

Next Step for Arkansas' Future <http://www.nextsteparkansas.org>

This material was copied from the website of Next Step for Arkansas' Future. The site also includes interactive features that provide targeted information for educators, students, the business community, and parents.

High School Redesign

Don't be frightened.

The ideas behind High School Redesign are not intended to attack teachers or to make your jobs more difficult. Teachers already have to spend a considerable amount of time dealing with compliance issues in the curriculum, and Redesign might seem like just another messy protocol, but it's not. The SmartCore program, a new rigorous high school curriculum, is the key to creating successful high school graduates who are prepared to move on to college or careers, which today are increasingly demanding. In order for this program to work, it needs the support of teachers like you.

The changing demands of the future.

The need for High School Redesign is not indicative of a failure on the part of teachers, but rather the changing needs of employers. We're already behind, but we can catch up and make a real difference in EVERY student's life. It doesn't matter if a student is going to college or going straight into the work force, it is important to make sure they are prepared. And that is what SmartCore will do.

Help us save the High School Diploma

It wasn't that long ago that the High School Diploma really meant something--it meant you could get a decent job, raise a family and be a success. Increasingly, the HSD means very little. Most white collar jobs require a college degree, and of the jobs that do not, employers complain that entry level applicants are not prepared in even the most basic job skills. The big picture is that America is slipping behind the rest of the world, and this is a problem that stems from an education system that is not doing its job.

Arkansas: Blazing the trail

Because Arkansas is one of leaders in the national movement to redesign High School, this change can seem even more daunting. We don't have a model to follow because we are the model. We are the example. And we can prove to the country, and the world, that Arkansas is up to the challenge; all the while making our state a better, more prosperous place.

Why High School? Why Now?

Why focus on high school?

Statistics show that the failure in our education system is happening between 8th and 12th grade. As students leave middle school, their interest and achievement levels in math and science are similar to the rest of the world, but by the end of high school, those levels drop dramatically. To succeed in today's global economy, Americans on all levels of the employment spectrum need to know and be able to do more than ever before.

Don't decide their future without them.

It is nothing short of a gigantic mistake to box students into a two track system: Work-bound and college-bound. This system just doesn't make sense anymore. Sure, we need all kinds of workers, but do not make the decision for a student as to what you think they will become. Besides, the same skills are required for a high school graduate, no matter what they want to do after they receive their diploma. Let the kids decide what they want to do, as a teacher, give them all the tools they need to be a success.

Change the focus

We need to stop preparing our students to graduate. This is not the ultimate goal of a high school education. We are preparing students for jobs, for college, for their future; a diploma should signify that they are ready for the next step.

How do we know we've made a difference?

There are a few very simple indicators that will let us know that we are doing our jobs.

1. Improved readiness for college and the workforce.
2. A decline in the rate of college remediation courses.
3. An increase in retention and timely graduation rates at colleges and universities.
4. Decreases in the levels of intervention among high school students.

If our children and our country are going to continue to be effective, we need to do a better job of preparing them to compete in the global economy.

How will Next Step affect you?

Next Step is not intended to make your life as a teacher more difficult. With existing compliance issues and requirements, we know how much teachers have to deal with. All that's required of you is to care; let each and every student know that you believe in them and then take the time show them.

The FAQs

Not convinced that we need Next Step? Still think the U.S. is leading the world? Take a look at these astonishing statistics.

- America's literacy rate is only 73%; one of the lowest among industrialized nations.
- The United States' university dropout rate is 38%; one of the highest among industrialized nations.

The old ways just won't work anymore.

Today's job market requires much more of employees, from executives to engineers, from doctors to dock workers, and here's the proof:

- Percentage of white collar office workers with "some college" has increased from 37 to 60 percent; the share of those with a bachelor's degree has almost doubled from 20 to 38 percent.
- Percentage of factory workers with higher education has increased fourfold in the past thirty years, from 8 to 31 percent.
- 39% of recent high school graduates now enrolled in college, and 46% of those who went directly into the job market, say they were not prepared.
- College professors and employers estimate that four out of ten graduates are not ready for higher education or employment.
- Research indicates that the level of preparedness required of entry level jobs is not lower than that needed to enter college.

Kids are not being prepared for college.

Among the students who opt to pursue higher education, we are finding more and more evidence that the high school curriculum is not in line with college expectations.

- Only 34% of high school students take a course load that is considered adequate for college preparation.
- Only 32% of high school students are actually considered "college-ready."

Want to know the big picture?

When we fail our kids in school, we establish a cycle of failure that continues throughout life.

- We lose \$17 billion annually on lost productivity and remedial education in postsecondary institutions and the workplace for skills that should have been learned in high school.
- 76% of college students who take remedial courses in reading never earn a degree.
- 63% of college students who take remedial courses in math never earn a degree.
- 67% of prison inmates nationwide are high school dropouts.

Don't continue the cycle of failure and regret...

88% of students said they would work harder if their high school demanded more of them, set higher standards and raised expectations.

What Is Smart Core?

