ALASKA STATE LEGISLATURE
JOINT MEETING
SENATE EDUCATION STANDING COMMITTEE
HOUSE EDUCATION STANDING COMMITTEE
February 11, 2013
8:00 a.m.

MEMBERS PRESENT

SENATE EDUCATION STANDING COMMITTEE

Senator Gary Stevens, Chair
Senator Mike Dunleavy, Vice Chair
Senator Bert Stedman
Senator Charlie Huggins
Senator Berta Gardner

HOUSE EDUCATION STANDING COMMITTEE

Representative Lynn Gattis, Chair
Representative Lora Reinbold, Vice Chair
Representative Gabrielle LeDoux
Representative Dan Saddler
Representative Paul Seaton
Representative Harriet Drummond

MEMBERS ABSENT

SENATE EDUCATION STANDING COMMITTEE

All members present

HOUSE EDUCATION STANDING COMMITTEE

Representative Peggy Wilson

COMMITTEE CALENDAR

PRESENTATION: ALASKA NATIVE SCIENCE & ENGINEERING PROGRAM (ANSEP)

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

DR. HERB (ILLISAURRI) SCHROEDER, Vice Provost and
Professor of Engineering
Alaska Native Science & Engineering Program
University of Alaska-Anchorage
Anchorage, Alaska
POSITION STATEMENT: Provided an overview of the Alaska Native Science & Engineering Program.

MICHAEL BOURDUKOFSKY, Chief Operations Officer
Alaska Native Science & Engineering Program
University of Alaska-Anchorage
Anchorage, Alaska
POSITION STATEMENT: Provided an overview of the Alaska Native Science & Engineering Program.

ACTION NARRATIVE

8:00:58 AM
CO-CHAIR GARY STEVENS called the joint meeting of the Senate and House Education Standing Committees to order at 8:00 a.m. Present at the call to order were Senators Dunleavy, Stedman, Huggins, Gardner, and Co-Chair Stevens.

CO-CHAIR LYNN GATTIS announced that Representatives Reinbold, LeDoux, Saddler, Seaton, Drummond, and Co-Chair Gattis were present at the call to order.

PRESENTATION: Alaska Native Science & Engineering Program (ANSEP)

CHAIR STEVENS announced the business before the committee would be a presentation by members of the University of Alaska-Anchorage Alaska Native Science & Engineering Program.

8:01:08 AM
DR. HERB (ILLISAURRI) SCHROEDER, Vice Provost, Professor of Engineering, Alaska Native Science & Engineering Program (ANSEP), University of Alaska-Anchorage, related that Alaska was in the midst of an education crisis in that 40 percent of Alaska Native students did not finish high school on time. Only 4 percent of minority students nationwide come to college prepared for science and engineering. Organizations were concerned about finding the talent they required to stay competitive. Mothers and fathers were concerned for the future of their children.

Funders were concerned by the lack of progress despite huge investments spanning decades. K-12 students were eager and bright, but were often denied the inspiration, guidance, and opportunity that led to success. College students were not graduating in the numbers necessary to meet the demands in science and engineering.

DR. SCHROEDER related that ANSEP reached only 3 percent of K-12 Native students, so 97 percent were unable to participate. He said they were convinced that there was enough money in the system to accomplish goals for many more students. The money in the system was not always spent in a manner that led to success; it was paying for failure.

8:02:56 AM
DR. SCHROEDER maintained that the system as denying students access to education and economic opportunities. People had been working hard to solve the problem for 40 years with little improvement. ANSEP takes education back to the basics, raised the bar, and focused on preparing students academically and socially with the tools they require for success in college and beyond.

He said ANSEP begins in middle school and offered a string of linked components that continued through high school and into college, graduate school, and the professions. In 1995, ANSEP began with one student. Today, there were 1,000 middle school, high school, university students, and alumni, successful at every level.

He related that ANSEP middle school students completed Algebra I before graduating from 8th grade at a rate of 83 percent. The national average was 26 percent. More than half of ANSEP high school students graduated engineering-ready and only 4 percent of minority students nationwide do so. More than 70 percent of all ANSEP students who began B.S. degrees graduated.

8:04:39 AM
DR. SCHROEDER said over the course of the next five years, ANSEP intended to expand opportunities that fostered success. First, ANSEP would work with policy makers so that money flowed only to those science and engineering programs that demonstrated successful academic outcomes. Secondly, ANSEP would work with districts to weave ANSEP components into the fabric of the K-12 system using existing K-12 funding.

