

STATE OF EDUCATION 2005

Discussion of education this year has been much about the high school AIMS test. Our conversations are dominated by the fact that beginning with this year's juniors, the students will not receive a diploma without demonstrating on an objective test that they have the proficiency in reading, writing, and math that the public expects of high school graduates.

The obvious is worth repeating: education is about more than passing the AIMS test. Education is for *three* major purposes:

First, preparing students to be productive members of society, including skills needed for employment.

Second, students must be prepared to be citizens. They will be voting, participating on juries, becoming active in their communities. They must know their history and know about their government and the economy.

Third, education is about more than being an employee, or a citizen: it is about being a human being. One of my favorite quotations on the subject was a letter from John Adams to his wife: "I study war and politics so that my children can study business and commerce, so that their children can study literature and the arts". I think this tells us something about what life is all about.

But, none of these purposes are served if students cannot read and understand a passage, write clearly, or do basic mathematics. The public demands an objective test to assure that high school graduates have these proficiencies.

Our job is to be sure that everything possible is being done to ensure that the students are taught what is needed for them to become proficient in reading, writing,

and mathematics. They get five chances to pass: The first opportunity is in the second semester of the sophomore year. If unsuccessful in any of the three subject areas, the students will have the opportunity to retest each semester through their senior year. For those who have not passed on one or two of their first tries, we must give them every possible measure of extra help. We are doing this in a number of different ways; it is a full-court press. This will be covered in some detail, as I talk about last year's achievements, and next years' initiatives.

When an artist creates a mosaic, he or she takes bits and pieces of small things to create a larger work. It is often a painstaking and detailed process, but the ultimate reward is worth the effort.

Education is like a mosaic. There are often many seemingly small and unique pieces that, when put together, create a new picture.

My state of education speech last year was divided into two parts. The theme of the first was "promises made, promises kept", showing how we achieved each of 8 promises made the prior year. The second part set forth goals for the second year, under the headings "better schools, better teachers, better curriculum". This year, we will maintain the theme of "promises made, promises kept", by showing what we have done to achieve the goals set forth this past year, under the same headings, "better schools, better teachers, better curriculum." We will set forth new initiatives for our third year under those same three headings.

As we talk about achievements last year, thanks are due to a number of people and groups who participated in these achievements: members of the legislature and of the State Board of Education; the hardworking people at the Department of Education;

and stakeholder groups such as Arizona School Administrators, Arizona Education Association, Arizona School Boards Association, Arizona Business Education Coalition, County Superintendents, universities and community colleges, the Rodel Foundation, and business and parent groups.

I. The First Category of Last Year's Promises Was "Better Schools."

Better schools refers to the school improvement process. This is a three-part process. First, we needed a fair and accurate system for measuring the schools. That was the focus of the first year. Second, we needed to help those schools identified by the fair and accurate process as needing help. That was a "promise made, promise kept" last year. Third, our first initiative for this year, is intervention in those schools that continue to produce test scores that are not showing sufficient student achievement.

Our focus last year was to help those schools that were labeled as underperforming, with the use of Solutions Teams and Arizona Schools Site Improvement Support Team (ASSIST) coaches. Solutions teams are master teachers, outstanding principals, and district administrators from throughout Arizona. Teams of three visited underperforming schools, and made recommendations. ASSIST coaches, who were permanent Department of Education specialists, with distinguished educational backgrounds themselves, provided follow-up with the schools and coached their improvement. When I took office, we discontinued the practice of employing outside consultants and hired Arizona's best educators as members of our solution teams.

Wherever I went in Arizona, I would hear what an excellent job the Solutions Teams and ASSIST coaches were doing with the schools. This was reinforcement of

the success of the department's overall philosophical change from being one of enforcement, to being primarily service-oriented, to help the schools improve their academic performance.

These subjective impressions were then confirmed by student performance data. The greatest focus was 81 schools that were in their second year of underperforming status. If they had a third year as underperforming schools, they would become failing schools, needing state intervention. The accountability system had no significant changes during the second year, so the only way the schools could escape failing status was to raise the student test scores. We thought about half of the schools would do so, and were gearing up to intervene in about 40 schools. In a happy surprise, 70 out of 81 raised their test scores sufficiently to become performing schools, with only 11 schools becoming failing schools. While primary credit goes to the teachers and principals in those schools, the effective help given by the Department of Education's Solutions Teams and ASSIST coaches did contribute to this "promise made and a promise kept."