Smart Core is required curriculum that is part of Next Step, a state initiative focused on improving Arkansas public high schools for all students so that they are prepared for life beyond graduation. The goal is to implement educational strategies that are innovative, effective, rigorous, relevant, and rewarding so that students are prepared to compete and be successful in the ever-changing global marketplace.

High School Graduation Requirements

For the graduating class of 2010 and beyond, students will be required to meet the Smart Core curriculum requirements of 22 units, which are as follows:

Smart Core Curriculum - 16 units

- English - 4 units to be taken in 9th, 10th, 11th and 12th grades
- Social Studies - 3 units
 - Civic or Civics/American Government
 - World History
 - American History
- Mathematics - 4 units
 - Algebra I or Algebra A & B (Grades 7-8 or 8-9)
 - Geometry or Investigating Geometry or Geometry A & B (Grades 8-9 or 9-10)
 - Algebra II
 - 1 unit from the following options (Transitions to College Math, Pre-Calculus, Calculus, Trigonometry, Statistics, Computer Math, Algebra III or Advanced Placement Math)
 - In addition, all students must take a mathematics course in grade 11 or grade 12 and complete Algebra II)
- Physical Science - 3 units from the following options:
 - Physical Science
 - Biology
 - Applied Biology/Chemistry
 - Chemistry
 - Physics
 - Principles of Technology I & II
 - PIC Physics
- Oral Communications - 1/2 unit
- Physical Education - 1/2 unit
- Health & Safety - 1/2 unit
- Fine Arts - 1/2 unit

Career Focus - 6 units

- All units in the career focus requirement are established by the local school district.

All the core and career focus units must total at least 22 units to graduate. Local school districts may require additional units for graduation beyond the 16 common core units and six career focus units.

Beginning with those students who are in 9th grade during 2006-2007, all high school students will participate in the Smart Core curriculum unless the parent or guardian waives the student's right to participate. In that event, the curriculum units are the same for the original Common Core curriculum with the exception of 4 units of Mathematics (1 unit of Algebra, 1 unit of Geometry; concurrent credit college courses may be substituted).

For the graduating classes of 2005 - 2008, a minimum total of 21 units must be earned by a student in grades 9 -12 in order for that student to be entitled to graduate from an Arkansas public high school. Only one of the units can be a physical education course. The 21 units are as follows:

Core - 15 units

- English - 4 units
- Social Studies - 3 units (1 unit of World History, 1 unit of U.S. History, 1/2 unit of Civics or Government)
- Mathematics - 3 units (1 unit of Algebra or its equivalent, 1 unit of Geometry or its equivalent)
- Science - 3 units (at least 1 unit of biology and 1 unit of physical science)
- Oral Communications - 1/2 unit
- Physical Education - 1/2 unit
- Health & Safety - 1/2 unit
- Fine Arts - 1/2 unit

Career Focus - 6 units

- All units in the career focus requirement are established by the local school district.

All the core and career focus units must total at least 21 units to graduate. Local school districts may require additional units for graduation beyond the 15 common core units and six career focus units.

For the graduating classes of 2009, an additional math unit will be required, equaling 22 minimum units required to graduate.

Rising to the Challenge:

Are High School Graduates Ready for College and Work?

A Study of Recent High School Graduates, College Instructors and Employers

- As many as two in five recent high school graduates say that there are gaps between the education they received in high school and the overall skills, abilities and work habits that are expected of them today in college and in the workforce.
- College students who took Algebra II or higher level math courses in high school are more than twice as likely to feel prepared for the math they are expected to do in college (60% feel well prepared) than students who did not take Algebra II (26%).
- High school graduates, who did not go to college, but who took Algebra II or higher in high school are even more likely to say they are prepared for the math they will face at work, as 68% of those who took Algebra II or higher feel prepared for the math they are expected to do at work, compared with 46% of those who did not take Algebra II.
- 65% of college students and 77% of non-college students now say that they would have worked harder and applied themselves more in high school, even if it had meant less time for other activities

The Case for Change in Arkansas High Schools

About 20% of Arkansas ninth graders do not obtain a high school diploma. The drop-out rate is even higher for African Americans and Hispanics. Only 16% of adult Arkansans hold a higher education degree, one of the lowest rates in the country.

Too many students leave our high schools unprepared for the challenges of college and work. National Governor's Association (NGA) statistics say one in three high school graduates who go to college nationally need immediate remedial education; in Arkansas 52% of those attending college need remedial courses. Only 30 % of high school students who took the ACT demonstrated readiness for college math and only 25% demonstrated readiness for college biology.

Most (76%) of Arkansas employers say less than half of the recent high school graduates who apply for jobs in their company have quality writing skills or the ability to do basic math. More than 60% are not satisfied with the ability of recent high school graduates to read and understand written instructions and materials.

A Crisis in High Schools

There is a crisis in high schools because students are graduating without the skills they need to succeed in the workplace or in higher education. In Arkansas, we must restore the value of a high school diploma so that our graduates are better prepared to succeed, whether they pursue employment or higher education. The college prep track has become the all-student track in Arkansas with the enactment of more rigorous high school graduation requirements under the nationally-recognized Smart Core program.

