paths and that the same curricular objectives could have been attained in another equally spectacular but less dangerous area. (p. 39)

Figure 2

Strathcona Tweedsmuir School Avalanche, 2003, 14 Students and Adults Buried, Seven Student Fatalities



Toronto District School Board Algonquin Park Drowning, 2017

The tragedy of a student drowning (as noted in the introduction) made national headlines. Early media reports claimed that half of the students on the trip failed a mandatory pre-trip swim test (Ferguson et al., 2017), including the deceased; however, this was not concluded at the later trial[2]. The students were on Day 3 of a 6-day canoe trip, and the supervising teacher allowed the group to swim without lifejackets, overseen by a certified lifeguard who was also a student on the trip. Earlier on the trip, the deceased had proven to the teacher that he had a marginal ability to swim; yet somehow, he entered the water and drowned, unseen by the supervisor, the lifeguard, and the group (*R. v. Mills*, 2021).

The primary source for this case was the detailed judge's decision in *R. v. Mills* (2021), which included extensive testimony from all the witnesses and the administrative factors leading up to this event. Beyond the direct danger that wilderness swimming presented, the third Accimap (Figure 3) shows several contributing factors at the regulatory body level, at the school management and parents level, and at the supervisory level.

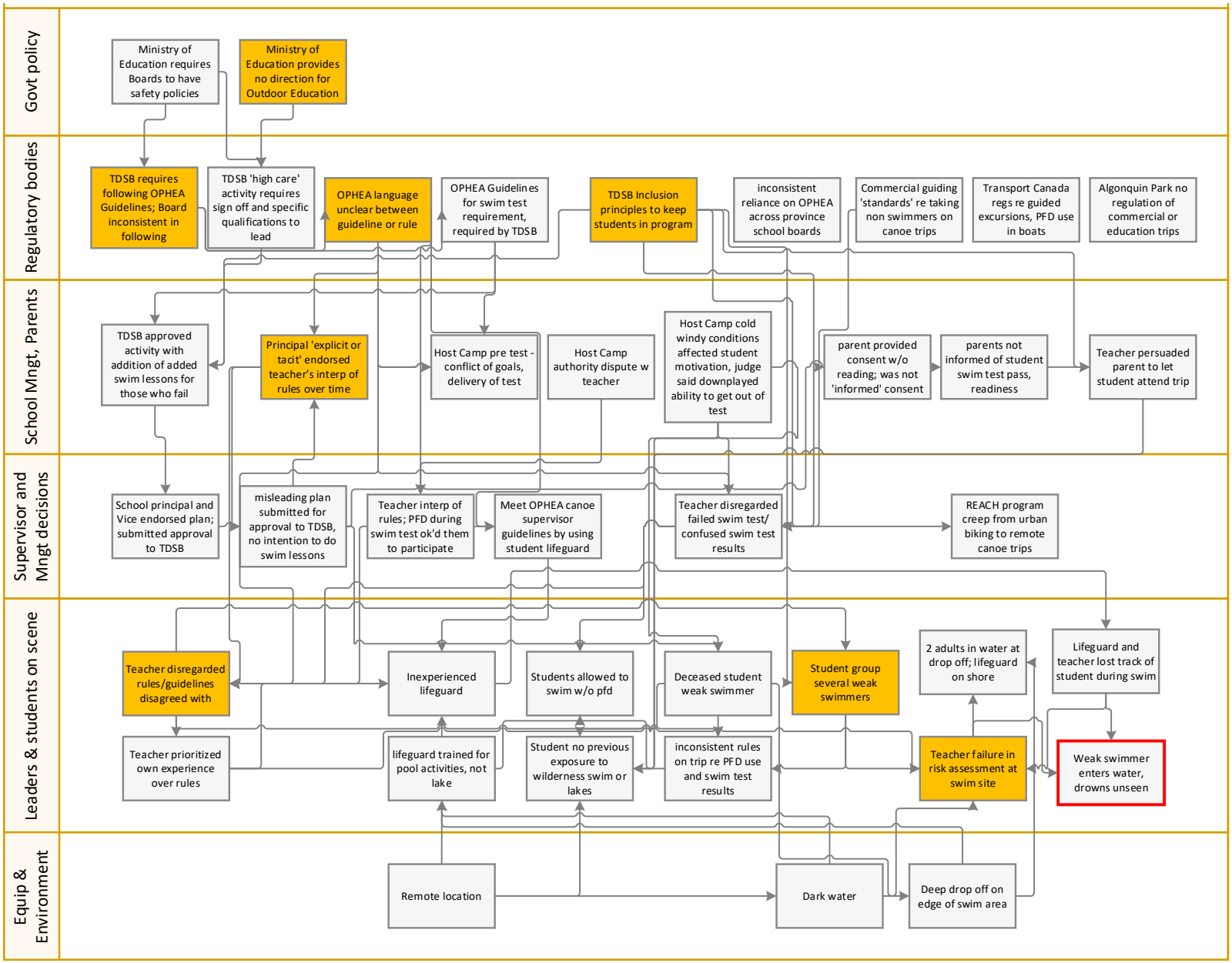
The Ontario Ministry of Education (top hierarchical level) provided no direction regarding OE policy, teacher qualifications, or activity guidelines. This created a condition where the TDSB (second hierarchical level) relied upon an external third party for OE guidelines, the Ontario Physical Health Educators' Association (OPHEA). In the criminal negligence causing death case, it was emphasized repeatedly that the teacher did not follow OPHEA guidelines. However, the TDSB was inconsistent in applying those guidelines (*R. v. Mills*, 2021, para. 403), and the language of the guidelines themselves were unclear regarding whether they were hard "rules" or assistive "guidelines" (*R. v. Mills*, 2021, para. 355). This created further conditions where the teacher interpreted the OPHEA guidelines and swim test criteria to suit his needs, endorsed by the school's principal, a third hierarchical level contributing to this fatality (*R. v. Mills*, 2021, para. 46). This eventually led to the teacher and principal providing misleading information to the TDSB to get the trip approved (*R. v. Mills*, 2021, para. 41).

