Youth Avalanche Education Programs in the Pacific Northwest: *Analysis and Recommendations*

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ABSTRACT

In Washington State alone, avalanches historically claim more lives that earthquakes, volcanoes, and other natural disasters. With snow sports becoming more popular, many schools (both public and private), outdoor programs, even Boy Scouts of America, are taking teens into the winter backcountry, on skis, snowshoes, and snow machines. And, these same teens and others are now exploring the backcountry on their own, whether it is skiing out of bounds or headed off into the wilderness. However, little is known about what kind of avalanche education is occurring in these programs. Through a grant from Friends of the Northwest Weather and Avalanche Center, current uses of youth avalanche education were measured using a quantitative/ qualitative survey. Of 48 possible recipients, 32 returned the survey, answering some sixteen questions. Through analysis of responses from individuals, plus interviews with several youth avalanche educators in Washington State and British Columbia, four recommendations were given to FOAC to consider. These included:

•Construct Beacon/ Avalanche Tool Box
•Develop FOAC supported instructor pool
•Offer Avalanche 1 Certification for Educators and Outdoor Program Coordinators
•Develop a youth (teen) focused Avalanche Awareness curriculum

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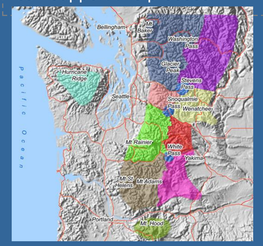
INTRODUCTION

With the rise of popularity of winter snow sports, more and more teens (and younger) are venturing out into the backcountry, sometimes into avalanche terrain. Friends of the Northwest Weather and Avalanche Center (FOAC) seeks to determine what current youth avalanche education is being conducted by both public and private schools, as well as ski clubs and assorted outdoor recreation programs, guide services in the Pacific Northwest. FOAC supported this research to:

•identify schools and programs that offer winter sports activities to their K-12 students and determine if they also offer youth avalanche education (YAE)
•survey educators for what is working in their avalanche curriculum and what is missing.
•make recommendations of how to strengthen youth avalanche education programs and how Friends of the Northwest Weather and Avalanche Center can support this process.



Map 1 NWAC coverage

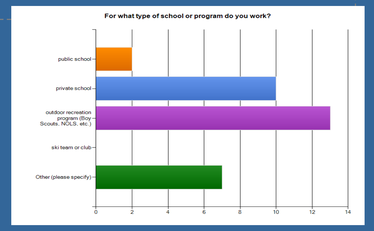


Chart 1. Types of Programs.

METHODS

The Northwest Weather and Avalanche Center (NWAC) coverage includes the Olympic Mountains and Cascades Mountains of Washington State, including the Mt Hood Area of Oregon. Based on their range, outdoor educators in the diamond-shaped range encompassing Bellingham to Portland, Or and Port Angeles to Wenatchee were sought to be indentified and interviewed (fig 1) A majority of the research time was spent locating teachers of public and private schools who run outdoor recreation, as well as outdoor program coordinators in both the private to non-profit sector. Often, public and private schools were searched for online in the Seattle and Portland areas, and then called to see if they had a ski or outdoor recreation program. Other contacts were found through fellow educators, colleagues of friends, and contacts of FOAC. At the same time, this researcher was constructing an online survey with about sixteen questions, constantly testing the survey out with FOAC members.

After several weeks of searching for contacts, a spreadsheet of some 62 possible contacts was created with names, phone numbers, emails, and school / business websites. After pairing down that list to workable email accounts, 49 public and private school teachers, and outdoor educators were identified and sent a survey created using Survey Monkey (www.surveymonkey.com).
The survey included both quantitative and qualitative questions.

RESULTS

Of the 49 possible contacts, 32 recipients returned the survey; a completion rate of 65%. Most of the participants in the survey run outdoor programs (outside of schools), while private schools are the next biggest group (Chart 1). When asked what grade level they serve, 90.3% served grades 10-12, and 77.4% served grades 7-9; compared to only 9.7% working with K-3. Nordic skiing, snow camping, and snowshoeing were the most popular activity offered by participants (Chart 2). Other important quantitative data gleaned from the research includes:

• 48% of participants are offered some type of youth avalanche education (YAE)
• Of those offering YAE, 86% instruct in-house verses outside experts
• 82% present create their own curriculum instead of AIARE or other
• 69% offer only 0-2 hrs/ year, while 19% offer up to 5-10 hours worth of YAE.