Employers who hire high school graduates want to hire people who can read, write and communicate clearly; analyze information; solve complex problems, and conduct research and make comparisons. College professors want people with the same skills.

To succeed in today's economy, Americans must know and be able to do more than ever before. All students need to graduate high school with the same level of skills. The same skills in English (four years) and math (through Algebra II) are needed for college and for the 21st century work environment. For example, a college freshman and a pipe fitter need algebra, geometry, trigonometry and physics mastery. A sales professional and a college freshman need advanced math as well as written and oral persuasive communications skills.

Students Can Meet the Challenge

Students can meet the challenge of the rigorous high school curriculum – known as Smart Core in Arkansas high schools – when we raise our expectations. Smart Core includes four years of math (that includes Algebra I, Algebra II, Geometry and another higher math) and English and three years of science and social studies. Higher expectations mean higher academic achievement.

When more rigorous curriculums are implemented, ALL STUDENTS LEARN MORE. NGA data show that students who took Algebra rather than general math had much higher test score gains between 8th and 10th grades – even those with the very lowest initial 8th grade math scores.

ACT scores in Arkansas rose for the first time in 2006 after years of remaining constant, but there is a gap between all students and African-American and Hispanics that is growing. The academic achievement gap between low income and minority students and others is LESS when a rigorous high school curriculum is followed by all students, according to NGA data.

When they take harder courses, **ALL STUDENTS EARN BETTER GRADES**. Tracking more than 3,000 students from middle school to high school, the Southern Regional Education Board found that low-achieving 8th graders were less likely to earn Ds and Fs when placed in college prep courses in high school.

NGA statistics indicate a clear majority of high school graduates say they would work harder and take more rigorous courses in high school if they could do it over. Of those who did not go to college, 72% say they wish they had taken more rigorous courses.

High Expectations Mean High Performance

A rigorous high school curriculum has not caused the dropout rate to rise. NGA data indicates that students are more engaged and achieve higher test scores when their curriculum is rigorous.

Parents can lead the way. Parents who encourage their children to attend college are raising the economic standards of their families – college graduates earn 62% more than high school graduates. But if parents sign Smart Core waivers, they are limiting their child's future opportunities and their ability to support a family.

As a community, we have to set goals, measure progress, hold our schools accountable and streamline governance to make needed changes in our high schools. We will know we have succeeded when:

- Readiness for college and workforce increases.
- College remediation rates decrease.
- Retention and timely graduation at colleges/universities increase.
- High school intervention required decreases.

Challenging Math Instruction Is Best Indicator of Success in College and Workplace

No matter what path they choose after the high school, students who have taken more demanding math courses are better prepared for work or college.

A new study by ACT compares the skills needed for success in freshman courses in college and compared them to skills needed for training programs in occupations that offer a salary sufficient to support a family of four. The jobs and the freshman courses require a comparable level of math skills in algebra, geometry, data analysis and statistics.

Research is clear – but it may be surprising to adults who did not take higher level math courses when they were in school – that taking challenging mathematics in high school is the gatekeeper that can either open or shut the door of opportunity.

Landmark federal studies have found that the highest level of math taken in high school has the most powerful relationship to earning a bachelor's degree, regardless of student ethnicity, family income or parents' education levels. Students who complete Algebra II in high school **MORE THAN DOUBLE THEIR CHANCES** of earning a four-year college degree. Those who do not take challenging math courses are much more likely to end up in remedial courses and are more likely to drop out.

Two-year colleges also require rigorous math. Although most community colleges allow students with a high school diploma to attend, they cannot get into credit-bearing courses unless they meet a certain level on placement tests in reading, writing and mathematics. Math placement tests usually include both geometry and advanced algebra. And most certificate and degree programs at two-year colleges require at least one credit-bearing math course.

Well-paying jobs that pay a living wage and allow for career advancement also require strong math, problem solving and reasoning skills. Due to advancements in technology, manufacturing companies need employees with strong math skills to operate the machinery on the factory floor.

Eastman Chemical in Texas evaluates apprentices on their ability to perform tasks that require solving multiple-step math problems and presenting solutions in the appropriate unit of measure and dimension. Construction workers also need higher math skills, according to the Associated General Contractors of America. Electricians, pipe fitters, sheet metal workers, draftsmen and surveyors all need algebra, geometry, trigonometry and physics to be successful.

In a national poll of recent high school graduates, more than two-thirds who took Algebra II in high school reported that they were well prepared for the demands they faced in college and the workplace. In contrast, of the graduates who took less than Algebra II, only four of 10 say they were well prepared. Statistics were similar whether graduates went to college or directly to the workplace.

When it comes to math, one-third of college students and half of those who went straight to the workplace would take more rigorous high school courses if they could go back and do high school over again.

Though graduation requirements have not kept pace with the changing world students enter after high school, some states – like Arkansas which requires four years of math – are raising requirements. We are joined by schools in Indiana, Kentucky, Michigan, Oklahoma, Boston, Chicago, Los Angeles and San Jose. In each of these states and districts, students are required to take three or four years of math through Algebra II.

