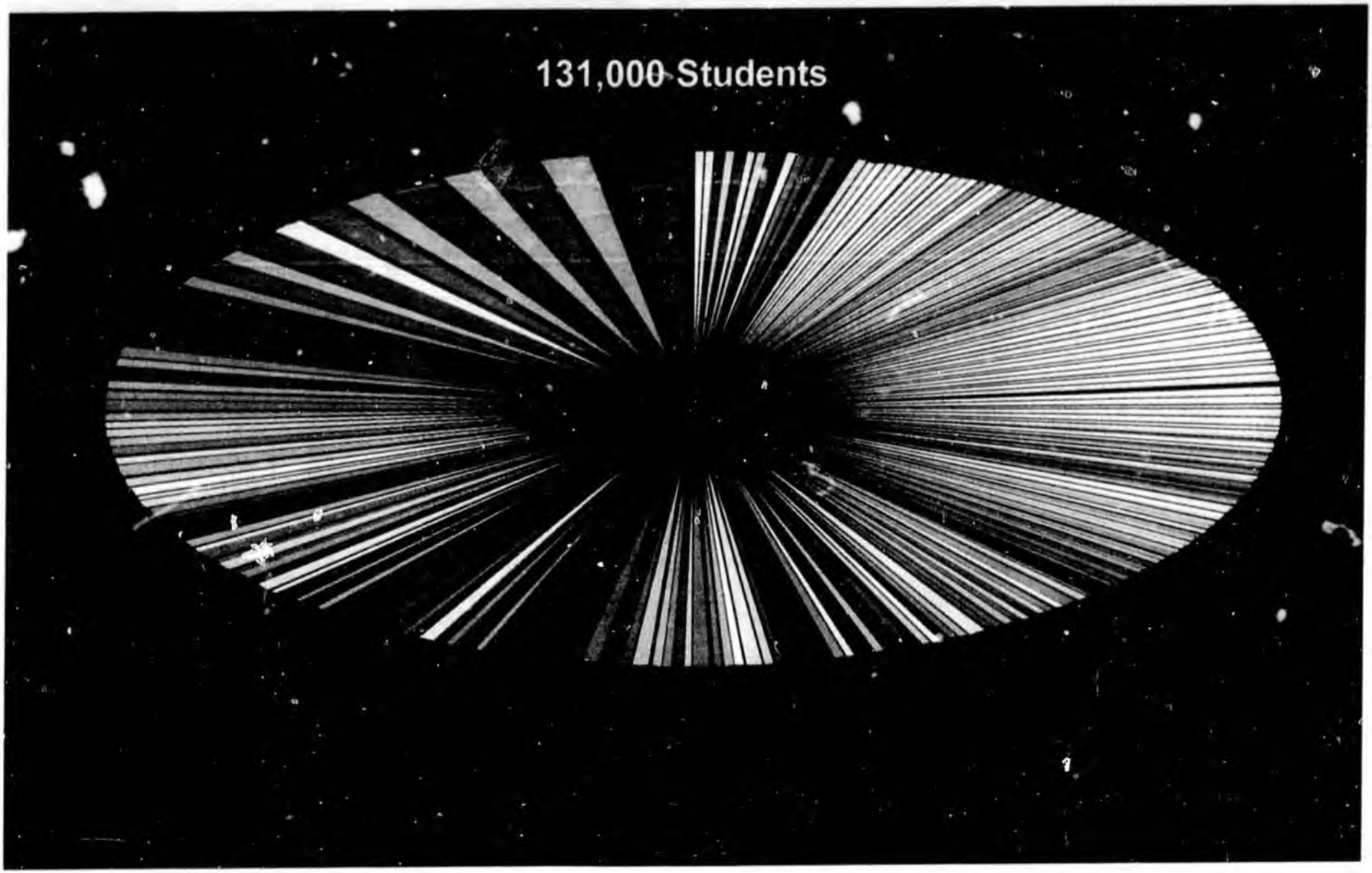
ADM Pie

488 Schools

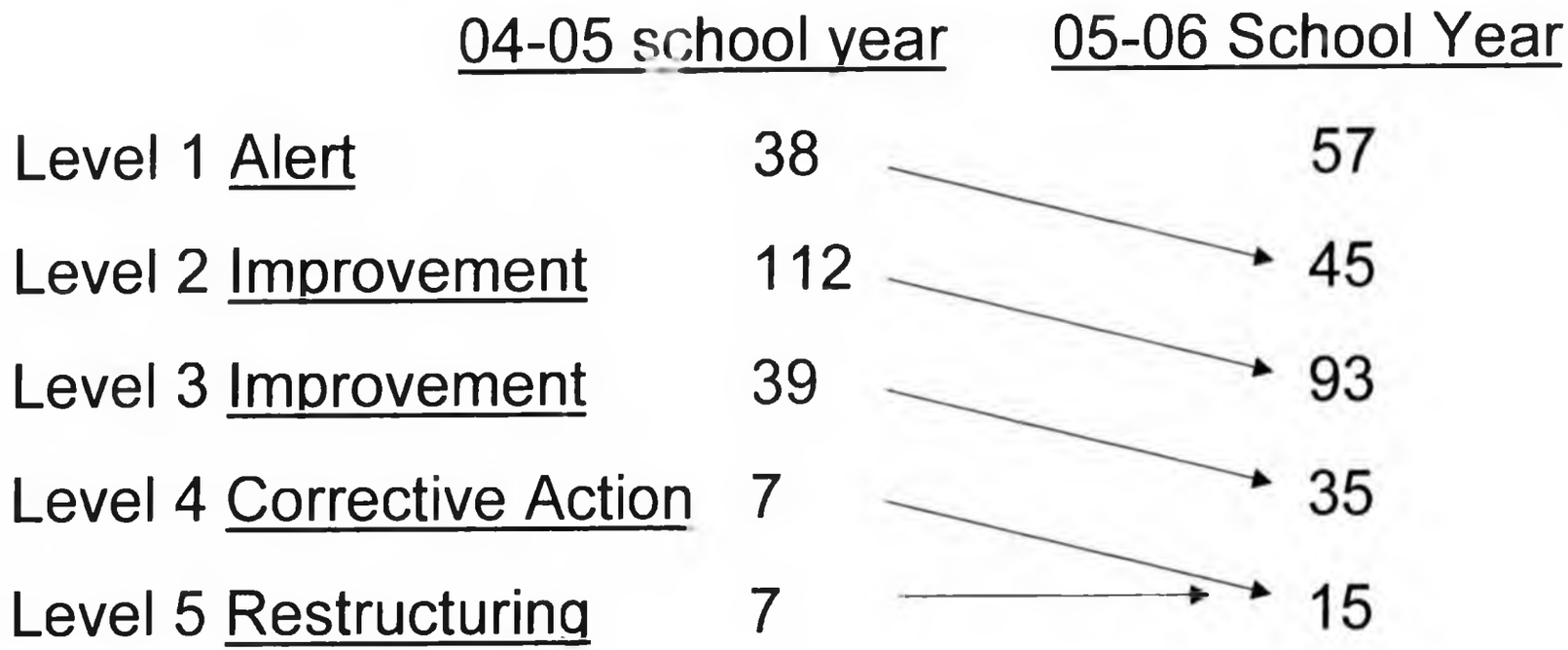


NAEP 2003 performance

Proficiency	Alaska	National Avg.
• Grade 4 Reading	28%	30%
• Grade 4 Math	30%	31%
• Grade 8 Reading	27%	30%
• Grade 8 Math	30%	27%

AYP and Alaska Schools

All Alaska Schools		
Number of Schools Eligible for AYP Calculations	495	
Number of Schools Not Meeting AYP	203	(41%)
Title I Schools		
Number of Title 1 Schools	291	
Number of Title 1 Schools Not Meeting AYP	124	(38.7%)



AYP Levels

- Level 1- School must seek technical assistance from District or EED to avoid being labeled again.
- Level 2- School must provide *choice* **or** *Supplemental Education Services (SES)* implementing School Improvement Plan designed by the school.
- Level 3- School must provide *choice* **and** *SES* implementing School Improvement Plan designed by the school

AYP Levels (cont.)

- Level 4- School must continue offering *choice* and *SES* and must additionally do one of the following:

  -Replace staff, **or**

  -New Curriculum, **or**

  -Decrease school management authority, **or**

  -Appoint outside expert management, **or**

  -Increase school day or school year seat time, **or**

  -Restructure Internal organization of the school.

AYP Levels (cont.)

- Level 5-1 *Choice + SES + additional level 4 "or"*, **and**,
  District must now make a plan to prepare for "alternative governance"
  -reopen as charter school,
  - replace all or most of the staff,
  - contract with private management company
  - turn over management t: EED,
  -or other major restructure approved by state.
- Level 5-2 (second year of level 5) Implement District Restructuring Plan for alternative governance, and continue all of the above.