When asked about strengths of their YAE, common qualitative themes were:

• student interest in material, especially hands-on sessions
• cross cultural connections and customized to fit outdoor trips

When asked what is missing in their YAE, common responses included:

• more class and field time, more equipment needed and experts to assist

When the 52% of participants who do not offer YAE, were asked what barriers prevent this type of education, again:

• not enough time, resources, or funding
• not comfortable with material

When all participants were asked to rate subject importance in YAE material:

1. Presenters focused on youth
2. Field sessions with beacons, etc.
3. More avalanche training for self

were the highest ranking choices (chart 2)
When asked about linking avalanche curriculum, most participants liked the idea, but "did not have the time to develop" cross cultural connections.
What do students need to receive from youth avalanche education? Common qualitative responses included:

• Independent decision making skills and general common sense
• Respect for terrain and dangerous conditions
• Understand that even with beacon and gear, that they are NOT invincible (similarly, a "healthy sense of fear" was voiced by several respondents)

When asked to compare youth vs adult avalanche education, the universal common response was "teens need even more hands-on sessions than adults"

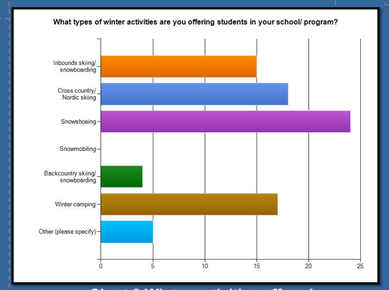


Chart 2 Winter activities offered.

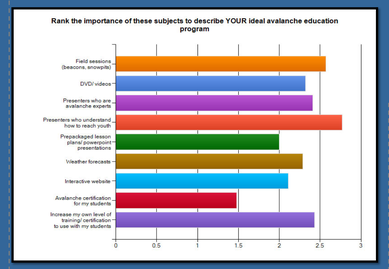


Chart 3 Ranking importance of avalanche material.

RECOMMENDATIONS

1. Construct Beacon/ Avalanche Tool Box
From both the qualitative questions of what is missing from your avalanche education and barriers to education, a common theme was lack of resources, equipment and funding. Also, when educators ranked the importance of educational tools, field sessions had the second highest score.
Currently, CAC has several beacon boxes that they mail to schools to use for transceiver training (CAC). FOAC could create several beacon boxes for use for schools and outdoor programs; these beacons could be used anywhere, snow or grassy athletic field

2. Develop FOAC supported instructor pool
Through educator comments, avalanche instructors who understand teaching youth are more effective that instructors who are avalanche experts (chart 3). FOAC could create a pool of instructors who volunteer (or get paid stipend) to present at schools and outdoor programs.
Currently, there are already volunteers in FOAC, ski patrols, SAR teams, etc. who already present avalanche awareness programs in the Pacific Northwest; Michael Jackson of the Alpine Safety Awareness Program in Bellingham, WA is one example,. These instructors might be brought into the umbrella of FOAC, equipped with a standard Avalanche Awareness presentation and labs to present to students.

3. Avalanche 1 Certification for Educators and Outdoor Program Coordinators. Through the survey, educators wanted more training for themselves, but were not interested in having their students avalanche certified (chart 3). Also, a major barrier to offering avalanche education was "Is not a subject matter that I am comfortable instructing". An avalanche 1 certification class could be aimed at both school teachers and outdoor program coordinators, and run through a local college/ university for teacher clock hours and college credit.

4. Develop a youth (teen) focused Avalanche Awareness curriculum.
There are many Avalanche Awareness classes and models out there, and they could just be adapted to be more hands-on (less lecture based). Canadian Avalanche Centre has multiple lesson plans and curriculum ideas that can be downloaded and used in a classroom, or field session (Curriculum ideas).

ACKNOWLEDGEMENTS

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