Why Arkansas Business Leaders Say High Schools Need To Change

NOTE: This research is a component of the Arkansas Department of Education's High School Redesign initiative. Research shows that the level of readiness needed to enter jobs offering a livable wage is not lower than that needed for college. High schools are failing to prepare too many of our students for work and higher education. Arkansas needs to demand that all high school students graduate on-time and ready for college. It is important for the future of each and every student; it is important for Arkansas to improve our economy; and it is important for us as a nation to be competitive in today's global economy.

Background

In May of 2006, the Arkansas Department of Education conducted two focus groups, with the goal of exploring the needs of Arkansas business leaders with regards to hiring Arkansas high school graduates. Some of the themes explored in the research were skills perceived to be lacking in the recent high school graduates, current workforce needs and overall perceptions of recent high school graduates.

The first group of 10 participants was conducted in Little Rock, and the second group of 12 participants was conducted in El Dorado. Participants were human resource professionals and business leaders from the respective communities. Additionally, participants came from both large and small businesses, as well as privately owned and government organizations.

Results

55.5% of respondents stated that recent American public high school graduates with no further education or formal training are either "not too well prepared" or "not well prepared at all" to enter the workforce.

The skills that Arkansas employers are looking for can be broken down into two categories – hard skills and soft skills. Hard skills are defined as specific skill sets useful for specific job types. In this report the hard skills discussed are writing, math, science, computer skills and reading comprehension. Soft skills are defined as everyday life/social skills and in this report will include work ethic, verbal and nonverbal communication, attendance, interview abilities and attitude, among others.

If and when hard skills were discussed, they were talked about in terms of the applied sense. The complaints of the business leaders were dominated by soft skills. As one employer said, "We want somebody who shows up on time, somebody who works hard and someone who's trainable."

Soft Skills

In both focus groups, the complaints and concerns of employers were dominated by soft skills. Many participants expressed extreme frustration with entry-level employees' lack of soft skills. Additionally, many participants expressed the willingness to train employees in whatever hard skills necessary, if only the graduates would exhibit most of the soft skills listed below.

For example, when participants were asked, "Which is more often the cause when a recent high school graduate is struggling with work?" 57% of participants responded that the employee "lacks motivation/has distractions/not applying themselves," as compared to 10.5% who responded that the graduate "lacks skills/was not adequately prepared."

Soft Skills: Attendance

Attendance was the number one soft skill brought up in the focus groups. Employers expressed great frustration with getting employees to show up to work on time or to even show up to work at all. A verbatim comment representative of most of the participants' attitudes towards the soft skill of attendance is,

“They [employees with a high school degree and no further training] can’t get to work on time, they won’t pick up the phone and call their supervisor ... I would say that 95% of the people who either terminate themselves or get terminated, it’s because of attendance.”

Soft Skills: Decorum/Demeanor/Personal Presentation

Many of the participants were baffled at the behavior and lack of professionalism in entry-level employees (including a lack of appropriate workplace behavior and poor interview techniques). This was a frequent theme in the focus groups. Some verbatim comments include:

- “We shouldn’t be teaching attitude. When we see a lot of young people coming in, we just try to teach them to be nice. That’s a challenge.”
- “They don’t know how to present themselves professionally in speech or dress. And that’s a big problem for us now.”
- “I’ve talked to so many of my managers; and they feel like they are parents, parenting kids, trying to reprimand them, discipline them. If you are a supervisor, you spend a lot of time doing that, instead of teaching them their job or helping them advance their skills.”

Soft Skills: Work Ethic/Habits

78% of respondents stated that they are either somewhat dissatisfied or very dissatisfied with the job that high schools are doing in preparing students in the area of work habits.

Focus group participants communicated their strong opinion that recent high school graduates have a poor work ethic and/or poor work habits. Some verbatim comments include:

- “A lot of the problems we have focus on general work ethic ... staying focused and staying on task.”
- “They [recent high school graduates with no further education] don’t come motivated. They want you to hand it to them on a silver platter and not ask them to do a heck of a lot for it.”
- “These kids just don’t know what it’s like to work, to be successful at work. They just don’t have a clue.”
- “If you [entry level employees] have that work ethic, you have that basic skill, if you are trainable, I can do something with you. I want you.”

Real World Experience: A Solution to the Soft Skill Problem?

When asked if providing real world experiences, such as internships and service learning, would encourage students to work harder and be better prepared for life after high school, 100% of the respondents stated that this would greatly improve or somewhat improve students’ workforce performance.

Hard Skills

Hard Skills: Writing

76.3% of respondents stated that less than half of the recent high school graduates who apply for jobs in their company have quality writing skills.

The ability to express one’s self on paper came up time and time again in the focus groups. Many of the focus group participants expressed dissatisfaction with recent high school applicants’ ability to express thoughts and communicate in written form. In fact, 10 out of the 10 Little Rock focus group participants agreed that the ability to read and write is a major problem with recent high school graduates. The participants’ concerns regarding recent high school graduates’ writing skills can be summed up by one participant’s comment, “I guess the biggest factor I can see in preventing me from keeping these kids is they just can’t flat read and write.”