A parallel set of contributory factors are evident in the Accimap, based upon the TDSB's inclusion principles. These principles were designed to ensure equitable access to education opportunities, which contributed to the fatality by creating implied pressure to keep students in the OE program to earn a credit (*R. v. Mills*, 2021, para. 46). Both the teacher's interpretation of the OPHEA guidelines and the TDSB inclusion mandate created combined conditions that allowed weak swimmers on the OE wilderness canoe trip.

[2] Even in the criminal negligence trial the court could not conclude exactly how many students or specifically who passed or failed the mandatory pre-trip swim test, given inconsistent test procedures and unclear record keeping.

Figure 3

Toronto District School Board, Algonquin Park Drowning, 2017



Comparative Analysis and Discussion

That these events occurred at approximately two-decade intervals (1978, 2003, 2017) allows for interesting analysis as to what factors were present in all three cases and, therefore, may persist over time or lie as structural issues within education administration.

Risk Tolerance

A common administrative and policy thread among all of these fatality events was risk tolerance. The term *risk tolerance* was introduced to the OE and greater education field in the Cloutier (2003) report on the STS avalanche, and was defined as the articulated limits on the nature and magnitude of dangers to which a school will expose its students and staff (Jackson & Heshka, 2011). The St. John's School had an explicit and well-understood (throughout the school) high tolerance for risk, as evidenced by its program ethos, past student fatality, and gruelling OE activities. STS OE staff were left on their own, given no administrative direction on this topic, to establish their program risk tolerance, which tacitly proved to be very high given Grade 10 introduction level courses taking place in technical avalanche terrain. The TDSB, likewise, did not articulate any specific risk tolerance; however, the school administration's explicit approval of the teacher's interpretation of suitable OE activities and participants, including dismissal of the swim test results, in effect adopted the teacher's high tolerance for risk.

Common among all three events was a perspective that risk was beneficial. The St. John's School valued hardship and suffering as aligned with its religious underpinnings. The STS Grade 10 OE course outline, listed one of the course outcomes for the students to "accept risk and overcome it" (Cloutier, 2003, p. 13). For the TDSB, as a "high care excursion" approval was required at the superintendent level, who expressed concern about the inability of students to get the credit if they failed the swim test and encouraged the teacher to devise some means to get them to participate (*R. v. Mills,* 2021, para. 12), the parties were clearly focused on the benefit and not the risk.

Cloutier (2003) offered insightful commentary on risk tolerance relevant to OE, and asked a fundamental question: Who should decide what level of risk is acceptable? "Should a school have the authority (or responsibility?) to decide the levels of risk tolerance for students?" (Cloutier, 2003, p. 15). Many actors (students, teachers, administrators, school boards, parents, and government) have input to risk tolerance as evidenced by factors in Figures 1, 2, and 3.

Cloutier (2003) agreed with Brookes' (2018) strict aversion to fatalities recommendation when he concluded that if a school was deciding the level of risk, then it must avoid any activity with catastrophic risk potential. This would include voyageur canoes on large, windy lakes, skiing in avalanche terrain, and even swimming without a lifejacket. By extension, if a school allowed parents and students to choose the level of acceptable risk, then communication and information exchange must be thorough and honest, with no repercussion for non-participation such as concerns over grade penalties.