DR. SCHROEDER stressed the importance of paying for success. Success meant that students were socially and academically prepared for college and confident and ready to accept the challenge of building a better Alaska and a better nation. He said ANSEP's objective was to build middle school academies in twelve districts by 2018. In 2020, the middle school component would reach a steady state with an excess of 600 students graduating from 8th grade annually. There would be more than 3,000 ANSEP students on track to complete science and engineering bachelor degrees and in 2022, there would be 4,000 students.

8:06:15 AM
DR. SCHROEDER spoke of expansion to additional districts due to shifting funds from activities that did not produce desired academic results. Every student enrolled in ANSEP had the opportunity to earn the Alaska Performance Scholarship.

DR. SCHROEDER showed a video about the number of students currently enrolled in ANSEP.

8:08:15 AM
MICHAEL BOURDUKOFSKY, Chief Operations Officer, Alaska Native Science & Engineering Program, University of Alaska-Anchorage, explained that ANSEP had the support of over 70 organizations and industry partners who have provided over $35 million in program and facility support. He showed a picture of the ANSEP building on the Anchorage campus.

MR. BOURDUKOFSKY returned to the video to show information about the Alaska Performance Scholarship. He noted that the videos were available on the ANSEP website.

8:10:59 AM
MR. BOURDUKOFSKY explained ANSEP programmatic components which involved lineal connections from the time students entered the system until they graduated and worked in the professional world.

8:12:12 AM
MR. BOURDUKOFSKY reported that ANSEP began in the middle school. One of the major activities was to build computers. In order for students to keep their computers they had to complete Algebra I before they completed eighth grade. They do so at a rate of 83 percent.

MR. BOURDUKOFSKY continued with the video in order to explain the ANSEP Pre-College Middle School Academy. He gave examples of hands-on activities students participate in for science and math.

8:14:20 AM
MR. BOURDUKOFSKY described the ANSEP high school computer assembly program. The students must complete chemistry, physics, biology, and trigonometry in order to keep their computers. He showed the video on ANSEP high school computer assembly. Over 50 percent of the students were able to keep their computers.

MR. BOURDUKOFSKY addressed a graph on the Indigenous Alliance for Engineering & Science Education; universities outside of Alaska. He spoke of the success of the program.

8:16:54 AM
MR. BOURDUKOFSKY reported on the ANSEP Pre-College Acceleration Academy offered to high school students who have completed a computer. He spoke of the advantages of the program for students from rural areas in their ability to successfully transition to a university setting. He showed the video on ANSEP Pre-College Acceleration Academy.

8:19:11 AM
MR. BOURDUKOFSKY explained the ANSEP Summer Bridge which involved a math class and an internship in a science or engineering field.

DR. SCHROEDER explained the process was just the beginning. A student could begin college with their math classes already completed.

MR. BOURDUKOFSKY showed the video on ANSEP Summer Bridge.

8:21:36 AM
MR. BOURDUKOFSKY described the ANSEP University Study Success Group; a support system that helped students to be engaged and successful. It involved a weekly study group and opportunities to hear about internships and jobs.

MR. BOURDUKOFSKY related graduate studies opportunities, which included financial support.

He stressed the importance of the sense of community and the connection of the program from middle school all the way through graduate school and beyond.

8:24:06 AM
CHAIR STEVENS thanked the presenters and commented on the excellence of the ANSEP program.

REPRESENTATIVE LEDOUX agreed it was an excellent program. She asked if non-Native students could participate in the program if they live in a rural community.

DR. SCHROEDER answered yes. He said no one was ever excluded from ANSEP.

REPRESENTATIVE LEDOUX asked if anyone could participate or if there is a selection process.

DR. SCHROEDER answered that the very best students were selected based on attendance and grades.

8:25:54 AM
REPRESENTATIVE SADDLER asked about the difference between ANSEP and the regular engineering curriculum.

DR. SCHROEDER answered that ANSEP students take the regular engineering classes and received support from ANSEP in the form of study groups that learn how to work in teams.

REPRESENTATIVE SADDLER asked if ANSEP students were integrated into the regular program.

DR. SCHROEDER answered yes. He noted that ANSEP worked to make sure that their students were prepared for college before they entered college. He recalled a time when Native students were not prepared for college.

8:29:02 AM
CO-CHAIR STEVENS asked Mr. Bourdukofsky how ANSEP assisted him in his educational journey.