The model used for evaluating our schools was a continuous improvement model. A number of schools improved, avoiding underperforming labels, but still have an overall unsatisfactory status, and need more help. To continue to avoid underperforming status, they will have to continue to improve, and we will recommend higher expectations for that improvement. Schools that accelerate their improvement will reach satisfactory status. Those who do not, may add to the number of failing schools in the future. In the meantime, we will be focusing state intervention on the first 11 failing schools, as pilot projects, with the hope of developing successful models for

turning around schools that cannot sufficiently raise their test scores. One way or another, we will push relentlessly, both in support and intervention, to ensure that never again in Arizona will a student attend a school where he does not learn and become proficient.

Our second new initiative for “better schools” is to promote a massive increase in the number of adults, especially highly accomplished retired adults, who volunteer to help students in the schools, one-on-one, achieve academic proficiency. We call this the “Emeritus Program.” We have identified four models: school districts that do a good job of training adults to volunteer effectively in the schools. These models, Peoria, Tucson Unified, Madison, and Yuma districts, have demonstrated that adults can be effectively trained as volunteers to give assistance to teachers in raising students’ academic achievement. We propose to expand these model programs to a massive state-wide effort. We are in the process of establishing partnerships with organizations such as the Senior Corps, Retired Senior Volunteer program, Older Adults Service and Information System, and Seniors Assisting Youth Engaged in Service programs. We will recruit adult volunteers state-wide, and partner with school districts to provide them with training and the opportunity to help students increase their academic achievement.

Also, as to “better schools,” Arizona has attracted national attention for its high school renewal project. I was one of three state school chiefs selected by the United States Department of Education to address a national high school leadership summit, representing over a thousand representatives from all 50 states in Washington, D.C. We were recognized, in part, because we opted to first identify the needs of our high schools and hear the ideas of our stakeholders in order to establish a solid and realistic

statewide vision and action plan for high school renewal and improvement. The results from this focus group project will lay the foundation for a statewide action plan for the Arizona High School Renewal & Improvement initiative, which is guided by a 40-member state team. This team has identified eight priorities that also align with my goals. They are:

1. AIMS intervention.
2. High School Literacy/Reading.
3. Lowering the dropout rate/increasing # of graduates.
4. Rich, comprehensive content-based curriculum that includes Career and Technical Education and the arts.
5. Rigor in the curriculum.
6. Dissemination of successful high school reform models.
7. Data-driven decision making.
8. Scholar's program to make course selection more rigorous.

[Drop-out prevention is of special importance. I put my money where my mouth is, and created, for the first time in the history of Arizona Department of Education, a full-time position devoted to drop-out prevention.

Since 1991, the legislature has been appropriating \$7 million per year to be spent by school districts on drop-out prevention. Until this year, there has been insufficient state supervision or accountability. Working with partners from outside the department, we are intensively studying Promising and Best Practices to determine what works and what does not work in drop-out prevention. We will then be working with the schools to disseminate and implement successful practices and programs – that not only keep

students in school, but also help them meet the standards in order to be well prepared for any and all post-secondary options.]

One of our promises last year was to work on developing outstanding leadership at all levels in our schools for continuous improvement to occur. Through our efforts in working with a consortium of key stakeholders, we are pleased that Arizona was one of six states, out of 21 that applied, to receive the prestigious Wallace Foundation leadership grant. This grant will allow us to address conditions to improve leadership in Arizona, such as providing incentives to attract, retain and reward outstanding principals and superintendents throughout the state. Along with the leadership academies that the Department of Education will be providing for all educational leaders in Arizona, the Wallace Grant activities will help us to improve leadership for “better schools.”

II. The second area of promises was “better teachers.”

Last year’s promise was to increase the number of highly qualified teachers by breaking down artificial barriers to entry into the teaching profession. The most important factor in a students’ education is whether or not that student has a qualified teacher. Nothing can improve the quality of a students’ education more than increasing the quantity of highly qualified teachers. Our promise was divided into two parts: 1) giving undergraduates the ability to have content majors like chemistry or history, and still be able to take the courses necessary to become teachers, without having to enroll in the schools of education; second, to facilitate those who already have bachelors degrees, have good content knowledge, and who want to make career changes into teaching. We wanted to create an opportunity for them to do so without incurring the

economic hardship of going back to school full-time and losing income for a substantial period of time.

With respect to undergraduates, we have worked with the universities in a cooperative spirit, and have the following progress to report:

- At the University of Arizona...
 - Any student in the College of Science can take courses in the teacher education program without meeting additional entrance criteria beyond admission to the College of Science.
- Arizona State University...
 - Beginning this coming summer, ASU will begin a program called SCISM, designed for students with undergraduate mathematics/science majors. Education course work will be completed in two intensive summer institutes. Students will receive stipends to participate.
- Northern Arizona University...
 - Continues to expand opportunities to earn teaching credentials away from the main campus including several alternative certification programs. In addition, any secondary subject student may enroll in education courses without being formally admitted to the College of Education.

