ANALYSING 8 YEARS OF YOUTH AVALANCHE EDUCATION

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ABSTRACT: In order to effectively educate youth in regards to avalanche safety there must be more than one approach. Realizing that youth are keen and curious but generally lack internal motivation, are conscious they are going to be scrutinized by their peers, unconsciously feel they are indestructible, can be strongly influenced by the lack of adult safety culture around them and are confined financially; youth avalanche education can be challenging. Other identified barriers to youth avalanche education include program funding, different user groups, a wide spectrum of education of the educator and a limited willingness to go beyond avalanche awareness into avalanche education. By providing a multiple layered approach youth avalanche education can go beyond these barriers and be successful.

Through trial and error, the Canadian Avalanche Centre (CAC) has explored different approaches such as educating the educator, running specific youth avalanche courses, youth avalanche awareness presentations, providing materials/equipment for educators and youth groups, and using social media as an education tool. As well, the CAC has worked collaboratively with a number of other organizations and institutions providing youth avalanche education. By analyzing the strengths and weaknesses of each approach the CAC hopes to share the knowledge gained, help other organizations promote youth avalanche education and open discussion on youth avalanche education.

KEYWORDS: youth avalanche education, educator, school programs

1. INTRODUCTION

The Canadian Avalanche Centre (CAC) has employed many different strategies over the last 8 years encompassing youth avalanche education. Some of the different strategies include educate the educator, educational and internet/website materials, youth avalanche courses, avalanche awareness presentations and social media outreach. In analyzing these different approaches it is hoped that a discussion can be broached within the avalanche community on how best to deliver and improve youth avalanche education.

2. EDUCATING THE EDUCATOR

During the 2008-09 winter season a survey was conducted of youth avalanche educators in order to ascertain what would help them better deliver youth avalanche education. One result was the need for an education driven avalanche course. In the spring of 2010 the Canadian Avalanche Association(CAA) ran an Operations Level 1 course specifically focused for educators. The foremost goal of the course was for educators to obtain the knowledge and skills the Operations Level 1 course provides. Secondly, was to create an environment where educators could discuss the challenges of educating youth and share methods and ideas on how to impart knowledge. Thirdly, was to create a space were educators could ask questions of an avalanche professional including scope of practice, terrain assessment and general avalanche knowledge. Finally, some of the educators were taking the Level 1 course to fulfill the requirement needed to teach AST 1 courses and hoped to be qualified to do so for the following school year.

All goals set out for this course were met and both students and instructors considered the course a huge success. An unintentional outcome of the course was that for a few of the students it demonstrated the breadth of knowledge required to move safely through the mountains in the winter and that they had a lot more knowledge to gain.

Although the Operations Level 1 Educator course was offered in following years there was never enough students to run it. Speculation is that funding and time are difficult for educators to obtain and therefore only 1-5 can do so in a year.
However, having the educator course posted garnered interest and led to more teachers contacting the CAA/CAC to discuss further avalanche education and into taking the regular Operations Level 1 course. Looking ahead, it might be better to try to get a cohort of 6 educators into a regular Level 1 course and have one of the field days be educator focused for them. As it takes time to apply for financing through the school board it would be beneficial to try and set this up the previous season for the following spring.

Along with the Educator Operations Level 1 course other education sessions have been led. During the 2012-13 winter season the CAC collaborated with Yamnuska Mountain Adventures and the Calgary School Board in running a one day workshop for educators in the Calgary, AB area. The idea was to hone teachers’ skills, introduce them to the latest technology and methods as well as providing a space for educators to ask a professional questions. The workshop was 6 hours with part of it being held in a downtown classroom provided by the school board and part of it being held outside on the grounds of the building. The workshop was advertised through the Calgary school board and the CAC educator newsletter, as well as directly to known Calgary teachers. People were asked to notify Bridget Daughney of their intention of attending in order to gauge the needs of the workshop. The workshop was free of charge and transceivers, shovels and probes were offered on loan for the day.

The successes of this workshop were that those that attended found it very educational and agreed skills and knowledge learned would help their classroom teachings. Some of those that attended were not previously in contact with the CAC and were pleasantly surprised with what the CAC offered educators. The participation of the Calgary School board shows a shift in culture with the idea was to hone teachers’ skills, introduce them to the latest technology and methods as well as providing a space for educators to ask a professional questions. The workshop was 6 hours with part of it being held in a downtown classroom provided by the school board and part of it being held outside on the grounds of the building. The workshop was advertised through the Calgary school board and the CAC educator newsletter, as well as directly to known Calgary teachers. People were asked to notify Bridget Daughney of their intention of attending in order to gauge the needs of the workshop. The workshop was free of charge and transceivers, shovels and probes were offered on loan for the day.