MR. BOURDUKOFSKY answered that he met up with ANSEP in college. He described the support and internship provided by ANSEP. He stressed that ANSEP brought the industry to the students.

8:32:08 AM
REPRESENTATIVE REINBOLD asked about Dr. Schroeder's comment about "spending money in failure." She complimented him on the program's success and number of partnerships and the students' enthusiasm for the program.

DR. SCHROEDER replied that it had taken ANSEP 18 years to achieve its level of success.

8:34:17 AM
REPRESENTATIVE SEATON explained that he served on the Task Force on Education which required an advisor/advocate program for any school that participated in the Alaska Performance Scholarship (APS). He commented that ANSEP was the pinnacle of an advisor/advocate program. He asked how districts identified programs that were not working in order to shift dollars to programs that worked.

DR. SCHROEDER emphasized that it does not work at the district level. He described the curriculum that must be completed by high school graduation in order for a program to be successful.

8:36:47 AM
REPRESENTATIVE SEATON suggested that APS sets high curriculum requirements. He asked if shifting money from programs that do not work could be accomplished on a state level.

DR. SCHROEDER replied that someone needs to be empowered in the Commissioner's office in order to allow high school credits for college course work so that students could qualify for the APS. He explained that currently the process was decided on a district level and noted that it had taken him over a year to get the Anchorage School District to consider the issue.

8:39:09 AM
REPRESENTATIVE SEATON asked if the legislature should require districts to allow those credits to be accepted at the high school level.

DR. SCHROEDER answered yes.

REPRESENTATIVE SADDLER asked what the cost was per student for ANSEP and what elements of the program were unique to Alaska Natives.

DR. SCHROEDER answered that the program was not Native-specific and was available to all students. The majority of students came from rural Alaska. He explained that the cost varied at different levels. In middle school, for 1,000 students, it costs $4 million annually. He said 18 percent of that amount came from the university system and another 18 percent came from the Department of Education and Early Development. He stated that

the rest came from state and federal agencies, philanthropic organizations, corporations, and private individuals.

He noted that ANSEP could expand to 18 districts by 2018 for less than $2.5 million in additional funding.

8:41:53 AM
REPRESENTATIVE SADDLER asked how many districts were currently served.

DR. SCHROEDER responded that there were currently 12 districts. He said the program expanded by 54 students at a time.

REPRESENTATIVE LEDOUX asked if urban school districts would be included.

DR. SCHROEDER answered that the Mat-Su Borough School District would be the next school.

8:43:46 AM
REPRESENTATIVE LEDOUX asked what ANSEP's 83 percent success rate was compared to.

DR. SCHROEDER replied it was compared to the nationwide rate of 26 percent.

REPRESENTATIVE LEDOUX noted that ANSEP chose "the best of the best." She asked if those students could be compared with similar students nationwide.

DR. SCHROEDER responded that he had not compared those ANSEP statistics to national statistics. He noted that some have criticized the program for choosing the best. He defended that idea by stated it was the way to create a systemic change.

8:46:04 AM
REPRESENTATIVE DRUMMOND shared the difficulty of increasing the number of math credit requirements in the Anchorage School District in 1994.

SENATOR DUNLEAVY asked what the result would be if more money was spent on the education system.

DR. SCHROEDER said, "You would continue to pay for failure."

SENATOR GARDNER addressed the positive impact of the APS and ANSEP on students in recognizing that students from their own

communities are able to go to college. She asked if ANSEP would be targeting sixth grade students if they had the resources to do so.

DR. SCHROEDER answered that ANSEP could focus on children as early as sixth grade or even earlier. He noted the difficulty of selling the idea of producing future employees to companies when students are only eleven years old. He noted that ExxonMobil provided the initial funding to get ANSEP started.

8:50:18 AM
SENATOR DUNLEAVY asked if the professors were certificated teachers.

DR. SCHROEDER replied that all students are taught by university faculty.

MR. BOURDUKOFSKY agreed.

SENATOR DUNLEAVY asked if they hold K-12 certificates.

DR. SCHROEDER answered no; they teach university courses.

MR. BOURDUKOFSKY said the middle school students participate in hands-on projects led by industry professionals.

DR. SCHROEDER said the Bill and Melinda Gates Foundation gave ANSEP funding, along with the Rasmussen Foundation, for a project in Bethel for students from 21 villages for an acceleration academy. Students were selected based on grades and readiness for Algebra I, however, it was discovered that some students could not even multiply. He noted that ANSEP was moving in the direction of testing in order to assess math ability.