With respect to mid-career changes by potential teachers with bachelor's degrees, and high content knowledge, we have fulfilled our promise with a pilot program known as "alternate pathways." Under this pilot program, a candidate with a bachelor's degree and high content knowledge, such as a biologist who wants to teach biology, or

an engineer who wants to teach mathematics, will first pass a test to demonstrate that knowledge. The candidate will then undergo an intensive summer of training in pedagogy: classroom management, differentiated instruction, standards-based lesson design and assessment, and so on. The candidate will then go into the classroom, and be paid as a teacher, while he is receiving extensive mentoring from a master teacher and continuing standards-based coursework. If the principal verifies that the teacher is effective, training and coaching will continue, and eventually the candidate will be certified. The transition will have been accomplished without any necessity to leave the job market and go without an income.

Initially, 10 school districts will partner with an institution of higher learning or a county superintendent's office, to offer a pilot program of 20 teachers a year for 2 years, or an initial pilot of 400 teachers. The program will be independently evaluated. If the evaluation shows these are successful teachers, the program can expand indefinitely.

As with all of our achievements, partnerships with stakeholders outside the Department of Education have been a key element of success. In this case, we worked closely with the Arizona Education Association to develop a compromise that met both the needs of maintaining high standards for teachers, and also the needs of the state to greatly increase the number of highly qualified teachers with strong content knowledge. I want to thank the teachers' association for working with us on this difficult issue. Together, we have produced a "promise made, and a promise kept."

The third major initiative for next year will be the use of technology to enhance data driven instruction. This will get data into the hands of educators as well as making quality professional development available to all of Arizona's educators, even those in

the remotest areas of Arizona. Online professional development provides a professional learning community for all of Arizona's teachers through streaming video of quality teaching, research-based practices, and web-based methods for communicating, displaying, and sharing of one's work.

Data-driven decision making is one of the most important lessons that education has learned from business. Successful businesses use data to make decisions. Starting this year, all Arizona educators will have access to data they need to make more informed instructional decisions.

For years, teachers have been individualizing instruction for students. However, they have lacked the tools and access to data. Our planned state support for technology and data-driven instruction will generate a major leap forward for teachers in individualizing instruction. It will provide the basic data analysis tools to schools, teachers, and to students. Through our new system, Integrated Database for Enhancing Arizona Learning (IDEAL) we will be able to monitor program effectiveness, identify what concepts need to be reviewed, give teachers performance benchmarks, provide web-based resources for professional development and teacher conferencing, supply web-based resources for student test taking for advanced placement coursework, and other individualized instructions.

Schools can no longer be data-rich and information poor. We can take a lesson from business and gather all the data in one place, tie it together, and then "mine" for valuable information and relationships between those elements that would otherwise remain hidden under mountains of bedrock.

Let me give you an example to illustrate the importance of this. Suppose a student is very good in all math areas, but has trouble with long division. He currently takes a test, he gets almost everything right, but gets all of the problems wrong involving division. This generates a “C+” every time he takes the math test, year after year. We think of him as a “C+” math student. But, with data-driven instruction, the state furnishes the detailed information on how well the student performs on each concept, and the teacher catches the student up in division. Now the student is an “A” student on every math test that he takes.

As a start, for the first time this spring, AIMS scores will be reported as to whether those students fell far below, approached, met, or exceeded standards, for each concept measured. In addition, the results will be available by early June, in time for summer school help, rather than by late August, as in the past. The teacher will have more time to help students.

Part of our goals in technology can be achieved by re-directing existing resources; for others, we will need the help of the Legislature in improving our computer capabilities. Combined, our new efforts are launching a major new initiative to convert data into information, and provide major support for individualized instruction.

Another “promise made, promise kept” under the category “better teachers:” state sponsored professional development institutes are offered in content areas to examine the articulated standards, and discuss strategies for their implementation. We use these institutes to help teachers integrate science and social studies into reading and writing. We have provided Math and Science Institutes to prepare teachers to help students become more proficient in taking the Math AIMS test and the 2008 Science

AIMS. Seventeen hundred teachers have been trained thus far, with 850 of them trained using a “trainer of trainers” model. This new year, we will also resume writing training for the newly articulated writing standard. And, for the first time, samples of Arizona students’ writing will be released for all grades three through high school to better prepare teachers and students for the expectations of AIMS Writing.