Hard Skills: Math

76.3% of respondents stated that less than half of the recent high school graduates who apply for jobs in their company have the ability to do math.

Many of the employers sought stronger math skills, especially those employers coming from industry and the technology sector. In particular, many of the participants suggested that graduates need more skills in applying math to real world situations. Some of the verbatim comments include:

- “Math skills, the kids need to learn how to apply that [math skills] in real life situations.”
- “[They lack] basic math skills.”

Hard Skills: Science

47.3% of respondents stated that they were somewhat dissatisfied or very dissatisfied with the science skills of recent high school graduates.

Science skills did not come up as frequently as reading, writing and math. Though many employers acknowledged its importance, they also noted that many of the applicable science skills could be taught on the job.

Hard Skills: Reading Comprehension

63.2% of respondents stated that they are either somewhat dissatisfied or very dissatisfied with recent high school graduates' preparedness in the area of reading and understanding complicated materials.

According to the focus group participants, reading comprehension is perceived as inadequate in many of the recent high school graduates. As with the other hard skills, employers discussed the lack of reading comprehension in the applied sense (e.g., the ability to read and comprehend technical manuals and employee policy books).

One employer noted, "All of our tech manuals are now written for the 11th grade and higher. If you can't read and comprehend, you are going to struggle advancing ... if you can't read it and understand ... you are limiting your career."

Hard Skills: Computer Literacy

79% of participants stated that they are either very satisfied or somewhat satisfied with recent high school graduates' preparedness in the area of computer skills.

All of the participants were undeniably pleased with recent high school graduates' level of computer literacy. Many of the participants expressed that the computer skills of recent graduates often exceeded their older colleagues. As one employer put it, "These kids coming out of high school know computers."

Additional Hard Skills/Themes

In addition to the above areas, the participants suggested the following hard skills as needed areas of improvement for high school education: listening and communication skills, development of mechanical aptitude, problem solving and analytical thinking and emerging technology.

Conclusions:

Many participants expressed the opinion that the problems with recent high school graduates are not skills that can even be taught in school. As one participant put it, "this is home training."

One solution offered by many of the participants is early exposure to the work environment. Many thought that mentoring or engaging young people in the professional world would help to teach many of these soft skills. In fact, 100% of respondents stated that providing opportunities for more real-world learning, through internships or other opportunities would improve or greatly improve entry-level employees.

Additionally, these real-world experiences may promote growth in the area of some of the hard skills. Participants suggested that reading comprehension, applied math and listening and communication skills could all be improved by the early exposure to the work environment.

This research is a component of the Arkansas Department of Education's High School Redesign initiative.

Answers for Educators

Questions and Answers

Q. Why do high schools need to implement the Smart Core rigorous curriculum?

A. Here are some of the facts:

One fifth of Arkansas ninth graders do not obtain a high school diploma. The drop-out rate is even higher for African Americans and Hispanics.

Too many students leave our high schools unprepared for the challenges of college and work. National Governors Association (NGA) statistics say **one in three** high school graduates who go to college nationally need immediate remedial education; in Arkansas **52%** of those attending college need remedial courses.

Only **30%** of high school students who took the ACT demonstrated readiness for college math and only **25%** demonstrated readiness for college biology.

76% of Arkansas employers say less than half of the recent high school graduates who apply for jobs in their company have quality writing skills or the ability to do basic math.

More than **60%** of employers are not satisfied with the ability of recent high school graduates to read and understand written instructions and materials.

Q. What can educators do to ensure the success of their students in higher education and the workplace?

A. Encourage all your students to take higher math classes. No matter what path they choose after they finish high school, students who have taken more demanding math courses are better prepared for work or college. A new study by ACT compares the skills needed for success in freshman courses in college and compared them to skills needed for training program in occupations that offer a salary sufficient to support a family of four. The jobs and the freshman courses require a comparable level of math skills in algebra, geometry, data analysis and statistics. Landmark federal studies found that the highest level of math taken in high school has the most powerful relationship to earning a bachelor's degree, regardless of student ethnicity, family income or parents' education levels.

Students who complete Algebra II in high school **MORE THAN DOUBLE THEIR CHANCES** of earning a four-year college degree. Those who do not take challenging math courses are much more likely to end up in remedial courses and are more likely to drop out.

Q. Can you define Smart Core in just a few sentences?

A. Smart Core includes four units of math and English and three units of science and social studies: 4 Math - Algebra I or Algebra A & B, Geometry or Investigating Geometry, Algebra II, Transitions to College Math, Pre-Cal, Trig, Statistics, Computer Math or Algebra III.

4 English - 9th through 12th grade English.

3 Natural Science - Your choice: Physical Science, Bio or Applied Bio/Chemistry, Chemistry, Physics, Principles of Tech I & II or PIC Physics.