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Unfortunately a large snowstorm hit the Calgary area the day of the workshop making travel through the city unmanageable. This led to fewer people attending the workshop than had signed-up. The workshop was held on a Saturday which meant educators needed to give up personal time to attend which deterred some. In the future it would be beneficial to hold the workshop on a professional day enabling teachers to attend through their work.

Through a 2013-14 SARNIF grant the CAC was able to host an informative classroom session for educators of the Lower Mainland of Vancouver, BC. This informative session was with a CAC forecaster and was aimed to go over the latest information/technology as well as be a Q &A session with a professional. Known educators were surveyed for input on timing, location and length of the workshop with the more popular answers being acted on. The workshop was then advertised through the CAC newsletter, lower mainland school contacts, directly to educators and through word of mouth. The advertising stated to contact Bridget Daughney with topics participants would like to have discussed at the information session. The workshop was free of charge and was held over 2 hours in a central Vancouver location.

Those that attended the information workshop found it very useful and were glad they had attended. The turnout was quite small with some participants who were going to attend not making the session. Looking to the future it would be suggested to work within the professional development days set out by the school board as this might raise the attendance.

The CAC Educator Newsletter is put out 3-4 times per winter season. Anyone who is interested can be added to the recipients list. The goal of the newsletter is to impart knowledge and updates on current avalanche practices, grant/funding opportunities for youth programs, highlight new materials and online tools for educators, highlight contests and avalanche programs for youth, as well as sharing ideas on how communities/programs are successfully promoting youth avalanche education. The newsletter has been a success in keeping educators connected into the CAC. After each release the CAC Youth Education Coordinator receives e-mails and phone calls about the newsletter information. As well, a few school outdoor education programs have been able to obtain funding through the information of grants in the newsletter. The newsletter also helps promote the sharing of ideas and materials leading to educators sending thoughts and lesson plans into the CAC. By tracking the rate of opening of the e-newsletter the CAC is able to ascertain that it is being read and links are being “clicked on”. The newsletter is a cost effective way of reaching a large audience and to continue interest in youth avalanche education.
3. YOUTH AVALANCHE COURSES

Through a decision reached from discussion and panel expertise the CAC recommends that youth aged 16 years of age and older take an AST 1 course if they are engaged in backcountry activity. The discussion to reach this conclusion was multifaceted with one of the main concerns being that youth do not have the maturity to apply skills learned in the AST 1 course with decision making in avalanche terrain. Would we be setting youth up for failure by giving them the false sense that they now have knowledge and can therefore be in the backcountry safely in the winter time? This concern was weighed against the fact that some youth are already exploring the backcountry, including out of bounds at ski hills, and that it would be better to have them knowledgeable than not. The conclusion has been to provide knowledge to youth with precautions put in place to make sure youth are aware of their limitations coming out of the AST 1 course. The recommended age of 16 is not set in stone. If the AST provider agrees younger students can attend an AST 1 course. Often providers ask that a parent or guardian accompanies the youth on the course. As well, some providers try to group youth together on one course so they can address youth specific concerns.

To mitigate the main concern of youth on AST 1 courses the CAC has created a couple of key documents. The first is “Appendix H: teaching AST to Youth”. This document is designed to help AST providers understand the differences in teaching to youth than adults. The main two areas of discussion in this document are the approach to risk management needs to be adjusted when teaching to minors and how minors assimilate knowledge differently. This document is available freely online www.avalanche.ca/cac/community/educators/curriculum-ideas in the side bar.

The second document is the Youth Informed Consent Brochure (YICB) also freely available online www.avalanche.ca/cac/training/resources/Youth-informed-consent. One concern that came out of youth attending AST courses was that they would feel, and convey to their parents, that they now had the skills and knowledge to be going into the backcountry. Parents who themselves were backcountry enthusiasts would be aware that the knowledge gained in the AST 1 course was only the first step and would remain vigilant about their child’s backcountry involvement. However, parents’ who themselves were not knowledgeable backcountry enthusiasts could be unaware of the limitations of the AST 1 course. Therefore the YICB was created to clarify the goals, results and precautions to be taken after, the AST 1 course. This brochure must be signed by the parent/guardian and returned to the AST provider for each youth participating in an AST 1.