Technology Benefits for AYP Requirements

- **Parental Notification (levels 2-5)**
- **Collaboration with school improvement plans**
- **Parental Choice**
- **Supplemental Ed Services (SES)**
- **New Curriculum**
- **New Staff**
- **Alternative governance (other districts, EED, or private management companies)**

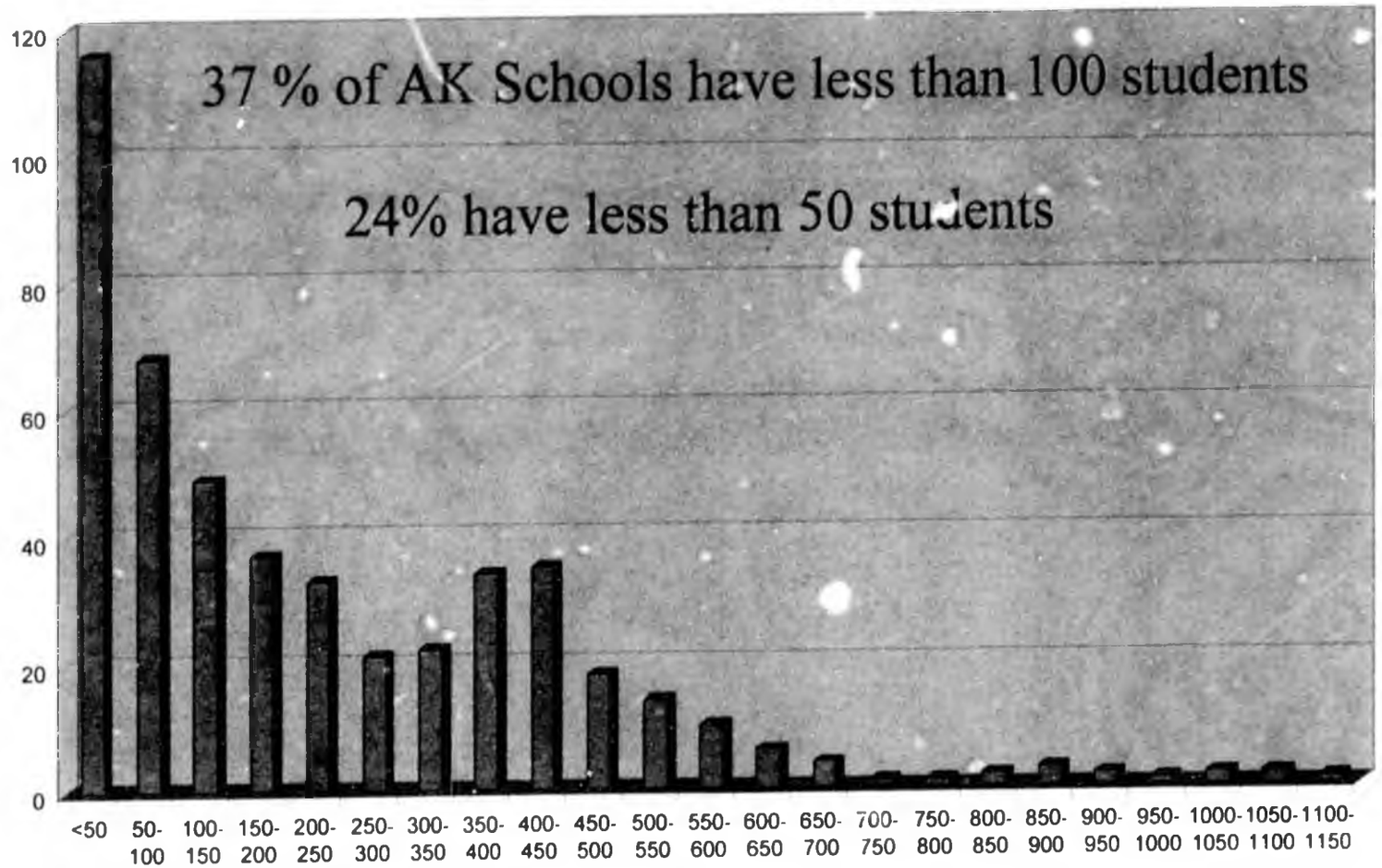
Education Technology

- Distance delivery
- Consolidation into "Virtual" classrooms
- Accumulative Student Records (tests, assignments, special projects…)
- Collaborative focus on student need (Individualized Learning Plan, Goals…)
- Unprecedented scope of information
- Unprecedented Communications
- Governance cooperation (standards, reporting…)

Myths about Ed. Tech

- Technology takes teachers out of equation
- Primarily Correspondence Application
- Teachers need extensive new Training
- Ed Tech is Computers
- Education Technology is Expensive.

School Size


37 % of AK Schools have less than 100 students
24% have less than 50 students
120
100
80
60
40
20
0
<50
50-100
100-150
150-200
200-250
250-300
300-350
350-400
400-450
450-500
500-550
550-600
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1050-1100
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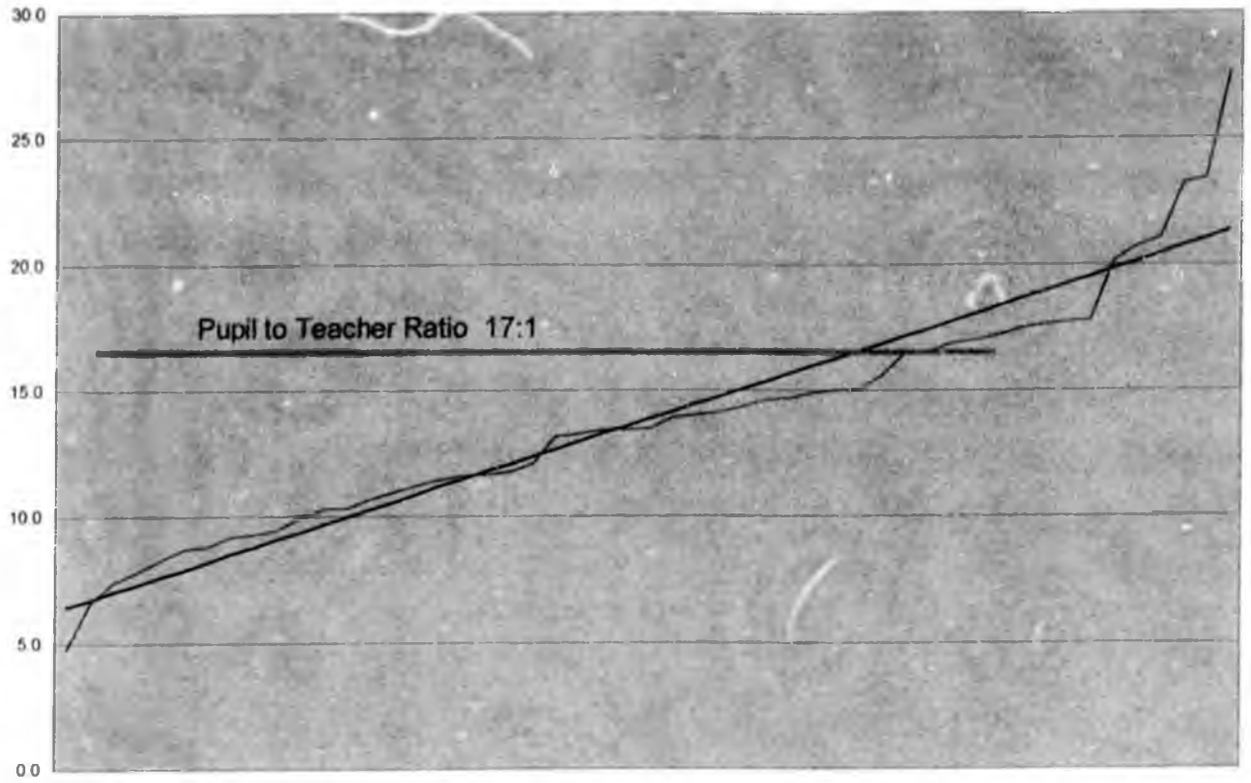
Pupil to Teacher



SCR 28 Resolves

- Encourages responsible application of education technology
- Encourages virtual grouping of students
- Encourages use of educational technology to address AYP challenges
- Encourages paying for educational technology via reallocation of savings from use of education technology
- Requests distribution to ALL local school board members in the state.

SB 281

- Simply authorizes any school district to enroll students statewide.
- AG Opinion

  "Agreements entered under these statutes can provide for the circumstances discussed at the Senate's hearing on SB 281."

  "… the local school district, operating within its borders… is the foundation of the state educational system… AK K-12 is, by statutory design, delivered locally."

- State Board Comment

  SB 281 is not clear, therefore no support for now…

The ABCs of "AYP"

Raising Achievement for All Students

As states develop and implement systems for measuring progress under the No Child Left Behind Act, parents, teachers, school officials, and policymakers have raised many questions and concerns about what the law requires.

This guide is an effort to summarize the accountability requirements of Title I of the No Child Left Behind Act (NCLB) and to clear up some of the most common misconceptions.

The Overall Bargain

By participating in Title I—a voluntary federal program that provides more than $11 billion to participating states to help educate low-income children—states agree to commit themselves to the goal of all students proficient in language arts and math by 2014. In order to tell whether schools and districts are on-track to meet that goal, each state sets benchmark goals to measure whether schools and districts are making "Adequate Yearly Progress" (or AYP) toward teaching all students what they need to know. While this report speaks in terms of school-level accountability, the same basic AYP rules apply to determine whether school districts have made AYP.

In the past, states had complete freedom in defining progress under Title I however they saw fit. But many states fell down on the job. Some set goals so modest that it would have taken more than a hundred years to see meaningful progress; one even defined "progress" as not falling backward very far. Many even failed to report the achievement of low-income and minority students.

Accordingly, when Congress passed NCLB, it made the accountability provisions clearer and stronger. The AYP provisions in NCLB set a new standard for defining success. Schools are expected to meet **clearly defined** goals for teaching **all students** to state standards.

- **Clearly defined goals:** To ensure that all schools are on-target for teaching kids up to state standards, each state sets specific benchmark goals for the percentage of students in each school that are expected to demonstrate proficiency on state tests in language arts and math. These target goals are raised over time.
- **All students:** Schools are accountable for overall student achievement and for the achievement of low-income students, students of different racial and ethnic backgrounds, limited-English proficient students, and students with disabilities. Old accountability systems allowed schools and districts to get high marks even while groups of students—often low-income and minority students—were not getting the education they deserved. Under NCLB, if a school doesn't make AYP for one of these subgroups, it doesn't make AYP.

These are ambitious goals. To reach them, public education will have to change the way it does business. But evidence from states that have already implemented rigorous accountability and instructional support systems demonstrates beyond any reasonable doubt that public schools *are* capable of meeting the expectations in the law.

What is AYP, exactly?

What AYP means for States, Schools and Students.

States decide whether schools are making Adequate Yearly Progress through a five-step process.

1) States determine what all students should know and be able to do.