3 Social Studies - Civics or American Government, World History, American History.

Smart Core is a mandatory curriculum for all high school students, beginning with the class of 2010. All students will have to participate in the program in order to graduate from high school, unless their parents sign a waiver indicating permission to participate in the alternate curriculum.

Q. As a teacher, what can I do to help Smart Core work in my school?

A. Believe in it yourself. Encourage **ALL STUDENTS** to take Smart Core courses.

Encourage parents not to sign waivers exempting their students from Smart Core. Parents who sign Smart Core waivers are limiting their child's future opportunities and their ability to support a family.

Q. Students are different and their needs after high school will be different. Why does Smart Core require college prep classes for everyone?

A. The high school community must embrace higher expectations for all students, regardless of a student's prior academic performance. To succeed in today's economy, Americans must know and be able to do more than ever before. All students need to graduate high school with the same level of skills.

The same skills in English (four years) and math (through Algebra II) are needed for college and for the 21st century work environment. For example, a college freshman and a pipe fitter need algebra, geometry, trigonometry and physics mastery. A sales professional and a college freshman need advanced math as well as written and oral persuasive communications skills.

Employers who hire high school graduates want to hire people who can read, write and communicate clearly; analyze information; solve complex problems, and conduct research and make comparisons. College professors want people with the same skills.

Q. Won't we be doing a disservice to students who aren't able to perform to this level?

A. When more rigorous curriculums are implemented, **ALL STUDENTS LEARN MORE**. NGA data shows that students who took Algebra rather than general math had much higher test score gains between 8th and 10th grades – even those with the very lowest initial 8th grade math scores.

ACT scores in Arkansas rose for the first time in 2006 after years of remaining constant, but there is a gap between all students and African-American and Hispanics that is growing. The academic achievement gap between low income and minority students and others is **LESS** when a rigorous high school curriculum is followed by all students, according to NGA data.

When they take harder courses, **ALL STUDENTS EARN BETTER GRADES**. Tracking more than 3,000 students from middle school to high school, the Southern Regional Education

Board found that low achieving 8th graders were less likely to earn Ds and Fs when placed in college prep courses in high school.

Q. Won't more students drop out?

A. A rigorous high school curriculum has not caused the dropout rate to rise. NGA data indicates that students are more engaged and achieve higher test scores when their curriculum is rigorous.

NGA statistics indicate a clear majority of high school graduates say they would work harder and take more rigorous courses in high school if they could do it over. Of those who did not go to college, 72% say they wish they had taken more rigorous courses.

Q. How will Smart Core be evaluated?

A. We have to set goals, measure progress and hold our schools accountable to make needed changes in our high schools. We will know we have succeeded when:

- Readiness for college and workforce increases.
- College remediation rates decrease.
- Retention and timely graduation at colleges/universities increases.
- High school intervention required decreases.

America's High Schools: The Front Line in the Battle for Our Economic Future

From the 2005 National Education Summit on High Schools

High school is where America's young people enter the adult world, not just socially, but more important, economically. Whether they realize it or not, it is where they begin preparing themselves for the economic environment in which they will compete and earn their livelihoods. Its importance is seen in the alarming reality that the United States has one of the lowest graduation rates of all developed nations, in the strikingly low percentage of students ready to use high school as a springboard for success in college and beyond, and in the pressing need for lifelong learning and effective citizenship in an increasingly demanding era of technology and global linkage.

High school is now the front line in America's battle to remain competitive on the increasingly competitive international economic stage.

Trade in services was once seen as America's ace in the hole. And, in fact, America has a variety of very strong service industries, from education to software to entertainment, that sell to customers around the world. But America's trade surplus in services is steadily shrinking—service imports have grown faster than service exports for seven straight years.

The result is firms are now making themselves more competitive by breaking down into their constituent activities and making sure that each activity is being done in the "right" place. As a result, more of these services are becoming tradable, and more of the American economy-- including more of its higher-value services—is exposed to global competition.

How Will America Respond?

Despite sporadic successes, the American response to date has been one of complacency leading to mediocrity. The towering heights of American achievement remain unmatched around the world—our Nobel-winning scientists, the cutting edge of American technology, the balanced working of the American economy and its entrepreneurial culture. But below these heights, the base is withering. Consider these facts alone:

-A recent study by the Organization of Economic Co-operation and Development (OECD) showed that America's literacy rate is average among the nations of the industrialized world and that our high school graduation rate—73 percent—is one of the lowest among the industrialized nations.

-Once the leader in education, the United States now ranks 14th in the number of years a 5-year-old may expect to attend school during the course of his or her life.

-The U.S. university dropout rate—38 percent—is among the highest in the industrialized world

-Of the 21 countries participating in the Third International Mathematics and Science Study, American high school seniors outperformed only students from Cyprus and South Africa and ranked behind such nations as Sweden, Canada, New Zealand, Russia and the Czech Republic.

-Non-U.S. residents with temporary visas accounted for a third of the Ph.D.s awarded in science and engineering in 2003, despite any post-9/11 difficulties they might have experienced.