The success of allowing youth into AST 1 courses is multifaceted. First off, youth that are already heading into the backcountry, whether it be through mentorship of an adult, ducking the lines at a ski hill or taking their sled into avalanche terrain, are able to obtain the beginning basic knowledge of being in avalanche terrain and rescue equipment. Parents who are concerned about their child’s winter activities but are unknowledgeable themselves have recourse to professionals to teach their child. In schools, teachers are able to gain the qualifications to teach AST 1 courses and are making it part of their yearly curriculum. Non-AST providing teachers can hire a professional to teach their students.

Whitewater Resort and the Nelson community are a strong example of youth in AST 1 programs. The community created Avalanche Awareness Beyond the Boundaries Society (AABBS) www.skiwhitewater.com/aabbs_youth_avy_skills_training.php which helps fund youth in AST courses. Whitewater Resort spent considerable time creating a longer youth specific AST 1 course. The culture of the resort and youth in backcountry has changed in that being educated is being more seen as “a must” as opposed to “who would take that course?”.

A long term goal of the CAC is to get AST 1 recognized by the school boards so a student can obtain highschool credits by taking the course. This has proven challenging due to the shorter length of the course and the education system itself. Another challenge is teachers hoping to qualify to teach AST 1 must acquire Canadian Avalanche Association (CAA) membership. The CAA membership requirement of “engaged in avalanche-related activities during two of the past four winter seasons” is difficult for a full time teacher to obtain.

Recently the CAC introduced a new recreational course called Companion Rescues Skills (CRS). This is a one day course aimed at learning how and why rescue gear is used. This course has proven to be very successful with younger students, 10-15 years of age, who are maybe not ready or are too young for the AST 1. A couple of parent groups have organized a provider to teach their children a CRS. As well, the CAC partnered
with Fernie Alpine Resort to run a pilot CRS program, free through application, at Fernie Resort. All courses reported high youth engagement and knowledge retention. One group split the teaching over 4 x 2 hour session and found the weekly repetition worked very well. A challenge was found when the age of the students differed greatly and this group recommended future courses be taught within a 2-3 year age group. Another challenge is funding, youth will not apply to take this course on their own but will become engaged when enrolled. In the future the CAC is hoping to partner with local organizations to run more financially supported youth CRS and AST courses in mountain towns.

4. YOUTH AVALANCHE AWARENESS PRESENTATIONS

There are many organizations along with the CAC that deliver direct youth avalanche awareness programs. In-school avalanche awareness presentations have proven to be very successful as students are required to attend and are a “captive audience”. Less successful have been non-course non-school awareness workshops for youth.

The CAC yearly presents avalanche awareness to all grades, K-12, in designated communities and requested schools. At the beginning of this program the outreach focused on 3 grades, grades 6,8 and 10. This smaller focus allowed the programs to be well thought out, delivered in an engaging manor, gave time for teachers and administration to “buy in” to the program and gave the presenter an idea of student knowledge. This also allowed the program to begin with a smaller financial backing which then grew with the program.

The following are things that have proven successful for in-class delivery. It is important to update the material yearly as students are gaining knowledge through the grades. For example what a grade 6 class knew 4 years ago has changed as now they have had 4 years of program delivery. Making sure the media (photos/videos) and activities are different grade to grade to keep student engagement yearly. Being able to partner with local ski hills, or parks personnel, for delivery so there are two voices and ideas instead of one. If you are able to have a local person tell their avalanche story or bring in a CARDA dog this will engage students more. Having student participation during the presentation through activities or story sharing. Make sure the material being delivered is relevant and age appropriate.

Challenges to in-class presentation can include difficult classes behaviorally which can be mitigated by good classroom management skills. Troubles scheduling presentations with school administration in a timely fashion. Sometimes working with superintendents or vice-principals over principals makes scheduling easier. Disinterested or unengaged students can be livened up by offering a small prize, such as a sticker, for answers to questions or by getting students to come up and demonstrate their knowledge. Funding to present can be difficult to obtain especially if there is travel involved.

Non-classroom presentation are more challenging. The CAC hosted a Family Night along with Kicking Horse Mountain Resort in Golden. As well the CAC hosted a fun activity day and partnered with CAPOW! on a second activity day at Revelstoke Mountain Resort. While students were keen initially about the idea very few showed up to the activities. It is very difficult to get youth engagement outside of scheduled activities. Partly this is due to the teenage nature of waiting till the last minute for the “best” opportunity. As well it is hard to engage youth to learn outside of the classroom.