Each state begins by setting academic *standards*—a process of deciding what all students should know and be able to do. States then develop tests that measure whether schools are teaching students what the state expects students to know. Students need to learn many things to be successful, but language arts and math are the building blocks for all further learning. NCLB focuses school accountability on the fundamental literacy and math skills that all kids need to learn.

Under NCLB, each state must set a specific score on its tests that indicates whether students at different grade levels are "proficient" in language arts and math.[1] Expecting students to be "proficient" in language arts and math isn't the same as expecting every student to become an expert or to get 100% on the state reading and math tests. Being "proficient" simply means that the student is on grade level. It's another way of saying that the student received a passing score on the state test.

2) States calculate the starting point for AYP.

The goal of NCLB is for all students to be proficient in language arts and math by 2014. But the law doesn't expect that to happen overnight, so it allows states to set a much lower beginning target (for example, 40% of students meeting the standard) and to raise that target incrementally until it reaches 100% by 2014.

The beginning targets need to be set at least as high as **the bigger** of the following two numbers:

- the percent proficient in the lowest performing subgroup of students (low-income students, students with disabilities, students who are limited-English proficient, or students from each major racial and ethnic group); or
- the percent proficient in the school at the 20th percentile of student enrollment within the state.

Using 2001-02 data, states calculate separate baselines in math and language arts. Chart 1 shows how the calculation might work for elementary reading in a hypothetical state. States can compute one baseline for all grade levels or calculate separate baselines for elementary, middle and high schools.

Chart 1: State Starting Point Calculation

Elementary Reading Assessment Results, 2001-02

State starting point will be the larger of:

State average proficiency by subgroup	
African American	38%
Asian	62%
Latino	39%
Native American	32%
White	64%
Limited English Proficient	25%
Low-income	36%
Special Education	30%

- or -

20th percentile school within state	40%

State Starting Point= 40%

States cannot set separate starting points for different groups of students, however. If the beginning target in a state is that 40% of students must pass the test, then 40% of all groups in a school or district must pass the test. Whether it is a whole school or a particular group of students below the initial target, educators need to focus immediate attention on helping those students.

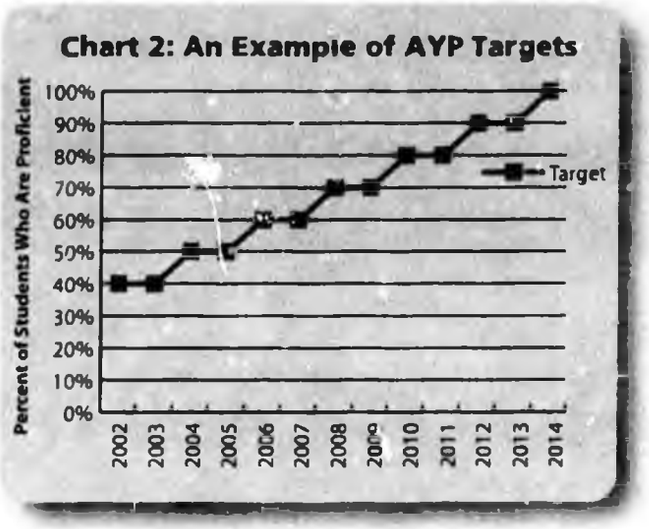
3) States set specific targets to measure whether all groups of students are making Adequate Yearly Progress in language arts and math.

Once the baseline is established, states set targets for increasing the number of students who are proficient over time, culminating with 100% proficient in 2014.

[1] By 2007-08, states must also assess science annually in at least one grade in each of the grade spans: 3-5, 6-9, and 10-12, but it is not part of the accountability system/AYP calculation.

For example, see Chart 2. In the first year, only schools with students or subgroups of students currently below the starting point of 40% fail to make AYP. But as the years progress toward 2014, states are required to periodically increase the target percentage of students meeting proficiency.

The first improvement target needs to occur by 2004-05,



and the others must be no more than three years apart. The increases must be in equal increments—a state that starts at 40% in 2001-02 might raise the bar to 50% in 2004, 60% in 2006, 70% in 2008, etc. *These targets must be the same for all schools serving the same grades and for all subgroups of students within schools.*

States also have to set one additional measure of academic progress. For high schools, the additional measure must be the graduation rate. For elementary/middle schools, the state selects the additional measure (many states have chosen to use attendance rates).[2]

State plans for measuring AYP were submitted to the U.S. Department of Education on or before January 31, 2003. Final AYP plans must be approved by the U.S. Department of Education and in place by May 1, 2003, when states also need to provide their starting points and intermediate goals for assessing whether schools and districts have made AYP.

4) States measure the performance of students, schools, and school districts.

Beginning no later than 2005-06, states must assess reading/language arts and math every year in grades 3-8, as well as once in grades 10-12.[3]

"Regular" AYP

Under NCLB, a decision has to be made every year about whether or not a school is meeting the state-established achievement targets described in the section above. To make this determination, states compare the percentage of students in each school who meet proficiency standards—as well as the percentage of students in each subgroup *within* each school—to the statewide goals for the year in question. States also have to measure whether the school met the statewide goal for th additional academic indicator.

If the school as a whole and each individual subgroup *within* the school meet or exceed the statewide goal in math and language arts and the school met the statewide goal for the additional academic indicator, then the school has met AYP. At least 95% of the students in each subgroup must take the test for the results to be valid.

"Safe Harbor" AYP: Flexibility in Meeting AYP

Even if a school *doesn't* meet the statewide goal in a given year, the school will still make AYP if it reduces the percent of students below proficient by 10% from the previous year (and makes progress on the other academic indicator). Schools can also apply this safe harbor analysis to any subgroup of students that fails to meet the statewide goal.

For example, Chart 3 shows a school where only 20%

[2]Unlike goals for students reaching proficiency in reading and math, goals for the additional indicator do not need to increase over time.
[3]By 2007-08, states must also assess science annually in at least one grade in each of the grade spans: 3-5, 6-9, and 10-12, but it is not part of the accountability system/AYP calculation.

of low-income students meet proficiency in 2003, meaning that 80% of low-income students *do* not meet proficiency. If the state achievement target for 2004 is 40%, but only 28% of the low-income students are proficient in 2004, the school has missed the 40% target. However, because the percentage of low-income students *not* meeting proficiency declined by 10%, from 80% to 72%, the school made AYP after all (as long as the school or group of students made progress on the other academic indicator).

A school can steadily decrease its percentage of students who are not proficient by 10% every year (as in Chart 3) and always make AYP, even if it never meets the state performance target. This is referred to as the "safe harbor" provision. It ensures that schools will get credit for making significant year-to-year improvement, even if they miss the overall target.

As states work to modify their existing accountability systems to meet NCLB's requirements, more flexibility might be possible. For example, to date the U.S. Department of Education has already approved two state accountability plans (Massachusetts and New York) that build on the "safe harbor" concept by giving additional credit to schools that significantly improve the performance of very low-performing students, even if those students don't quite meet the standard of proficiency.

There are a number of additional provisions in place to ensure that AYP determinations are as fair and accurate as possible. They include:

- **Averaging scores** - States can average scores from the current year with scores from either the previous year or the previous two years when calculating the score that will be compared to the state performance target for the purposes of determining AYP. Schools can also average scores across all grades within a school.
- **Only full-year students** - Schools are only accountable for the performance of students who have been enrolled in the school for at least one full academic year.
- **Minimum number of students for subgroup accountability** - Schools are only accountable for groups that are large enough to reveal "statistically valid and reliable" data; each state has discretion to set the minimum number of students required for subgroup accountability.

5) Steps are taken to help students in schools that do not make AYP.

Once there is a process in place for determining whether schools and school districts are making AYP, states are required to take a variety of steps to help schools that are struggling—that is, consistently *not* making AYP. For schools that receive funds under the federal Title I program, which provides additional funding for the education of low-income students, the following actions must be taken. Below is how it would all play out for a school not making AYP:

- **IN YEAR ONE:** A school is going about its business as usual.
- **IN YEAR TWO:** School finds out that it did not make AYP for the previous school year. Under the law, there are *no consequences* for not making AYP for one year. Schools and districts should use this information to identify areas that need attention and make necessary adjustments, but nothing happens under NCLB.
- **IN YEAR THREE:** If a school fails to make AYP for **two consecutive years**, parents need to be notified and given the option to transfer their children to a higher performing school in the district. Priority needs to be given to the lowest achieving low-income students in that school. Student transfers are paid for with federal funds. Schools must also identify the specific areas that need improvement and work with parents, teachers, and outside experts to develop a plan to raise student achievement.
- **IN YEAR FOUR:** If a school fails to make AYP for another consecutive year, then tutoring and other supplemental educational services must be made available to low-income students at that school. Like student transfers, supplemental services are paid for with federal funds.
- **IN YEAR FIVE: CORRECTIVE ACTION.** If a school does not make AYP for four years, it is identified for "**corrective action.**" Children can continue to transfer to other schools or to receive tutoring and other services. In addition, the district

and school are required to implement at least one, but not necessarily all, of the following corrective actions:

- Replace the school staff who are "relevant to the failure to make AYP."
- Institute a new curriculum, including appropriate professional development.
- "Significantly decrease management authority" at the school level.
- Appoint an outside expert to advise the school.
- Extend the school year or the school day for the school.
- Restructure the school's internal organizational structure.

- **IN YEAR SIX: PLAN FOR RESTRUCTURING.** If the school fails to make AYP for five years, the school must continue corrective action and develop an "alternate governance" plan.

  The "alternate governance" plan must include one of the following:

  - Reopen the school as a public charter school.
  - Replace all or most of the staff responsible for the lack of progress.
  - Enter into a contract with a private company to operate the school.
  - Turn over operation and management of the school to the state.
  - Implement other fundamental reforms approved by the state.

- **IN YEAR SEVEN: RESTRUCTURING.** If a school does not make AYP for six years, the "alternate governance" plan that was developed the previous year must be implemented.

