**Los Alamos scientists: School grading system is unclear**

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**By Robert Nott**
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LOS ALAMOS — When Gov. Susana Martinez introduced her A-F system for grading New Mexico schools in early 2012, critics said it would take a rocket scientist to figure out the complex formula.

However, even a committee of five Los Alamos physicists, statisticians and math experts had difficulty after running the numbers and crunching figures in an effort to understand why one of their school district’s seven schools received a grade of C.

On Monday, several of those men said the grading system — which weighs student performance, student growth and the growth of both the highest-performing and lowest-performing quadrants of student populations — contains helpful data but doesn’t clearly convey either the proficiency of students or the true measure of a school’s worth.

“It’s a very complicated model,” said Bill Wadt, a member of a School Report Card Task Force charged by Los Alamos Public Schools with sorting out the data. “If it is that complicated, is it the good communication tool that the governor wanted? I don’t think so.”

Wadt, a theoretical chemist and chair of the Los Alamos National Laboratory Foundation, said the average person probably couldn’t decipher the measures behind the system. Wadt, who said he has edited many scientific papers, said he doesn’t think it would “pass peer review in the scientific community.” Nor was he sure he could easily explain it.

Dave Higdon, a Los Alamos National Laboratory statistician who earned a Ph.D. in statistics from the University of Washington, presented the report to Los Alamos Public Schools Superintendent Gene Schmidt. Said Higdon: “Any system based on growth — has it ever been successful?”

The report, which the group started working on a year ago using three to four years of test-score data, primarily focused on the elementary-school level. Using a scale of zero to 80, with 40 representing proficiency, the measurements made clear that the majority of the district’s 3,500 students have been attaining and maintaining expected proficiency rates in the past few years.

But as the Public Education Department has noted in its various presentations on the grading system, proficiency itself is not enough when it comes to earning a high grade for a school. According to Wadt, the state’s system expects growth of about 1.3 percent in math and 1.7 in reading at the elementary-school level for students in the lowest-performing quadrant.

Though six of the district’s schools received A’s and B’s, one — Mountain Elementary School — received a C, even though in many cases it outperformed the A-ranking Aspen Elementary School, Schmidt said. But it received a failing grade in the area of growth among those in its lowest-performing quadrant, which earned the school the C rating.

Yet, according to the Los Alamos report, Mountain is still among the top 20 performing elementary schools in the state, out of some 320 schools.

Several of the scientists said it is admirable that the state is honoring schools for displaying growth — any growth — over the course of a year. But, as they put it, if you are earning a 10, 20 or even a 50 as an average score, it is easier to progress than for a school or district already at the 70, 80 or 90 mark. For the most part, based on the statisticians’ figures, Los Alamos Public Schools has displayed proficiency rates ranging from the low 70s to the mid-80s in math and reading.

Also, they argue, their data shows that elementary school students’ achievement levels can vary on average from year to year by as much as 10 percentage points in either direction.

Pete Goldschmidt, assistant secretary of assessment and accountability for the Public Education Department, agreed that student scores can “bounce around a little bit” but said that variation is stabilized when one looks at aggregate data for an entire school.

The data in the study contained few surprises, the task force members said, though here and there they discovered an anomaly. Between 2011 and 2013 the district’s middle school students’ reading proficiency rates increased by 8 points. At Aspen Elementary School, students averaged a 12-point jump in math scores in the same time period.

Schmidt said the latter jump is easy to explain because that school sent most of its math teachers to an intensive teacher-training program focused on math one summer.

The committee report, he said, will allow the district to dig deeper and try to discern the reasons behind such noteworthy spikes. In general, the assembly agreed that the report doesn’t offer explanations yet. They all suggested such factors as class size, quality teaching, household income and focused programming can make a difference.

Schmidt asked the group to come up with some recommendations for further action to present to the school board in January.

Task force member Morris Pongratz, who described himself as a retired rocket scientist from the lab, said the task force should put together its own district A-F grading system and present it to the education department for comparison.

Asked what he thinks of the state’s A-F operation, he said, “It can be improved.”