Parental Consent

Relatedly, some of the parents involved in all three events expressed that they did not know the risk to which their children were exposed. Parental consent, a cornerstone of education practice, will likely be found lacking in the event of most fatalities, from the reflective perspective of the parent after a tragedy. In some cases, this lack was overt, with uncollected parental consent forms found in the pockets of some deceased students in the STS avalanche (Cloutier, 2003). In all three events, parents made assumptions about planning, safety precautions, and teacher training. Figures 1, 2, and 3 all show a pathway whereby parental assumptions or lack of parental consent contributed to conditions which led to the events. However, these assumptions and suboptimal consent are likely ubiquitous and persistent, but only become problematic when exposed by tragedy such as those analysed here.

In the TDSB drowning, the parent "testified that he did not read the information package," but "he believed that there were safeguards that would be in place. He trusted that the school and the TDSB would ensure the safety of the students" (*R. v. Mills*, 2021, para. 65, 67). The judge, however, concluded that lack of parental consent in itself was not "causal":

> Although there was no informed consent, I cannot find that the absence of informed consent was a significant contributing cause of the death. … I cannot conclude that [the student]

> would not have attended the trip had his father known that the OPHEA guidelines were not being followed. (*R. v. Mills*, 2021, para. 68)

With regards to STS, Cloutier (2003) concluded:

> A school and/or its teachers should not be placed in the position where they are making decisions about what level of risk is acceptable to a family. Parents have the responsibility to make these decisions, but in order to do so they need access to a significant amount of program- and activity-related information. The parents also need to be diligent in carrying out their responsibility in this regard. (p. 18)

Risk Creep

Also evident among all three cases were elements of risk creep. *Risk creep* refers to the incremental and unnoticeable increases in risk as programs progress and as staff become comfortable with old risks (Jackson & Heshka, 2011).

St. John's School started with day-long snowshoe activities near campus, which rapidly transitioned to month-long canoe expeditions (Raffan, 2002). STS moved the backcountry ski course from Grade 11 to Grade 10, with no change in curriculum or physical demands, thereby increasing the risk of the course with a younger population (Cloutier, 2003). The TDSB credit program, at which the canoe trip was targeted, started as an urban cycling program that grew to a wilderness expedition. To those involved, this progression of the OE program was likely logical and reasonable; however, it raised questions as to the recognition of growing risk, the educational value and need for that risk, and the increasing demands in planning, leadership, student preparedness, and parental consent. As risk in an OE program grows, each organizational level and each set of actors needs to account for this creep and put in place appropriate safeguards and redundancies. To avoid risk creep, OE policy can be implemented in advance to create hard limits on accepted activities and exposure to hazards, aligning with Brookes' (2018) strict aversion to fatal risks.

Outdoor Education vs. Adventure Education

These case studies all reflect "pinnacle" OE or adventure experiences (Henderson & Potter, 2001). These were all major expeditions or backcountry travel requiring substantial training, skill, planning, and management to execute with educational benefit and with safety outcomes. These cases do not reflect the simple, out-of-classroom learning OE experiences that are delivered daily (and safely) at schools across Canada. The St. John's School and STS cases would qualify as "adventure education," where challenge and risk were purposely sought for educational purposes (Cloutier, 2003). Cloutier (2003) advised that "the appropriateness of programming risk into school-based programs needs to be reconsidered, and school boards and parents must more clearly understand and endorse these risks if they are to be included in programming" (p. 14).

The TDSB case, while seeking challenge within a wilderness experience, was not specifically using risk as an educational tool, so that whether it should be categorized as OE or adventure education is debatable. The tragic fatality in this case was specifically tied to the inherent risk of swimming and the supervision of that activity, not the risks of wilderness travel or adventure pursuits.

All three of these case studies replicated trips or activities commonly offered by professional guides in the adventure field, and the fatalities all resulted from known and foreseeable dangers in those environments. None of the fatalities in these three case studies was due to random or unforeseeable circumstances. Adventure guides gain specific training and expertise, which is difficult for OE teachers to replicate given the natural constraints of a teaching position. The STS teachers and the TDSB teacher each had suitable training (such as those indicated in the OPHEA guidelines), but OE pinnacle experiences such as these were only offered annually or less often. The OE teacher will have difficulty gaining the experience and expertise to effectively lead a group of students in these higher risk environments and activities, when compared to the professional guides who permanently work there. Both the TDSB teacher's criminal defence and the STS rationale claimed that their OE trips aligned with what commercial guided trips would have done. The caveat is that none of the teachers was a commercial guide, so

that this rationale is insufficient.