Just as it takes two consecutive years of *not making* AYP to be identified for improvement under NCLB's accountability system, it takes two consecutive years of *making* AYP for a school to no longer be identified as needing improvement. If an identified school makes AYP for one year, it does not proceed to the next level of the improvement process (i.e., offer supplemental services, implement corrective action or restructuring, depending on what level the school was in). If the school makes AYP for a second consecutive year, it is no longer identified as needing improvement. If the school only makes AYP for one year and then fails to make AYP the next, it must continue implementing NCLB's school improvement process.

The steps described above briefly outline what AYP means, and what actions must be taken under NCLB to help schools where students persistently fail to make academic progress.

What AYP *Doesn't* Mean For States, Schools, and Students.

Unfortunately, the AYP provisions of NCLB have generated a number of misconceptions regarding what the law does and does not mean. Here is our attempt to separate the myths from the realities of AYP:

Myth: *States or schools that don't make AYP will be penalized by losing federal funding.*

REALITY: There are no financial penalties in NCLB for schools that fail to make AYP.[3] In fact, the law requires states to set aside a portion of funds received under the federal Title I program to provide *additional* assistance to schools that have been identified for improvement. In 2003, $234 million will be given to states to assist schools in the improvement process. Because of a formula in the law, that amount will more than double in 2004.

A state could jeopardize federal funding for its schools and children if it categorically rejects the goals embodied in NCLB by refusing to implement a system of standards, assessments and accountability. But NCLB doesn't penalize schools for low student achievement—it penalizes states that refuse to *measure* student achievement, hold schools accountable, or help them improve.

Myth: *The federal government will determine whether or not local schools are succeeding.*

REALITY: Student success under NCLB is defined and determined by states, not the federal government. Each state decides what its students need to learn by setting academic standards. Each state decides how to measure its students' success in meeting those standards by developing state-specific tests in areas like reading and math. Each state decides the score students need to reach on those tests to be deemed "proficient" in meeting the

[3] The Congressional Research Service confirmed this to the U.S. House of Representatives Committee on Education and the Workforce in a memorandum dated February 20, 2003.

standards. In determining whether schools and students are making Adequate Yearly Progress, states have a great deal of discretion to define what students need to learn, how well they are learning, and what level of learning constitutes success.

While states set all the substantive standards, NCLB does require them to have a real process in place for identifying schools that are not making AYP, focusing resources and reform efforts on these schools, and communicating with parents about what is happening.

Myth: *AYP penalizes states with high standards and creates incentives for states to lower their standards.*

REALITY: Standards are an expression of what states expect their public school students to know and be able to do after receiving a public education. By now, virtually every state has set standards. And when they did, state leaders loudly claimed that they were for "all" students.

But standards are only meaningful if they are used to measure learning, to set clear goals, to identify schools that need to improve, and to focus additional energy and resources on the schools that have the farthest to go. That's basically what NCLB asks states to do. For if a state has high standards but does not establish a system to ensure that schools are meeting those standards, then they are "high" standards only on paper or in speeches. Children need more than that.

It is possible that some states might lower standards to reduce the number of schools identified for improvement. It is indeed possible that some of them may have overshot—setting standards at a level that students are not really expected to meet. More often, however, discussions about lowering standards reveal a lack of confidence among state leaders that their schools can teach or that their students can learn up to the state standards. Surely, teachers and children deserve more credit than that.

Myth: *AYP is unfair because the number of schools not making AYP varies wildly across states.*

REALITY: Because each state develops its own standards and assessments (and then sets its own cut-score for what constitutes "proficient"), there will always be differences in the numbers of schools identified in different states. Under the prior version of Title I, states had wide discretion in establishing not just the standards and assessments, but the accountability systems, too. Some of the AYP systems developed under the old law were very weak. Others were stronger in identifying schools but weaker in ensuring that meaningful assistance reached those schools.

It is important to note here that the wild variations reported last year in the number of schools that different states identified as "needing improvement" were largely a vestige of the previous federal law, under which states defined their own accountability systems. For example, it was AYP formulas implemented *prior to the enactment of NCLB* that led to more than 1,500 schools failing to make AYP in Michigan, and no schools failing to make AYP in Arkansas, after the 2001-02 school year. As each state now moves to bring all groups of students to proficiency under a common timetable, such differences should diminish somewhat over time.

Myth: *Identifying a school as "needing improvement" means the school is failing.*

REALITY: Nothing in NCLB requires states to label schools that have been identified as "needing improvement" as "failing." Indeed, some schools identified as needing improvement may be succeeding with most students, but not with one group. This is not a "failing" school, but clearly needs to improve.

This also means that some "needs improvement" schools will need more assistance than others. For example, a school that has not met the state target for one group only will likely need different strategies from a school that has not taught any group to state goals.

Myth: *An unreasonably large number of successful schools will be identified as needing improvement.*

REALITY: By measuring school success on a school's lowest-performing group of students, NCLB raises the bar for what it means to be a successful school. NCLB will undoubtedly shed new light on the performance of many schools. Some schools that have traditionally been considered to be successful based on their highest performing students or on school-wide averages will find themselves labeled as "needing improvement" because they are not making progress with particular groups of students.

This is not an unintended consequence of NCLB. Rather, it is one of the main reasons the law was passed. If a so-called "successful" school is identified as "needing improvement," it is because the school is NOT being successful with at least one group of students. Defining success based on *average student progress*—across student groups—has long masked achievement gaps between groups and left the most vulnerable students behind.

Myth: *Schools that educate the most severely disabled students will be penalized under AYP formulas.*

REALITY: All students with disabilities can take assessments that have been modified to accommodate their special needs, as long as the assessments still measure grade-appropriate achievement in reading and math. There are of course some students with disabilities so severe that grade-level tests are not appropriate. The Department of Education proposed a regulation on March 20, 2003, that will allow states and districts to exempt up to 1% of their students from taking grade-level assessments. Individual schools could exceed the 1% limit (for instance, a school that specializes in serving students with disabilities), as long as the district as a whole stayed below the 1% level. States and districts that need to exempt more than 1% of students from grade-level assessments could apply for a waiver.

Putting aside the most severely disabled students, the law envisions most special education students meeting state standards. Given what research shows about the overidentification of students in special education—particularly of minority students—states and districts need to examine their policies to ensure that students with special needs are accurately identified and that they receive the help they need to achieve up to state standards.

Myth: *AYP means that schools must improve test scores every single year to avoid being labeled as needing improvement.*

REALITY: AYP stands for *adequate* yearly progress, not *annual* yearly progress. This language in the law can be misleading, because it implies that every school has to make progress every year in order to make AYP. In fact, if a school makes great gains in one year, only to fall back slightly in the next year, it still makes AYP as long as it stays above the state's target performance level.

For example, take a school in which 40% of students are proficient in 2002. Assume that the state improvement plan specifies that 50% of students must be proficient in 2004. The school makes great improvement in 2003, increasing the number of students who are proficient from 40% to 55%. In 2004, however, performance declines somewhat, to 52%. Does this drop in test scores from 2003 to 2004 mean that the school will be labeled as needing improvement? No, because the school's 52% score in 2004 remains above the state target of 50%.

In addition, to account for fluctuations in test scores, AYP determinations can be made on the basis of two- or three-year rolling averages. In other words, the percent proficient for the school in this example in 2004 could be based on a proficient rate of 53.5%—the average of the most recent two years of test scores.

Moreover, remember that it takes **two consecutive** years of failing to make AYP for a school to be identified as needing to improve. No consequences apply to a school that misses AYP for one year.

Challenges Ahead

AYP is basically a signaling system—it will identify schools that aren't meeting state goals and bring sharper focus to existing achievement gaps. The important next step is to use this data to put into place new practices so that schools will make much-needed progress in raising overall achievement and closing gaps between different groups of students.

The challenge for educators and state policymakers will be to stay the course on AYP when it reveals disturbing deficiencies and disparities, even in schools that the public has believed are just fine. High average scores can no longer substitute for making sure that *all* students get the education they deserve. At the same time, it is imperative to identify the extent to which various schools "need improvement," so that greater resources and attention can be provided to the schools and students that are the farthest from meeting the state's goals.

In the end, holding schools accountable for student learning makes sense only if one believes that schools are capable of raising student achievement, even among very poor children. There is abundant evidence that this is

possible. The Education Trust alone has identified nearly 800 high-poverty and high-minority schools performing in the top third of their states in multiple subjects, at multiple grade levels, for multiple years. These schools, along with some districts and some whole states, are pointing the way. The challenge is to make educational excellence the rule for all students in all schools.

But the belief that these schools are "outliers" is pervasive. It can be heard in the voices of educators who think it's unfair to be judged on the performance of "those" kids and seen in the data that demonstrate schools educating the highest concentrations of poor and minority students get less than their fair share of every important resource, especially high quality teachers.

Until policymakers, practitioners, and the public at large summon the will to provide solid educational opportunities to poor and minority students, AYP determinations will tell us as much about our own prejudices as they tell us about student achievement. To make AYP meaningful, we must dedicate ourselves to providing a high-quality public education to every child.

About The Education Trust

The Education Trust, Inc. was created to promote high academic achievement for all students, at all levels—kindergarten through college. While we know that all schools and colleges could better serve their students, our work focuses on the schools and colleges most often left behind in education improvement effort: those serving Latinos, African American and low-income students.

The Education Trust works side-by-side with policy makers, parents, education professionals, community and business leaders—in cities and towns across the country—who are trying to transform their schools and colleges into institutions that genuinely serve all students. We also share lessons learned in these schools, colleges and communities with policy makers.

The Education Trust • 1725 K Street, NW, Suite 200 • Washington, DC 20006 • www.edtrust.org

EDUCATION ISSUES

NATIONAL CONFERENCE of STATE LEGISLATURES

A Primer for Policymakers

January 2006

Technology in K-12 Education

By Heather Grinager, Policy Associate

Introduction

In the last few decades, the world has been saturated with changing and complex technology, leading to a 21st century marked by its interconnectedness and an increasingly globalized society. This presents a challenge for policymakers, because America's children must be prepared to thrive in this new world and the United States educational system must adapt to meet the needs of 21st century learners and workers.

