

Math Achievement among ACC Students from Western Bush Alaska

May 7, 2013 (Soldotna, AK): Math Achievement among ACC Students from Western Bush Alaska

http://ic.pics.livejournal.com/esandell/48603753/89450/89450_300.jpg

Research on school attendance consistently shows that absenteeism is correlated to students' school behavior, participation in extracurricular activities, assessment and grades, and long-term educational outcomes. Anecdotal information suggests that most students really want to enjoy school, participate fully, and do well in their coursework. So, when students start to slip and miss school, it is often a "red flag" that something is wrong.

Student engagement and attendance is a challenge for children and youth from Western rural "bush" villages. Chronic absenteeism could be related to a variety of family and community issues. School leaders want to provide prompt and persistent attention, but may be over-whelmed by the extent of the problems. For example, in Hooper Bay, Alaska, 100% of the 414 students in pre-kindergarten through grade 12 are identified as "minority." 100% of the public school students attended full days on less than 50% of the 180 days of school. Continuity of learning in all subjects, including math, is significantly impacted.

In Western rural "bush" villages, the traditional economy functions on an almost cash-free basis. In fact, Alaska Native families avoid many products being sold at the village grocery stores, where the prices include the high costs of shipping products to the village. Alaska Native families rely on hunting, fishing, and gathering to feed their families. Since Alaska Native families, therefore, do not need to use math to calculate their budgets and expenditures, children and youth have less experience using abstract numbers.

Students arrive at Alaska Christian College (ACC) with little experience with success in math. Most students avoid math and even postpone taking any math course until their last semester at ACC. Some of the students must repeat the course because of poor performance.

During Spring, 2013, 10 students started in Jackie Smith's 'Foundations of Math' class. Shortly thereafter, two withdrew from ACC altogether and two were dismissed from ACC for behavior issues. The remaining six students finished the semester. Instructor

Jackie Smith found it was important to adjust curriculum to be able to respond when students remarked: "we don't do it that way in the village." The course applied concrete "western" calculations to their village experiences. They learned the "language of commerce" and the math formulas involved in pricing, profits and discounts, loans and mortgages, probabilities and odds. Knowledge and skill in using algebra and fractions prepares students to participate in a cash economy beyond the villages.

During the semester, students took steps toward success when they worked hard during class, requested study sessions beyond class meetings, and then reported that they had fun! She shared "how exciting it was that students could calculate their own grade point averages!"

5 of 6 passed the course (83%) with 2.555 GPA for students

A 4.00

B 3.75

B 3.00

B- 2.80

C- 1.80

F 0

(From Instructor Jackie Smith and Development Director Debbie Bogart)