Key Person Dependency

The lack of standardized OE curriculum or overarching provincial OE policy means that many OE programs are driven by the vision and skill of a local teacher (Asfeldt et al., 2021; Henderson & Potter, 2001). In each of these three cases, the school relied upon an individual to carry the full load of managing the risk of its OE programs, which was combined with limited administrative oversight. The St. John's School canoe trip did not have the most experienced staff member on the trip, who instead delegated to a junior teacher. The STS OE trip relied upon a single trained and skilled teacher to oversee a large group and two additional untrained adult supervisors. The TDSB at-risk student OE program was conceived and led by one teacher who was acquitted of criminal negligence.

The risk creep identified above may be manageable for individual OE teachers who grow their experience and expertise so that they can offer more ambitious adventures. However, as programs grow or staffing changes, existing OE programs can be picked up by new, inexperienced teachers without the cumulative expertise acquired by the previous teachers. Key person dependency – reliance upon one individual to manage risk - becomes a system weakness as staffing inevitably changes over time.

Lack of Oversight

In all three cases, the individuals involved were compelled to define for themselves a suitable level of risk for their educational activities, given that little or no direction was provided from above. The St. John's School tragedy occurred at a time (1978) when private schools largely operated outside of provincial oversight. STS, as a private school, could define for itself its educational mandate in 2003. For both of these schools, the individual teachers operated without external approval or oversight requirements. The recent TDSB drowning, occurring under the responsibility of a public school board with modern approval expectations, exemplified how oversight can become just submitting the required documents. When challenged by the superintendent, the approval documents were modified and resubmitted, with no change in practice (*R. v. Mills*, 2021).

With the TDSB, the presence of the external OPHEA guidelines created an oversight vacuum. Board administrators required "strict compliance" as if the guidelines were policy (*R. v. Mills*, 2021, para. 352). They also assumed that the guidelines were understood, would be followed, and that following those guidelines would ensure safety. In practice, the guidelines were inconsistently applied across the Board's schools, and the teacher was explicitly approved by his principal to re-interpret the OPHEA guidelines to suit his student group and the trip needs. A guideline or policy in itself cannot ensure safety. If a policy wass regularly ignored, or supervisors did not enforce it, one was left to believe that the policy did not matter. Without clear and consistent supervision, individuals can be left to decide for themselves what guidelines can be applied, and when policy can be modified. In the case at hand, the Court heard that the teacher had been allowed to exercise discretion and professional judgement in the past. A statement released by the TDSB (2018) indicated that its internal "checks and balances" were inadequate (para. 1). A provincial review of OE (considering the TDSB case) found that existing guidelines were adequate, but application and oversight were not (Deloitte, 2018).

Limitations

There are several limitations to consider in this comparative case study. Any case study is a reconstruction of events – in some cases, highly stressful events sometimes set far back in time. As such, the quality of material is limited by the subjective interpretation of the authors documenting these cases as well as the recollections of witnesses and those involved who contributed to those secondary sources. The interpretation of the case study narrative is in itself a subjective activity.

When considering the causal factors within any one case, there are no strict limits on how far back in time one can analyse contributing aspects, beyond a direct reasonableness test (Brookes, 2018). Links between layers and causal factors rely upon researcher expertise and interpretation.

The focus of this comparative analysis was centred on administrative, policy, and oversight issues relevant to these cases and potentially insightful to all OE program management. There are additional lessons to be derived from this material, relevant to alternative audiences and interpretations, such as

analysis of the crisis response after the fact or specific discussion regarding outdoor hazards and safety. Lastly, these three case studies all involved pinnacle OE experiences, taking place in remote environments and requiring a relatively high level of skill to deliver safely. The same causal factors may not be present for small scale, local OE activities that are delivered safely every day in schools across Canada.

Conclusion

This comparative case study examined how school and board administration and policy level factors contributed to three OE fatality cases, and discussed causal factors common among these cases. Risk tolerance and risk creep emerged as distal, causal factors in all three cases. Little to no administrative direction was provided to guide program development or OE delivery; key decisions on risk were left to the teachers leading the activities. This lack of oversight was also present among all cases.

The purposeful pursuit of risk in these studied OE activities moved them from outdoor education towards "adventure education." The benefit of programming risk into OE activities was not critically examined by actors in these cases, and any risk must carefully be communicated with all parties – particularly parents. Inadequate parental consent was found, and will likely always be deficient when assessed in retrospect, and could be considered as a structural risk factor. Lastly, all cases showed evidence of key person dependency: The OE programs and fatal trips relied upon a single teacher at each school to bear the load of running its OE pinnacle experiences. The value of OE pinnacle experiences is not questioned here, but common factors were present among all these tragic cases.

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