Technology has the potential to transform learning environments in ways that will benefit the 21st century student. As with many emerging societal trends, younger generations are the first to incorporate technical change into their everyday lives. Increasingly, however, our nation's schools also are becoming adopters, dramatically changing the way students and teachers use technology in the classroom.

Effectively integrating technology in education settings, understanding technology's effect on student learning, and articulating the role state policymakers have in that effort is far from complete. The unique nature of technology investments makes them a difficult fit with traditional district and state budgeting processes. Although several states have made great strides in using technology to improve education, others are lagging behind. This brief presents goals for 21st century education technology, discusses the challenges of access and funding, describes how technology is successfully being used in schools around the country, and highlights state leaders and state-led initiatives in the innovative use of technology in education.

Why Is Technology Important in Meeting the Goals of 21st Century Education?

For students to compete in a global economy, experts agree that students must be equipped with certain skills that will prepare them to succeed in the work force and in college. Complex thinking, sophisticated information technology literacy skills, and highly developed, life-long learning skills are essential for all students.

According to The Partnership for 21st Century Skills (an organization that brings together the business community, education leaders, and policymakers to define a vision for 21st century education in order to ensure every child's success as citizens and workers), it is increasingly important that today's education system bridges the gap between how students live and how they learn. Students will spend their adult lives in a multitasking, multifaceted, technology-driven world, and they must be prepared for such an environment. The Partnership, therefore, proposes six key elements of 21st century learning.

1. **Emphasize Core Subjects.** As defined by the No Child Left Behind (NCLB) Act, this includes English, reading or language arts, math, science, foreign languages, civics, government, economics, arts, history and geography.

2. **Emphasize Learning Skills.** This includes information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills.
3. **Use 21st Century Tools to Develop Learning Skills.** Technology plays an important role in engaging students in the learning process.
4. **Teach and Learn in a 21st Century Context.** Students understand and retain more when their learning is relevant, engaging and meaningful to their lives.
5. **Teach and Learn 21st Century Content.** This includes global awareness; financial, economic and business literacy; and civic literacy.
6. **Use 21st Century Assessments that Measure 21st Century Skills.** Sustainable and affordable assessment at all levels must use new information technologies to increase efficiency and timeliness.[1]

Does Technology Improve Student Achievement?

A Missouri program has demonstrated that the thoughtful implementation of technology in a classroom is correlated with higher standardized test scores. The Enhancing Missouri's Instructional Networked Teaching Strategies (eMINTS) program provides each participating teacher with technology for the classroom, extensive professional development and ongoing support. Specifically, each classroom receives the following equipment:

- One computer for every two students, with a high-speed Internet connection,
- Teacher workstation computer,
- Teacher laptop,
- Interactive whiteboard and projector,
- Digital camera and scanner,
- Printers, and
- Microsoft Office and Inspiration software.

Research conducted by Missouri's Office of Social and Economic Data Analysis concludes, "...students of teachers who consistently apply the inquiry-based instructional practices emphasized by the eMINTS professional development program scored higher on the Missouri Assessment Program (MAP) tests than did the students whose teachers used other instructional practices."[2]

The program has expanded beyond Missouri to Utah, Maine, Nevada and Illinois. Test results continue to show that, on most state tests, students enrolled in eMINTS classrooms scored higher than students enrolled in non-eMINTS classrooms and that low-income and special education students in eMINTS classes generally score higher than their non-eMINTS peers.[3]

Why is technology important in education? According to the Partnership's report, *Learning for the 21st Century,* technology will continue to be a driving force in workplaces, communities and personal lives in the 21st century. Technology helps prepare students for the workforce when they learn to use and apply applications used in the work place. When content and strategies meet accepted education standards, research shows that technology increases mastery of vocational and work-force skills and helps prepare students for work when emphasized as a problem-solving tool. In this environment, the need for technologically literate citizens and workers increases every year, and skilled people in the 21st century need to understand how to use technology tools.

Technology also is important in engaging students in the learning process. Most young people have never lived in a world without computers, the Internet, cell phones, multi-media, and software applications. Their personal lives are filled with "gadgets" that allow them to easily connect with people and direct their own discovery. Most education settings, however, have been slow to incorporate these options, creating a "reverse digital divide," where students experience technology saturation out of school but have lesser access during school.

The Partnership defines technology tools as information and communication tools (ICT). Current ICTs include computers; networking and other technologies; plus audio, video, and other media and multimedia tools. These tools enable people to perform effectively at work and in their daily lives. However, today's technology may be obsolete tomorrow. That's why it is important for students to acquire higher-order thinking skills so they can quickly adapt to changes.

Access to Technology: Results Are Mixed

The National Center for Education Statistics (NCES) conducted its first survey on information technology in schools and classrooms in 1994. Although the results of this report indicate access to technology has increased dramatically in the decade since, significant room for improvement still exists as schools have slowly struggled to provide all the essential elements—beyond the hardware and connectivity—of a highly functioning, transformed learning environment.

According to the February 2005 NCES report, *Internet Access in U.S. Public Schools and Classrooms: 1994-2003*, in the fall of 2003, nearly 100 percent of public schools in the United States had access to the Internet. Even more encouraging, however, is that 93 percent of public school instructional rooms had Internet access, compared with 3 percent in 1994. The ratio of students to instructional computers with Internet access in public schools was 4.4 to 1 in 2003, a decrease from the 12.1 to 1 ratio first measured in 1998. This indicates dramatic improvement in the opportunity for student access to technology in recent years. Schools also have begun offering access to technology in their buildings during non-school hours as a way to address the digital divide. In 2003, 48 percent of public schools with Internet access reported making computers available to students outside regular school hours. Nearly all public schools (97 percent) used some method to control student access to inappropriate material on the Web.

Many types of technology are used by schools. Among the more popular are laptops; hand-held computers that are smaller, lighter, and more easily transportable; and Web sites. In 2003, 8 percent of public schools lent laptop computers to students. However, the median number of laptop computers available for loan was five, making access to mobile units limited. Only 10 percent of public schools provided hand-held computers to students or teachers for instructional purposes. Nearly 88 percent of public schools connected to the Internet in 2003 used a Web site or Email to make information available to parents and students. (Later sections of this report will focus on specific examples of the technologies being used as a result of statewide policy setting.)

In 2003, 95 percent of public schools with Internet access used broadband connections to access the Internet. Broadband, as opposed to dial-up connections, allows larger amounts of information to travel faster, decreasing the amount of time spent waiting for information to arrive to the end user. Broadband is loosely defined, however, and many schools still suffer from inadequate bandwidth to accommodate increasingly complex information. Thirty-two percent of public schools with Internet access used wireless connections. This permits a computer to be free of cables plugged into a wall, allowing it to move freely throughout a building and still access the Internet. However, only 11 percent of public school instructional rooms had wireless Internet connections, a decrease from 15 percent the previous year.

In 2003, 82 percent of public schools with Internet access indicated that their school or district offered professional development to teachers on how to integrate the use of the Internet into the curriculum in the 12 months prior to the fall survey. However, only 37 percent of schools have a full-time school technology coordinator and only 62 percent of teachers felt that their pre-service education on technology prepared them.[4]

Although connectivity has largely been addressed in school buildings, access to technology remains limited. Computer labs require a teacher to take students to a new room outside the typical instructional setting to integrate computer-based lessons into instruction. Although

Technology Statistics in Schools Nationwide, 2003	
Student to computer ratio	4:1
Public schools with Internet access	100%
Instructional rooms with Internet access	93%
Public schools with wireless Internet connections	32%
Instructional rooms with wireless Internet connection	11%
Public schools with a full-time, paid technology director	37%
Public schools that offered professional development for technology to teachers	82%
Teachers who report feeling prepared after initial technology training	62%

Source: *Internet Access in U.S. Public Schools and Classrooms: 1994-2003*, National Center for Education Statistics, February 2005.

making a few computers available in a classroom adds value, it can be insufficient to truly transform teaching and learning. In addition, if teachers are uncomfortable or have little or no training in how to use the technology that is available in their school, the effectiveness of the technology is severely diminished. In fact, teachers report that the greatest barriers to their use of technology had to do with time: limited time to develop new activities that incorporate technology, limited time in the school schedule to conduct activities, and limited time to practice technology skills.[5]

Teacher surveys reveal a slightly different story than do hard statistics. Although more than 70 percent of teachers said they use the Internet "frequently or always" to prepare for class and 58 percent said they use the Internet in class with similar frequency, most complained of inadequate availability of hardware. Just over 47 percent said they have only a single computer with Internet access in their classrooms, and 41 percent said they have access to a computer lab. A quarter of teachers do not have such access, however, and others who do say it is difficult to get into the labs.[6] This presents a challenge for schools and policymakers. An essential link in using technology to improve student learning is teacher training. A computer or software application does little good if teachers are not given sufficient time and professional development opportunities to learn to effectively incorporate technology into classroom instruction. The progress of the past decade will be fully appreciated only when teachers are prepared to use technology.

Funding Technology: Challenges and Opportunities

Understanding the role of the federal, state, and local governments in funding technology is not easy. Districts bear most of the cost of technology used in schools, although the federal government has taken the lead in providing schools with connection to the Internet and states also are beginning to take a more active role.