5. MATERIALS AND INTERNET RESOURCES FOR EDUCATORS

The CAC jurisdiction is to work with people from all across the country. As it is impossible to visit every school in the country the CAC website plays an integral part in youth avalanche education. The CAC website hosts materials to facilitate the delivery of avalanche education as well as an Online Course in both English and French. All material is aimed to be presented in an easy to understand and accessible manor on the CAC website. Through feedback from users it has been found that having materials sectioned into categories such as “Videos” or “Handouts” with grade levels visible “For Grades 3-5” makes materials more accessible and less overwhelming.

One of the first resources created was the Guidelines for Youth Avalanche Education (www.avalanche.ca/cac/community/educators/guidelines-youth-education ). The purpose of this document is to provide educators/teachers with rough guidelines on when to talk to students about topics of snow safety and avalanche awareness education. These will always be “rough” guidelines as regional interests, teacher’s/educator’s winter knowledge, time allowance and the previous year’s winter education will play large roles in providing winter safety education.

The contents of the guidelines are the culmination of discussions over years. The materi-
al has been put before a panel containing the following professions: principal, teacher, outdoor education teacher, outdoor program leader, avalanche professional, parks employee. As well, the material was reviewed at the CAC annual general meeting 2010.

These guidelines are not to be confused with an avalanche course. Their aim is to create avalanche and snow safety awareness in more students through helping educators and teachers deliver this awareness. They have proven to be a great starting point for educators wanting to begin an awareness or educational program.

The CAC has aimed to become the hub of educational avalanche materials, creating new ones where there is a need and showcasing materials already created. Materials range from handouts for the uneducated adult to give or show to their student/child, to materials that support AST 1 or outdoor education programs taught by well educated people. Realizing that learners use different media the CAC hosts powerpoints, photos, videos, site and location information maps, internet resources, handouts, activities and an online course. All materials are downloadable and can be found on the curriculum webpage: www.avalanche.ca/cac/community/educators/curriculum-ideas.

There are two other material sections on the website. One is a section of purchasable materials such as books and DVD’s applicable to the youth audience. Contained in this section is the Avalanche Safety Classroom Kit. The kit is free material we will mail upon request to youth groups or classes. The second section is the Online Course available in English and French. The Online Course is mostly text based but does have video clips, interactive Q&A parts and interactive route finding exercises.

Feedback on the website material has been very positive. It is very easy to have someone on the phone beside their computer and walk them through what is available. As well, when visiting a school it is easy to show the librarian or principal how to access the material for classroom follow-up. The person can then peruse the materials at their own pace and get back to the CAC with any questions. It has been found people are more likely to deliver avalanche education when materials are already made and ready to go. Materials are available 24 hours/day seven days a week, whenever an educator needs them. By hosting materials on the website there is no cost of printing or mailing materials for the CAC.

A draw back to having materials on the website is that once a person is introduced to the webpage it is challenging to know how often they use the material, what is working for them and if they have passed along the information. Unless the person has signed up for the CAC newsletter, there is also limited opportunity to continue communication with them. Another complication is the rights to the materials. The CAC asks that, for example photos, are only used for educational purposes but do not have any recourse in tracking material use once it is available on the internet. Finally, it is important to make sure that materials are up to date with the latest knowledge, time and expertise for updating is necessary.

This section of the website continues to grow. Suggestions from educators and new technological advances help drive what is created. In the future it would be beneficial to have the materials tie into the Youth Avalanche Education Guidelines as well as the Learning Objectives created in provincial school curriculum.

In 2009 the CAC created the “Tool Box” program. Rescue equipment, such as transceivers, can be cost prohibitive to education programs wishing to teach students its use. The Tool box program was created to fill this equipment need at no cost to youth programs. All equipment in the Tool Boxes has been donated, mostly by organizations but also some individuals. The first year of the program, many winter guiding operations in Canada were switching from analogue to digital transceivers and were happy to donate their old analogues to the Tool Box program. Probes and shovels proved harder to obtain and were in shorter supply in the boxes. Again, it was mostly older gear donated, like screw together probes or gear that was in slight disrepair. As the program has continues older gear has been replaced with new thanks mostly to donations from gear companies and in particular Backcountry Access. The CAC currently has 3 Tool Boxes each containing 20 digital transceivers, 20 probes, 10 shovels, 4 snow saws and 10 snow study kits.