Economists Anthony Carnevale and Donna Desrochers found almost all categories of employment now require more advanced education today than they did 30 years ago. They show the share of office workers with "some college" has increased from 37 percent to 60 percent over that span; the share with a bachelor's degree has almost doubled, from 20 percent to 38 percent. Even factory work demonstrates the trend—the share of factory workers with some higher education has increased fourfold, from 8 percent to 31 percent in the past three decades. As foreign suppliers step into more advanced service industries, American workers must respond by becoming more productive. Thus, America is faced with a stark choice—we can either

climb the productivity ladder and re-create the American middle class, or we can watch our nation's middle class fade away as other countries' teenagers continue to outperform our children. It is high school, specifically, where the failure occurs. For example, international student comparisons show American students report levels of both accomplishment and interest in math and science on par with their counterparts in other nations at both the 4th and 8th grade levels. But by grade 12, they fall far behind in their proficiency and report dramatically lower levels of interest. It is between 8th and 12th grade where the failure occurs. Research from the U.S. Department of Education indicates that the rigor of high school coursework is more important than parent education level, family income or race/ethnicity in predicting whether a student will earn a postsecondary degree. The share of high school students who take a course load preparing them for college is as low as 34 percent, and the share of high school students who are actually "college ready" is only 32 percent. Together, the 50 states spend \$63 billion annually to subsidize higher education. Obviously, this is an important part of a strategy to build local economies and attract a skilled workforce. Yet these investments will not yield the expected dividends unless high schools do a far better job of preparing students for postsecondary education. And high school builds a better citizenry. Aside from the obvious benefits of educational achievement—lower demands for social services, lower rates of incarceration, better parenting and public health, and better preparation of the subsequent generation of small children for school, among many other—higher levels of education prepare our citizenry for the ever more sophisticated issues they must confront.

The average wages of high school graduates and those individuals who never graduated high school have fallen over the last two decades; the average incomes of those who went beyond high school have risen. This demarcation promises to become even starker in the coming years, as technology and trade separate the economy into two camps—those with the skills to participate in the global economy and those who lack them. If we do not make a concerted effort to move our society beyond this boundary, we will find ourselves a society cut in two—one side enfranchised in the modern economy, experiencing its affluence, the other lacking the means of access to the future. In short, we run the risk of losing our middle class.

High school lies at the center of this crisis. Fifty years ago, it was finishing school for the American middle class. Today, it must be more. It must be a bridge to higher education, to a productive and innovative economy, and to an informed citizenry. It is time to transform our country's high schools to reflect these new realities.

The Realities of Readiness: High School Graduates Need Same Skills for Workplace and College

When students take challenging courses in high school, they have more options when they graduate. What used to be thought of as college-prep is now the level of preparation all students need to be successful in college or the workplace.

While it is true that some students go directly to the workplace after high school, research reveals that the skills needed to get and keep good jobs are very similar to requirements for incoming college freshmen. In fact, most well-paying jobs today require education beyond high school.

In the past students bound for the workforce needed dramatically different preparation than those bound for college. But times have changed. A growing body of research shows that the skills needed for success in college and good jobs are converging, particularly jobs that pay well and allow for career advancement.

An ACT study examined results from high school juniors who took both the college admissions test and the Work Keys tests, which measure the academic skills needed to perform various jobs. Researchers honed in on training programs for occupations that offer a salary sufficient to support a family of four and that include opportunities for career advancement. They found that those programs require the same knowledge foundation as colleges do.

The American Diploma Project interviewed college professors and employers from around the country and found that the skills needed to succeed in freshman-level courses are the same as those needed for living-wage entry-level jobs and careers. To be successful all high school students need advanced reading, writing, communications and mathematics skills. Their curriculum should consist of four years of grade-level or honors English and mathematics classes through at least Algebra II.

Arkansas' Smart Core Curriculum now requires four years of English and mathematics (including Algebra I, Algebra II, geometry and a higher-level math), along with three years of science and social studies. This rigorous curriculum is necessary to prepare our students for both the workplace and the university classroom.

Not only white collar jobs, but blue collar ones demand higher skills today. Due to advancements in technology, the level of education required to get blue-collar jobs is higher than ever before. Tool and die makers must have four or five years of apprenticeship training after high school. They need to master the content and skills covered in algebra, geometry, trigonometry, along with advanced technical reading skills.

It is true that service sector workers like cashiers and food service workers can get jobs without taking a rigorous curriculum. But these jobs typically provide low pay, few benefits and little room for advancement. If their education prepares students only for the lowest rung of the economic ladder, they are doomed to few employment options.

Earning potential increases dramatically the more education young people receive. The typical bachelor's degree recipient can expect to earn 62% more than a high school graduate, who earns 43% more than a high school dropout.

When high school students are polled, more than 80% say they plan to go to college. Sadly, not all of them have taken a curriculum that prepares them for college. Too often, students are tracked into low-level courses that lead to dead-end diplomas, and this is particularly true for minority and low-income students. One national study found that although 74% of minority girls want to take advanced math courses, only 45% of their schools offer the courses.