The E-Rate (Education Rate) program was established in 1996 with Congress's reauthorization of the Telecommunications Act. As one of the initiatives of the longstanding Universal Service program, which collects fees from and through telecommunications providers to extend telecommunications services to Americans who would not otherwise have access to such services, E-Rate is subject to an annual spending cap of $2.25 billion. The E-Rate program, administered by the Universal Service Administrative Company (USAC) at the direction of the Federal Communications Commission, seeks to improve access to digital technology by providing approved schools and libraries with discounts ranging from 20 percent to 90 percent on qualifying telecommunications services. Discount rates are based on the percentage of students eligible for participation in the National School Lunch Program and on whether the school or library is located in a rural area. The E-Rate program supports the acquisition of digital technology infrastructure, including telephone services (basic, long-distance and wireless), Internet and Web site services, and the purchase and installation of network equipment and services. Other components of educational technology—such as computer hardware and software, staff training, and electrical upgrades—are not covered under E-Rate. E-Rate has been given much of the credit for narrowing the digital divide by allowing networking capability for low-income and rural schools.[7]

Enhancing Education Through Technology, also known as E2T2, is Title II Part D of the No Child Left Behind Act that provides grants to states for technology to improve student academic achievement. Under E2T2, the U.S. Department of Education provides grants to state educational agencies on the basis of their proportionate share of funding under Part A of Title I. States may retain up to 5 percent of their allocations for state-level activities and must distribute one-half of the remainder by formula to eligible local educational agencies and the other one-half competitively to eligible local entities, defined as high-need schools or a partnership of a high-need school and another qualifying institution. Between 2002 and 2005 more than $2 billion dollars was awarded to states, although funding for E2T2 has decreased every year, down from an initial amount of $700.5 million in 2002 to $496 million in 2005.[8]

State initiatives to fund technology are diverse in their purpose and funding amounts. According to a survey of state technology directors, *Education Week* reports that eight states, Alaska, Colorado, Maryland, Nebraska, New Hampshire, Oklahoma, Oregon and Utah, do not allocate state funds specifically for educational technology as of 2005. Of the 42 states that do allocate money specifically for education technology, amounts range from a low of $318,000 in Mississippi to a high of $196.3 million in New York.[9]

Sampling of No Child Left Behind Education Technology Requirements

- By eighth grade, each student must be technologically literate.
- The state educational and local education agencies should provide professional development so that all educational staff may integrate technology effectively into their jobs.
- The integration of technology into all teaching content areas must have a foundation in scientifically based research on best practices.

Source: North Central Regional Education Laboratory, *Understanding the No Child Left Behind Act of 2001: Technology Integration*, http://www.ncrel.org/policy/curve/resource.htm.

Texas, for example, allots $30 per student to provide for the purchase by school districts of electronic textbooks or technological equipment that contributes to student learning. It also may pay for training educational personnel who are directly involved in student learning in the appropriate use of electronic materials, and for providing access to technological equipment for instructional use.[10]

Other states, instead of allotting a per pupil funding amount, designate funding for specific projects. Utah, for example, reported to *Education Week* the allocation of $5 million (one-time appropriation) in 2005 to be used to build capacity and infrastructure to deliver online, state-mandated, end-of-level tests in reading/language arts, math and science.[11]

One difficulty in understanding technology funding is that many funding sources exist from all levels of government. Titles I, II and V of NCLB each allow federal funds to be used for technology purchases. When answering surveys of technology provisions, states may or may not include funding for virtual schools or pass-through funds from the federal government. Thousands of local education agencies also make funding decisions independently of the federal or state governments.

There are many challenges to funding technology. Given the combination of major equipment purchases, the hiring of specialized staff, and the ongoing training of existing staff, technology funding holds a unique distinction. "It is neither a labor expense nor a capital expense nor a recurring material expense, but rather a hybrid," according to Larry Picus, an expert on school finance. Two funding philosophies currently are at work: Local governments will either choose to continue to raise funds as needed, tacking technology onto existing line items in the budget, or they will attempt to incorporate and design flexible budgets that allow for a wider array of funding options.[12]

As states consider investing in technology initiatives, they may wish to consider identifying those elements that are essential to ensuring that technology has a real and lasting effect on student achievement.

Essential Elements to Ensure Technologies Are Used to Support Real Gains in Educational Outcomes

1. There must be **leadership** around technology use that is **anchored in solid educational objectives**. Simply placing technologies in schools does little good. Effective technology use is always targeted at specific educational objectives.
2. There must be **sustained and intensive professional development** that takes place in the service of the core vision, not simply around technology for its own sake.
3. There must be **adequate technology resources** in the school including hardware and technical support to keep things running smoothly.
4. There must be recognition that real change and lasting results take **time**.
5. **Evaluations** must be conducted that enable school leaders and teachers to determine whether they are realizing their goals, and how to adjust if necessary.

Source: Margaret Honey, Vice President and Director, Center for Children and Technology, testimony and statement before the Labor, Health and Human Services, and Education Appropriations Subcommittee, U.S. Senate, July 25, 2001.

States Lead the Way

Just as schools and districts are in various phases of adopting technology, so are states. Some, however, are leading the nation. In 2005, *Education Week* named technology leaders based on recently collected statistics. South Dakota is the leader in providing access to technology. At the school level, there are 1.7 students per instructional computer and 1.9 students for every Internet-connected computer. At the classroom level, there are 3.5 students per instructional computer and 4 students per Internet-connected computer located in classrooms.

Utah leads the nation in the use of education technology. It is the only state that has state standards for students in technology, tests students on technology, has established a virtual school, and offers computer-based assessments.

Virginia is the national leader in the capacity to use technology. Its state standards include technology for both teachers and administrators; an initial license for both teachers and administrators that requires technology training, coursework, or a test; and a requirement for technology training, a technology test for recertification, or participation in technology-related professional development.

Schools and districts have long experimented independently of their state with education technology initiatives. However, states have recognized the potential of technology to enhance and improve learning and have taken an increasingly proactive role in developing technology initiatives. Some examples of these state initiatives follow.

Laptops

Taking advantage of the mobility of laptops is one way schools are bridging the digital divide and transforming teaching and learning. Research shows laptops can have a positive influence on student and teacher outcomes.

- Laptop students spend more time engaging in collaborative work than do non-laptop students.
- Laptop students participate in more project-based instruction.
- Laptops lead to more students writing and to writing of higher quality.
- Teachers who use laptops use a more constructivist approach to teaching.
- Teachers who use laptops feel more empowered in their classrooms.[13]

Although many districts and individual schools have laptop programs, three states—Maine, Michigan, and New Mexico—have funded laptop initiatives in some form.

The Maine Learning Technology Initiative (MLTI), a "state learning technology plan to prepare students for a future economy that will rely heavily on technology and innovation," is the largest educational technology project in the state's history. Maine is the first state to embark upon a plan to eliminate the digital divide by providing a laptop to every seventh and eighth grade student and teacher. The initiative, begun in 2003, cost $37.2 million over a four-year period and equipped more than 30,000 teachers and students. Wireless access to the Internet has allowed students and teachers to acquire information that is not available through conventional methods. Curriculum is being developed that will leverage this technology so that both teachers and students will excel in a world that is driven by information.

Maine focused not only on providing the technology, but also on providing the professional development necessary so teachers could integrate the technology into their instruction. A program of professional development that introduced teachers to the laptop and basic computer skills was developed early in the program and is continuing, with increasingly sophisticated training focused more specifically on teachers' academic content areas.[14]

Online/Distance Learning

Online education has the potential to enhance communication between teachers and students and the ability to accommodate different learning styles. Students may be enrolled full-time in an online program and forego attending a regular school or might be involved in only one or two online courses as a supplement to traditional education environments.

During the 2002–2003 school year, students in about one-third of public school districts (36 percent) were enrolled in distance education courses.[15] Many schools are taking advantage of the Internet to offer classes to their students that the school cannot offer. Small schools with few students and teachers are able to offer Advanced Placement classes online, allowing their students to meet the same high academic achievement standards of large schools. Parents who choose to school their children at home or whose children need a more flexible schedule can take advantage of online courses, creating a virtual community of online learners. When it is not economically viable to offer courses for a few students who are interested in a subject,

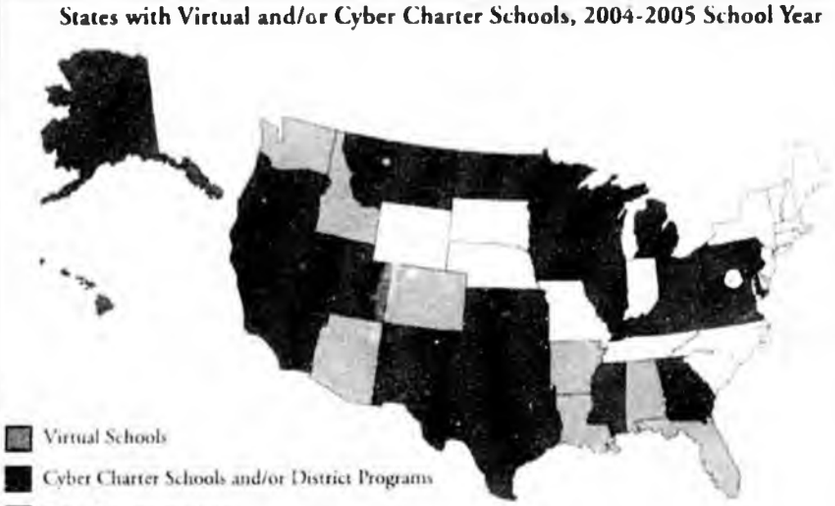
students can instead choose to take the course online with students from around the country. In fact, 80 percent of public school districts said that offering courses that are not available at their schools is one of the most important reasons for having distance education.[16] Some states even have full-time virtual schools in which a student's entire public education is provided via online technologies, including supervision by a certified teacher and provision of standards-aligned curriculum.

As of the 2004-2005 school year, at least 22 states had established a virtual school.[17] Sixteen states have cyber charter schools and/or district programs.[18] Florida Virtual School (FLVS) has become a leader in developing and providing virtual education solutions to students throughout the country. The Florida Legislature initially funded the FLVS as a pilot project in 1997, at $1.3 million to begin course development with limited student enrollment. The 2000 Florida Legislature enacted Statute 228.082, establishing FLVS as an independent education entity with a separate governing board appointed by the governor.