The Best Practices section of the department works with hundreds of schools across the state to improve teacher effectiveness. Priority topics have been defined by Solution Teams’ visits. As a result, a series of academies have been offered on such topics as data-driven decision making, tying lesson plans to standards, improving instruction, effective teacher observation and feedback, and effective reading and math instruction.

The Reading First program provides targeted funds for 72 high-needs schools. In my speech last January, I announced a major change in the program to provide Reading First training for *all* schools in Arizona. This year we have sponsored Reading Leadership Academies for all school and district leadership. For the first time, in partnership with the 15 county school superintendents’ offices, K-3 Reading Academies were offered for teachers in every county in the state. This helped to meet our commitment to provide training that is consistent in quality and locally accessible. By the end of this school year, we will have trained 8,602 teachers and administrators to improve the quality of reading instruction. Another “promise made, promise kept.”

The AZ READS Task Force was convened this year to define and establish criteria for the use of valid and reliable assessments in K-3 early reading skills. Our K-3 schools will be collecting valid and reliable data on children’s early reading development

in kindergarten through second grade. We know that prevention is far more cost effective and efficient than remediation; this will ensure the early identification of reading difficulties before they become reading problems.

Our fourth new major initiative will be a math initiative, led by the same people who have operated successfully with Reading First. This initiative launches a two-pronged approach to the math challenge:

- A. Provide effective strategies for math intervention to address the needs of students who have fallen far below where they need to be in order to be proficient in mathematics.
- B. Increase the effectiveness of classroom-based math instruction for K-12 in order to reduce the numbers of students who need math intervention.

This initiative is built on four cornerstones:

1. Instruction: This is ongoing support and assistance to schools in data-driven decision-making for math instruction, the implementation of the articulated math standard. We have math-teaching academies scheduled for January 19-20, February 23-24, and March 3-5.
2. Intervention: Solutions Teams and Assist coaches are providing targeted assistance to underperforming schools.
3. Professional Development:: A two-tiered approach will provide leadership training using a trainer of trainers model in collaboration with universities and colleges. In turn, these trainers, in a second tier, will provide training that is consistent in quality and locally accessible through the County School

Superintendents Offices. Nationally Board Certified Teachers will take the lead in training math teachers across the state.

4. Partnerships and Support. So far, we have established partnerships for the Math Initiative with the Arizona Association of Teachers of Mathematics, the state universities, the Center for Research on Education in Science, Mathematics, Engineering and Technology (CRESMET), the Rodel Foundation, the National Board of Certified Teachers, and the Arizona Education Association.

III. The Third Category of Last Year's Promises Was "Better Curriculum."

The purpose of "Better Curriculum" is to fight the unintended consequence of schools reacting to the testing environment by limiting the curriculum to reading, writing, and mathematics. Our students must have a well-rounded education, including content rich curriculum in science, social studies, history, and the arts.

In science, we developed and the State Board approved a new set of standards which would provide an important balance between two schools of thought on the teaching of science: discovery learning, in which the student do their own experiments, and content rich materials, in which the students learn the substance of science. In social studies, we revised the high school standards, so that our high school students would receive a rich program of American and World History, including standards on the Declaration of Independence, the Constitution, the founding fathers, the ideas on which our country was built, and the Greco- Roman basis for western civilization. Now, we have a committee working on articulating standards, which will result in far more content-rich standards in the elementary grades, as well. In this way, students will arrive at high school better prepared with the necessary background to learn history.

We are keeping our promises in science and social studies. In order not to overburden elementary school teachers, we are working on ways to integrate programs, so that while teachers are teaching the students reading, the students are reading content-rich materials in science and in history.

Another way of looking at this is to emphasize the use of “informational” text, not just “narrative” text in reading instruction. The goal is for students to *learn to read and read to learn* from the earliest days in school; we can teach children to do both of these simultaneously by incorporating informational text in the primary grades. This is supported by research, and it makes good sense. Six key reasons why informational text should be in every primary classroom are:

1. It is a key to success in later schooling.
2. It is the preferred reading material for some children.
3. It often addresses children’s interests and questions.
4. It builds knowledge of the natural and social world.
5. It helps build vocabulary, academic language and comprehension.
6. Students cannot pass AIMS reading tests if they do not have sufficient science and social studies knowledge to understand what they are reading.