8:53:23 AM
CO-CHAIR GATTIS asked if there were certificated teachers in K-12 and middle schools who teach math.

DR. SCHROEDER explained that middle school academies were 12-day programs where "inspirational activities" were taught by industry staff. Students build computers which they were able to keep if they passed Algebra I.

CO-CHAIR GATTIS requested clarification about certificated teachers.

DR. SCHROEDER explained that all courses taken on the ANSEP campus resulted in college credit and university professors taught those courses.

CO-CHAIR GATTIS asked what the difference was between certificated and non-certificated teachers. She asked if ANSEP teachers were qualified to teach.

DR. SCHROEDER explained that almost all ANSEP teachers had PhD's in their content area.

8:55:29 AM
CO-CHAIR GATTIS stated that students received college credit, but not high school credit.

MR. BOURDUKOFSKY said the students had to apply for high school credit at their individual districts. The problem was credit was based on contact hours at the high school level.

DR. SCHROEDER added that progress was being made in that area.

CO-CHAIR GATTIS inquired if the certified teacher versus college professor issue had bearing on the issuance of credit.

DR. SCHROEDER answered no. He assumed a certified teacher would also be qualified to teach the class.

REPRESENTATIVE SADDLER referred to page 2 of Dr. Schroeder's handout, which he described as the "call to action." He inquired who might be resistant to that goal.

DR. SCHROEDER replied that districts with their own programs were very defensive.

8:57:55 AM
REPRESENTATIVE SADDLER asked if there had been any criticism of ANSEP.

DR. SCHROEDER replied that he had been harassed by the system and others. He said he counters that by focusing on the opportunity for students that ANSEP provided.

REPRESENTATIVE LEDOUX asked what legislative changes might be made.

DR. SCHROEDER said he does not have the answer to that question. He suggested that educational programs must be longitudinal. He

shared a personal story about his path toward an engineering degree, stressing that there must be an incentive.

9:00:55 AM
REPRESENTATIVE LEDOUX said the legislature could not micro-manage education and it must look at structural changes to the system.

DR. SCHROEDER agreed. He reiterated the importance of building longitudinal programs.

REPRESENTATIVE LEDOUX requested more information.

DR. SCHROEDER explained that longitudinal programs were programs that connected.

9:02:25 AM
REPRESENTATIVE LEDOUX inquired if those ideas could apply to students who were not the brightest.

DR. SCHROEDER replied yes. He explained the importance of peer power.

REPRESENTATIVE LEDOUX asked if the ANSEP concept could work for non-engineering students.

DR. SCHROEDER said yes. He maintained that more math and science was good for all students.

REPRESENTATIVE LEDOUX asked if the ANSEP concept must be math and science based.

DR. SCHROEDER explained that the focus was on the areas where there were jobs.

9:04:37 AM
SENATOR HUGGINS asked if the MAT-SU program called Middle-College was connected with ANSEP.

DR. SCHROEDER replied that Middle-College was an excellent program, but was not associated with ANSEP. He maintained that the last two years of high school were unnecessary and students could begin to take college classes. He noted the Jump-Start project offered that option.

9:06:19 AM

SENATOR HUGGINS said Dr. Schroeder's program represented the "adjunct pieces" of education, something that supplemented the system.

DR. SCHROEDER stated that change was needed and ANSEP was doing one small piece that was a possibility for a model for others to follow.

CO-CHAIR STEVENS suspected that in ten years success would be measured, not just by how many engineers were produced, but by how many leaders were produced in various fields.

REPRESENTATIVE SEATON asked if ANSEP partnered at local levels and shared funding.

DR. SCHROEDER replied that there were partner opportunities and Mat-Su School District was an example, as was Bethel School District which was funded by grant money.

9:09:09 AM
REPRESENTATIVE SADDLER asked who would take over when Dr. Schroeder retired.

DR. SCHROEDER said he would never retire because ANSEP was so important to him. He described the endowment plan in place and the student advocate faculty position. He described two students who were finishing their PhD. engineering degrees and returning to become School of Engineering faculty. He noted that Mike Bourdukofsky played a big role in the future of the program. He added that ANSEP was run by six individuals, three of which managed the funds.

CO-CHAIR STEVENS thanked the presenters.

9:11:59 AM
There being no further business to come before the committees, Co-Chair Stevens adjourned the joint meeting of the Senate and House Education Standing Committees at 9:11 a.m.