Today, FLVS serves schools across the nation, offering virtual education solutions for grades six to twelve, as well as for adults who are seeking GED alternatives. Courses are free to Florida residents and are available to public, private and home school students. National and international students may enroll in FLVS on a tuition basis. FLVS offers more than 80 courses—everything from GED to honors to 11 Advanced Placement courses.[19]

Beginning in 2003-2004, FLVS is funded through the Florida Education Finance Program, according to how many students pass the school's online courses. Traditional public schools are funded according to the number of students enrolled. The virtual school's 2004-2005 budget was approximately $16.2 million, based on 3,171 full time equivalent students. Prior to 2003-2004, the FLVS was funded through a line item in the General Appropriations Act.[20] In 2003, the Florida Legislature also created a separate, full-time virtual K-8 pilot program that now serves 1,000 students across the state.

States with Virtual and/or Cyber Charter Schools, 2004-2005 School Year



Sources: "Technology Counts, Electronic Transfer: Moving Technology Dollars in New Directions," *Education Week*, 24, no. 35, (May 5, 2005); and John Watson, "Keeping Pace with K-12 Online Learning" (Naperville, Ill.: North Central Regional Educational Laboratory, October 2005)

Online Tutoring for Students

Few things are more valuable to a student's learning than one-on-one time with a knowledgeable instructor. Limited time and teachers can make it difficult for a student to receive the amount of individual attention he or she needs during the school day; tutoring programs also are limited by the knowledge of the tutor and the time allotted. Online tutoring can be one solution to these problems.

Beginning August 1, 2005, all Alabama students in fourth through twelfth grades are able to take advantage of free online tutoring between the hours of 3:00 p.m. to midnight in the subjects of math, science, social studies and English. Students can connect to a tutor through any computer with Internet access. The tutors help students with homework through the use of instant messaging, an interactive virtual "chalkboard" and shared Web browsing. Drawing and diagramming features allow tutors to demonstrate math and science concepts. When the session is completed, students can print their session for future reference or share it with a parent or teacher. Both students and tutors complete surveys, which are shared each month with the Alabama Public Library Service and the individual public libraries. Although its primary intent is to assist school children, any Alabama citizen can take advantage of the service.

According to Rebecca Mitchell, Alabama's state librarian, the program was started with federal funds from the Institute of Museum and Library Services in the form of a Library Services and Technology Act grant. The state partnered with tutor.com, which provides issue experts who are current or retired teachers, college professors or graduate students and who undergo an extensive background check and training. In the first three months of the program, there were 19,000 tutoring sessions, the most popular of which were middle school math and science assistance. The $300,000 federal grant lasts 12 months, and the funding for future years has yet to be determined.[21]

Online Professional Development Opportunities for Teachers

Research has found that quality, ongoing professional development for teachers is essential to ensure high-quality teaching and learning. As discussed earlier, teachers most often feel that lack of time is a barrier to learning how to integrate technology into the classroom. By offering online professional development, teachers have more freedom to schedule their own learning. The Louisiana Department of Education provides professional development projects through the Louisiana Center for Educational Technology (LCET), which was established to provide professional development for teachers, administrators and school personnel in K-12 school districts. The impetus for the program was the need to provide professional development for educators that better suited their learning styles and their schedules.

The program includes graduate-level online courses, community of learner networks, and workshops for specific educational needs. Through a variety of experiences, it provides learning opportunities and resources to support all teachers in their efforts to improve student learning and achievement.[22]

Data Systems and Online Assessments

Data-driven decision making is becoming popular in educational settings, partly due to the No Child Left Behind requirements and the capacity of information technology to allow decision makers access to data.

NCLB stipulates that all public school students must meet or exceed the state's proficient level of academic achievement by the end of the 2014 school year. It also requires that each state develop a monitoring and accountability system to measure that targets are being reached. In light of this, states and districts are beginning to use technology to create systems that allow them to answer important questions, such as:

- Given where we are now, are we improving at a rate that will keep us on track to reach the target in the time remaining?
- If we are improving too slowly, what must we do differently?[23]

In 2003, the Idaho Legislature passed HB 367, authorizing the State Board of Education to provide for and implement the Idaho Student Information Management System (ISIMS) and requiring all school districts in Idaho to use it to the full extent of its availability. ISIMS creates a statewide, student information management system designed to provide new resources for parents, teachers, students and all stakeholders of education in the state. The J.A. and Kathryn Albertson Foundation dedicated $35 million to the development and implementation of the ISIMS system. The plan expands a $3.5 million pilot program in 13 districts that allows the districts to collect, maintain and share student information among their schools. The project will build a centralized, uniform system that includes a host of web-based resources and tools for education stakeholders.[24]

Virginia has developed a model and implemented a statewide initiative for integrating data systems and statewide online assessments. The goal of this initiative is to have Virginia schools use Internet-based systems to administer assessments to improve student achievement with use of data by stakeholders. Online testing became a major component of the initiative due to a need to speed up return of preliminary test results for educational decision making. Four objectives of the initiative are to:

- Provide student access to computers at a ratio of one computer for every five students;
- Create Internet-ready local area network capability in every school;
- Ensure adequate high-speed, high-bandwidth capability for instructional, remedial and testing needs; and
- Establish a statewide Internet-based standards of learning test delivery system.

An executive order from the Virginia governor that required the entire state to move toward "electronic government" was the first step in establishing this program. Developed through a partnership between the Virginia legislature, the Virginia Department of Education and the Governor's Office, the legislature included Item 143 C. 11. of the 2000 Appropriation Act, which by May 2004 received $232 million in support.[25]

Textbooks and Digital Instructional Materials

Accurate and current textbooks are crucial to quality education because teachers rely on them to aid in the instructional practice. Textbooks represent a significant expenditure, however, and updating them regularly can be a challenge for school districts.

Texas, one of few textbook-adoption states in the country, began early to incorporate digital materials. In 1989, Texas amended the definition of a textbook to include "computer software" and, in 2004, the State Board of Education adopted instructional materials for technology applications that included many online and computer-based products. These materials are available to schools for the 2005-2006 school year.

During the 2005 legislative session, several proposals were considered that would keep Texas moving in the digital direction. Although none were passed by the Legislature, they continue to be considered and debated. Several proposals would add flexibility to the process of textbook adoption, changing the review and adoption cycle and the funding and purchasing process. Another proposal provides for an instructional materials and technology allotment and allows for purchase of traditional print materials, digital materials, technology, professional development and network infrastructure.[26]

Emerging Technologies

If you were to walk into any school in America, you would likely see a wide variety of technologies in use by students, teachers and administrators beyond those discussed above. Unique use of technology tends to occur first in schools and districts. The following excerpt from *Hot Technologies for K-12 Schools*, a report from the Consortium for School Networking (CoSN), highlights emerging technologies in schools.

> *Addressing diverse learning styles*
> One emerging technology is classroom audio enhancement, which evenly distributes the teacher's voice above background noise in the classroom, making the sound more intelligible to students. According to CoSN, research shows that all students, and especially those with attention deficit problems and those for whom listening is an effective learning style, benefit from this technology. In Anaheim Public Schools in California, a study of third and fourth graders showed gains in reading, math, language and spelling scores in sound-field enhanced classrooms, compared to the previous year's test scores without audio enhancement implementation.
>
> *Galvanizing the instructional process*
> Datacasting allows teachers to go online to find a rich collection of high quality media content packaged with software, interactive time-lines and activities, and games, to stream into classroom computers or TVs. Teachers can access and navigate large data files easily using the Internet, select what they need, and have it delivered to their desktop computers immediately or overnight. In North Texas, the public television datacasting service provides more than 75,000 K-12 students and teachers with more than 8,000 learning objects.
>
> *Improving assessment and evaluation*
> Digital assessments come in all shapes and sizes and have the power to deliver immediate results using a wireless or online tool. Students answer questions in a classroom setting electronically using a remote control-like device, PDA, or graphing calculator. Teachers see the results immediately on a computer, gaining immediate insight into "knowing what the students know," allowing them to adjust classroom time to meet the needs of the students. In Cleveland, Ohio, math and language arts teachers have built diagnostic assessments, called "testlets" for each of the indicators in Ohio state standards.

Conclusion

Understanding why and how technology is being used in schools is an important first step for state legislators. Education is lagging behind all other industries in adopting technology as a tool to increase efficiency and improve performance, and the pace of change will not slow as we progress through the 21st century. Effective implementation of technology in education will require thoughtful and diligent leadership at all levels.

The National Conference of State Legislatures (NCSL), through the Education Technology Partnership and as part of a project with the NCSL Foundation, will continue over the course of a year to produce materials that assist state legislatures as they consider their role in education technology. Thanks to the legislators, legislative staff and private partners who are participating.

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Audio Enhancement
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STATE OF ALASKA

DEPARTMENT OF LAW
OFFICE OF THE ATTORNEY GENERAL
LABOR & STATE AFFAIRS

FRANK H. MURKOWSKI, GOVERNOR

P.O. BOX 110300
123 4TH STREET
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JUNEAU, ALASKA 99811-0300
PHONE: (907)465-3600

March 14, 2006
Via E-Mail

The Honorable Peggy Wilson, Chair
Health, Education and Social Services Committee
State Capitol, Room 108
Juneau, AK 99801-1182

The Honorable Fred Dyson, Chair
Health, Education and Social Services Committee
State Capitol, Room 121
Juneau, AK 99801-1182

Re: Questions Prompted by SB 281

Dear Representative Wilson and Senator Dyson:

Senator Dyson has asked whether school districts can design, promote and operate non-correspondence public school instructional delivery systems, including charter schools, statewide. Representative Wilson's letter asks about the ability of a charter school to be operated by a district other than the district where it originated. Both letters ask whether a school district can build and operate a public school building outside of its district boundaries.

Each of the operations set out in your questions, school district operation of schools other than correspondence schools outside its own geographic area, can be conducted through co-operative agreements under AS 14.14.110-14.14.115, or through an action by the Department of Education and Early Development under AS 14.07.030(1). Otherwise, as we discuss more fully below, a district operates within its own boundaries.