The Tool Boxes have definitely been successful as a teaching aid. Some groups/classes use a Tool Box every year and other groups change yearly. A couple of school classes have been able to demonstrate the benefit to students practicing with the Tool Box which in turn has enabled them to secure funding for their own school equipment. Students are able to see the benefit of having and knowing how to use rescue equipment and are encouraged to purchase/rent their own when in the backcountry. The Tool Box has also demonstrated the importance of gear knowledge, there are numerous backcountry users who carry the safety gear but do not know how to use it. We
have also been able to match professionals with uneducated teachers and classes to demonstrate the Tool Box equipment. The Tool boxes have encouraged some educators to gain further knowledge in order to be able to teach their classes.

Operational concerns of the Tool Boxes are that the gear has been donated and moves around, and is therefore not reliable enough to be used in the backcountry. Equipment is only to be for frontcountry learning purposes only. Moving the boxes from town to town has sometimes proven a hardship due to weather and road conditions or the shipping company not delivering in a timely manor. It takes time organizing who gets the boxes when and making sure the “handoffs” in a community go smoothly. Funding is required to move the boxes between communities. As well, it requires time and effort in maintaining and storing the gear. The teacher introducing the Tool Box to students must possess education and knowledge in avalanche rescue equipment and the CAC has no knowledge if this is being done properly. Finally, groups are only able to obtain the Tool Box once per season for a finite period of time.

Looking ahead with the Tool Box program there are goals to work towards. It would be beneficial for mountain school districts to obtain their own Tool Box and have it available for educators to sign it in and out. This would mitigate the one-time availability over the season. The CAC is seeking sponsorship or grant funding to pay for the movement of the boxes around the country. To expand the Tool Boxes more into the prairies were many snowmobilers are uneducated yet come to BC to sled in the mountains. Continue having gear donations to switch out broken and heavily used gear.

6. SOCIAL MEDIA

In 2010 the Canadian Avalanche Foundation(CAF) created the Facebook page Behind the Lines. The intention of this page was to engage youth through social media and to give them the avalanche awareness tools to be safe in the backcountry. Realizing that the time, effort and expertise in keeping a social media page going was beyond what had been expected the CAF handed the running of the Facebook page over to the CAC social media expert Karilyn Kempton. Funds were also secured to enable Karilyn to upkeep and manage the page as well as for the Youth Education Coordinator to help with input. This funding also helped to garner prizes, along with some donations, for the Behind the Lines Video Contest.

Over the two years that Karilyn has been running Behind the Lines, the “likes” have grown considerably. Karilyn has been able to support professionals blogging on the Facebook page. The professionals discuss “Lines” or ambitions they would like to achieve over the winter season and then blog about the steps they are taking to achieve their goals safely. As well regular posts are put on the webpage regarding winter safety, accidents and learning from them and relevant videos. For the past two years a video contest with transceivers, probes and shovels as prizes has been run.

Behind the lines has been a learning process as youth use social media differently than the adult population. Successes have been that the page has seen a lot of internet traffic and continues to grow its following. Users are commenting and engaging in the articles posted. We have received a lot of direct positive feedback about the content particularly from educators. As Karilyn also does the rest of the CAC’s social media she is able to cross-over some material. Karilyn has been able to work with one of our sponsor’s, Mountain equipment Coop, social media personnel to bounce ideas and techniques off of.

Some of the challenges have been it is undetermined if the majority of the “likes” are adults or youth. Despite advertising heavily we were unable to gain a good amount of entries to the video contest and have decided to discontinue it next year. We were hoping to get youth submitting posts and photos and have been unable to do so.

In the future Karilyn will be looking into other social media such as Twitter to see if we can garner more youth interaction. We will be looking at smaller, monthly or weekly photo contests for prizes. We will continue to engage professionals to blog and share on Behind the Lines.

7. CONCLUSION

In conclusion there are many successful different approaches to youth avalanche education. Each strategy has its strengths and weaknesses and is dependent on the educator presenting the material. Some of the common barriers to youth avalanche education are funding, knowledge, and available support. Successful programs have been able to engage youth, been well supported and have knowledgeable educators. By providing a variety of materials and strategies it is more likely that people will be willing to engage youth in avalanche education. Through continued sharing of knowledge and open discussion youth avalanche...
education will only keep on growing and strengthening.