In the arts, we focused \$4 million of “No Child Left Behind” money over which I had some discretion, into arts programs, in the higher poverty school districts. This was based upon a study in Tucson that showed that students in rich arts programs not only acquired more knowledge and skill in the arts, which is desirable for its own sake, but also showed higher academic performance. Students in these programs had 30% higher language scores than students in other schools with the same poverty level, but

lacking the arts programs. Latino students in arts programs did 55% better, so we were closing the gap in the schools that had the arts programs but not the other schools.

These studies were the justification for my decision to focus \$4 million of federal money on arts programs. At the time, we thought we might be criticized. But, then a letter went from the Secretary of Education, Rod Paige, to superintendents throughout the country, on the subject of No Child Left Behind and the arts. Some people had testified in federal hearings that No Child Left Behind was causing schools to cut back on the arts. He wrote that was not the intent, that the arts were a core subject in NCLB. This letter cited Arizona as an example of a state using \$4 million of NCLB money for arts program. Rather than being criticized, we were held out as an example, which was a relief! Last year, we promised to focus more effort on the arts, in a big way. This was a “promise made, and a promise kept.”

A fifth new initiative for this year will be in this area of “better curriculum.” It will involve expanding successful programs in career and technical education. Arizona has attracted national attention because of the academic success of its career and technical education students. All 30 career and technical education programs have had their standards aligned with the Arizona academic standards. While students are learning about specific occupations, they are focusing on the reading, writing, and mathematics standards that relate both to the occupational skills and to the Arizona academic standards. By working in the private sector, they learn that skills such as algebra, geometry, reading difficult material, and writing clearly, are relevant to their futures, and this is an important motivational factor. As a result, Arizona career and technical

education students passed high school AIMS tests at a higher rate than other students. This has attracted national attention.

We will increase the number of schools participating in three exceptionally successful career and technical education programs. The first is in automotive technologies programs. There are 92 such programs offered at Arizona high schools. Currently four offer students the opportunity to obtain Automotive Service Excellence (ASE) certification. Graduates of these programs can earn salaries up to \$60,000 after five years of experience, with no formal education beyond high school. We seek to add two more ASE (certified) programs next year. This requires expensive equipment, and we will strive to partner with business to access industry standard equipment. We will also provide professional development to equip teachers with the ASE certifications needed to expand these programs.

The second area is health care programs. Some of these allied health programs lead to employment, such as pharmacy technicians and medical assistants. Other programs prepare students for additional formal education leading to higher paying careers, such as registered nurses. The market demand for all these areas is strong. As with automotive technologies, we will seek to expand the number of these programs at our high schools, emphasizing partnerships and community stakeholders.

A third area is drafting and design technology. There are 100 such programs in Arizona high schools. In the spring of 2004, when 37 percent of Arizona high school sophomores passed the AIMS math test, 62 percent of the students concentrating in this area passed the same test. With the help of business partnerships, we will expand this highly successful program to new high schools.

A summary of our five new initiatives are:

1. Intervention in failing schools
2. Increasing adult volunteers in our schools to help students increase their academic performance – the emeritus program.
3. Incorporating technology to help teachers to individualize instruction.
4. The math initiative.
5. Expansion of career and technical education programs.

IV. When I began this speech, I spoke about our full-court press to give every possible measure of help to those high school students who still must pass one or more of the AIMS tests in order to graduate. In addition to what I have previously discussed, here are some of the things we are doing to help these students:

1. Arranged for ten million dollars for tutoring.
2. Hired the same teachers who wrote test questions, to write different questions that test the same concepts, and posted them on the web site as practice questions.
3. Presented conferences on best practices for teaching mathematics, at various locations throughout the state.
4. Geared up to report test results by concept, as discussed earlier.
5. For the first time this Spring, all of the test questions will have been written by teachers, and the selection of field tested test items for the actual test will have been done by teachers. Previously, this was done by an out of state testing company. The result is that the test questions will be a better match to the standards that the teachers are teaching in the classroom, the students

will be tested on material that they have been taught, and this should produce higher passing rates.

Other states have gone through this process, and we expect law suits and controversy. But, we will remain as unmovable as the Rock of Gibraltar: Beginning in 2006, for the first time in many years, the public will be assured that a high school diploma in Arizona means something.

Whatever is worthwhile, requires passing through hardships. A passage written by Theodore Roosevelt is relevant to all of us in this process:

“It is not the critic who counts, not the one who points at how the strong man stumbled or how the doer of deeds might have done better. The credit belongs to the man who is actually in the arena, whose face is marred with sweat and dust and blood; who strives valiantly; who errs and comes short again and again; who knows the great enthusiasms, the great devotions, and spends himself in a worthy cause; who if he wins, knows the triumph of high achievement; and who, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who know neither victory or defeat.”