The result is high college remediation rates and low college completion rates, particularly for low-income and minority students. One student expressed it this way, "They showed me how to fill out a McDonald's application in my Life Skills class. I think that they should have at least taught me how to fill out a college application or told me what the college requirements are."

These kinds of concerns have been addressed by the Arkansas laws that require all schools to offer advanced courses and make Smart Core the default curriculum for all students.

Students Succeed When We Raise Expectations: San Jose Unified School District

Whole school systems have found that many more students succeed when rigorous courses are required. That's what happened for students at San Jose Unified School District in California. The district requires all students to complete the full set of courses required for admission to California's public college and universities. In 2004, 65 percent of San Jose graduates completed all those courses with a C or better, up from just 37 percent in 2001. And that success hasn't come at the expense of higher dropout rates; the district's four-year graduation rates improved slightly over the same period.

High School Was Too Easy

Responding to demands by parents and a concern that high school was just too easy, the San Jose Unified School Board adopted rigorous graduation requirements on the premise that student performance would rise to meet increased academic standards and expectations.

The school was under a court-enforced agreement to boost Latino achievement resulting from a 1971 suit that alleged segregation. So, the district created magnet programs, offered district-wide open enrollment and went through a process of "de-tracking" to put children of every academic ability in classes together.

Half the district's students are Latino and 40 percent of students come from poor families. The system had been a two-tiered one that placed the students who aimed highest – most of them white and Asian – in college-preparatory and Advanced Placement Courses. The second tier – most of them Latino – were offered basic courses and electives that prepared them for little beyond high school.

Rigorous Courses Required

Beginning with the freshmen of 1998, students were required to complete a series of core academic courses and elective commonly called the "A-G Sequence." This sequence means at least three years of college-prep math, four years of English, three years of science, three and a half years of social studies, two years of foreign language and one year of visual or performing arts. In addition, the students were required to have 40 hours of community service.

Popular with parents and students, the plan was controversial because skeptics feared many students would dropout. Supporters of vocational education worried the curriculum was too restrictive for students who wanted to go to work immediately after high school. Teachers doubted the district would supply the extra time and help they and students would need to succeed.

To make the world of A-G work, the district crafted a menu of programs for students and teachers who would struggle with the change. Up to two additional periods were allotted for the high school day. Special Saturday sessions were created to help students, especially in math. Summer school was redesigned to be rigorous rather than remedial. The district opened enrollment in Advanced Placement courses to all students, and a more diverse group of students signed up.

Though they hoped all students could obtain a diploma through the A-G curriculum, some students in special education and alternative programs needed another path. About 9 percent of San Jose Unified graduates take an independent curriculum, though they must earn the same number of credits as their peers.

Difficulties included recruiting higher level math and science teachers, immaturity of ninth graders at the beginning of the four-year graduation plan and loss of flexibility with time for fewer electives for freshmen and sophomores.

Myths are Dispelled

San Jose Unified's strategy is an example to other districts throughout the nation struggling to fix failing high schools and increase minority students' graduation rates. Data from San Jose shows that their students are thriving, with reading and math scores improving significantly, at a much higher rate than the rest of California. Between 1998 and 2002 African American 11th graders improved in reading seven times more than African Americans statewide. The achievement gap between Latino and White students closed by 43 percent.

More students of every subgroup are taking and scoring higher on the SATs and AP exams. Graduation rates have held steady or risen slightly, depending on the methodology used for graduation calculation. Latino enrollment in chemistry and biology courses more than doubled from 1999 when fewer than 250 took those courses to 2003 when more than 500 Latino students were enrolled.

One concern was that the proportion of students applying to four-year colleges remained around 24 percent even though 64 percent of the 2003 graduates finished the A-G courses, which meet the minimum course standards for admission to the California University System. A grant from a private industry funded an innovative program to help encourage college attendance for students from poor families. As a result, more than 75 percent of San Jose High's seniors scheduled to graduate in the spring of 2004 had applied to two- or four-year colleges.

Education, Standards and Leadership: A Review of Public Opinion on Education

By Allan Rivlin, Peter Hart Research

For the Bill and Melinda Gates Foundation

- A survey sponsored by National Geographic found:
 - 63% of 18- to 24-year-olds in America can't find Iraq on a map of the Middle East
 - Only 50% can find New York on a U.S. map

Key survey findings from the Gates Foundation Dropouts Survey:

-A strong majority of dropouts say they did not feel motivated or inspired to work hard in high school. Most are confident that they would have been able to graduate if they had put in the necessary effort, and that they would have worked harder if more had been demanded of them.

-Attendance is a strong predictor of dropping out: most dropouts say they frequently missed class during the year they dropped out.

-Most dropouts blame themselves for their failure to graduate from high school, although clearly there are aspects of the school environment that contribute to or exacerbate the problem. Fewer say the responsibility is shared with school, and even fewer believe the school is squarely to blame for them dropping out.

Top 5 Reasons Dropouts Identify as Major Factors for Leaving School:

47% - classes were not interesting

43% - missed too many days and could not catch up

42% - spent time with people who were not interested in school

38% - had too much freedom and not enough rules in my life

35% - failing in school