The State of Alaska is predominantly a local control jurisdiction. Municipalities and regional education attendance areas (REAAs) have the power and the duty to educate the children in their districts. AS 14.08.021-14.08.041; AS 14.14.090. The districts are governed by boards elected by and accountable to the voters in a particular geographic area. In the case of municipal school districts,

agreements in circumstances such as those contemplated under SB 281 and discussed at the hearing on the bill:

> Sec. 14.14.110. Cooperation with other districts.
>
> (a) When necessary to provide more efficient or more economical educational services, a district may cooperate or the department may require a district to cooperate with other districts, state-operated schools, or the Bureau of Indian Affairs in providing educational or administrative services. However, if a cooperative arrangement requires pupils to live away from their usual homes, the school board shall provide classes within the attendance area when there are at least eight children eligible to attend elementary and secondary school in the attendance area. In this subsection
>
> (1) "administrative services" includes supervisory, maintenance, purchasing, or other services that are required for unified administration; and
>
> (2) "educational services" includes boarding and tuition arrangements, pupil or teacher exchanges, special education services, or curriculum development.
>
> (b) The department may prescribe the terms and conditions of any contract entered into under (a) of this section....

The legislature has provided an incentive for such co-operation by authorizing grants for co-operative arrangements:

> Sec. 14.14.115. Cooperative arrangement grant program for school districts.
>
> (a) To encourage cooperative arrangements between school districts to provide more efficient or economical administrative or educational services, a school district may receive a one-time cooperative arrangement grant from the department of up to $100,000....

Further, the department can establish or combine schools under AS 14.07.030(1). The State Board of Education can adopt regulations to carry out this and other provisions of Title 14.

In summary, Alaska K-12 education is, by statutory design, delivered locally. Hence the operation of a district in the geographic territory of another district without that district's consent is not contemplated under the Alaska statutes. However, AS 14.07.030(7), and AS 14.14.110-14.14.115 authorize and

CORRECTION

THE FOLLOWING DOCUMENT(S)
HAVE BEEN REFILMED TO
ASSURE LEGIBILITY OR PAGINATION

STATE OF ALASKA

DEPARTMENT OF LAW
OFFICE OF THE ATTORNEY GENERAL
LABOR & STATE AFFAIRS

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The State of Alaska is predominantly a local control jurisdiction. Municipalities and regional education attendance areas (REAAs) have the power and the duty to educate the children in their districts. AS 14.08.021-14.08.041; AS 14.14.090. The districts are governed by boards elected by and accountable to the voters in a particular geographic area. In the case of municipal school districts,

taxes on the real property in the geographic area fund district schools. AS 14.17.400 *ff.*

Other sections of Title 14 provide for school administration based on a district with a specific geographic area. AS 14.04.080 grants children the right to attend school in the district in which they reside. Compulsory school attendance is likewise framed in terms of attendance at a school in the district where the child resides. The ability of a municipal assembly or council or REAA board to assume responsibility for planning, design, and construction of a school or education-related facility is only for facilities locate within the "...boundaries or operating area of the municipality or regional education attendance area." AS 14.11.020(a). AS 14.14.060 contemplates interaction between a borough assembly and school district on the location, design, and construction of schools. Elements of the school foundation formula are based on locale, particularly the district cost factors. AS 14.17.460. Charter schools operate as part of their local districts – the charter school statutes do not contemplate a charter school operating outside of its own district. AS 14.03.255.

Currently, school districts operate outside their jurisdictions only when the operate correspondence schools – and these activities are regulated by the department. AS 14.07.020(a)(9).

The foregoing statutory provisions are evidence that the local school district, operating within its borders and politically and financially accountable to its voters, is the foundation of the state educational system.

However, current law also permits districts, and the department, the flexibility to contract and co-operate to assure the efficient delivery of education throughout the state. The department has the authority to:

> (7) enter into contractual agreements with school districts to provide more efficient or economical education services; reasonable fees may be charged by the department to cover the costs of providing services under an agreement, including costs for professional services, reproduction or printing, and mailing and distribution of educational materials; ...

AS 14.07.030(7).

Further, districts may co-operate, or may be required by the department to co-operate, to provide more efficient or economical education or administrative services. We quote this statute in full to show that its broad scope allows for such

agreements in circumstances such as those contemplated under SB 281 and discussed at the hearing on the bill:

> Sec. 14.14.110. Cooperation with other districts.
>
> (a) When necessary to provide more efficient or more economical educational services, a district may cooperate or the department may require a district to cooperate with other districts, state-operated schools, or the Bureau of Indian Affairs in providing educational or administrative services. However, if a cooperative arrangement requires pupils to live away from their usual homes, the school board shall provide classes within the attendance area when there are at least eight children eligible to attend elementary and secondary school in the attendance area. In this subsection
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>
> (a) To encourage cooperative arrangements between school districts to provide more efficient or economical administrative or educational services, a school district may receive a one-time cooperative arrangement grant from the department of up to $100,000....

Further, the department can establish or combine schools under AS 14.07.030(1). The State Board of Education can adopt regulations to carry out this and other provisions of Title 14.

In summary, Alaska K-12 education is, by statutory design, delivered locally. Hence the operation of a district in the geographic territory of another district without that district's consent is not contemplated under the Alaska statutes. However, AS 14.07.030(7), and AS 14.14.110-14.14.115 authorize and

indeed encourage co-operation among the department and districts. Agreements entered under these statutes can provide for the circumstances discussed at the Senate's hearing on SB 281.

DAVID W. MÁRQUEZ
ATTORNEY GENERAL

By:
Kathleen Strasbaugh
Assistant Attorney General

cc: Roger Sampson, Commissioner
Karen Rehfeld, Deputy Commissioner
Eddy Jeans, Director, Division of School Finance
Barbara Thompson, Director, Division of Teaching and Learning Support
Department of Education and Early Development

David Márquez, Attorney General
Randy Ruaro, Special Assistant
Department of Law

FISCAL NOTE

STATE OF ALASKA
2006 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: SCR 28
() Publish Date:

Revision Date/Time (No. if correction):
Dept. Affected: Education & Early Development
Title: Relating to the innovative application of education technology tools
RDU: Education Support Sevices
Component: School Finance & Facilities
Sponsor: Senate HESS
Requester: Senate HESS
Component No.: 2737

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous						
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2006) cost: 0.0
Mark this box (X) if funding for this bill is included in the Governor's FY 2007 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

SCR 28 allows local school districts to apply for grants available under AS 14.14.115 as a means of installing educational technology.

The Department of Education & Early Development has determined that a zero fiscal note is warranted for SCR 28. If districts apply for grants under AS 14.14.115 the department will include the request in the subsequent year's budget for legislative consideration.

Prepared by: Eddy Jeans, Director — Phone: 465-8679
Division: School Finance — Date/Time: 4/17/06 12:02 PM
Approved by: Karen Rehfeld, Deputy Commissioner — Date: 04/17/2006
Agency: Education & Early Development

(Revised 9/7/2005 OMB)

SENATE COMMITTEE REPORT
First Committee of Referral

DATE: 4/13/06

FURTHER:

Date of 5-Day Notice: _____
(in accordance with Uniform Rule 23)

DATE TURNED IN TO OFFICE: 4.27.06

Health, Education & Social Services Committee considered SENATE CONCURRENT RESOLUTION NO. 28

SCR 28 TECHNOLOGY FOR DISTANCE EDUCATION

Relating to the innovative application of education technology tools to provide improved distance education programs in the state.

and recommends:

[X] be **replaced** with _____ **CS** SCR 28 (HES)

[ ] adopt **previous** _____ **CS** _____ (_____)

[ ] attached amendment(s)

[ ] adopt Letter of Intent by _____ Committee

[ ] further referral to _____ Committee

CS Senate Bill:
[X] Same Title
[ ] New Title

SCS House Bill:
[ ] Same Title
[ ] Technical Title Change
[ ] New Title w/ SCR #_____

NEW FISCAL NOTE(S):

Department	Date	Fiscal	Indet.	Zero	FN#
EED	4/17			X	

PREVIOUS FISCAL NOTE(S):

Department	Date	Fiscal	Indet.	Zero	FN#

[ ] **APPROPRIATION - no fiscal note**

SIGNATURES AND RECOMMENDATIONS:	DO PASS	DO NOT PASS	NO REC	AMEND
			✓	
Gary Wilbanks	✓			
Linda Green			✓	
Ronald C Ross	✓			
CHAIR:	✓			

SJR

19

SESSION ADDRESS:
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(907) 465-4925
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Toll Free: 1-800-821-4925

Senator Gary Stevens
Alaska State Legislature

INTERIM ADDRESS:
112 Mill Bay Road
Kodiak, Alaska 99615
(907) 486-4925
Fax: (907) 486-5264

Memo

To: Senator Fred Dyson, Senate HESS Committee

From: Senator Gary Stevens

Date: 2/16/2006

Re: Committee hearing request

I would like to request a HESS Committee hearing on Senate Joint Resolution, "Relating to creating the Task Force to Assess Public Reporting of Health Care Associated Infections " at your earliest convenience.

Thank you for your consideration of this request.

Senate District R
Senator_Gary_Stevens@legis.state.ak.us

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
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Mail Stop 3101

State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM February 16, 2006

SUBJECT: Summary of SJR 19 (Work Order No. 24-LS1657\A)

TO: Senator Gary Stevens
Attn: Doug Letch

FROM: Jean M. Mischel
Legislative Counsel

You have requested a summary of the above-described resolution.

As a preliminary matter, note that a summary of a resolution should not be considered an authoritative interpretation of the resolution and the resolution itself is the best statement of its contents.

The Whereas clauses state the findings of the legislature regarding the rate and costs of hospital acquired infections and other infections associated with health care.

The Resolve clauses establish a 10 member task force to conduct a review of and report on infections associated with health care and hospitals and reporting mechanisms.

JMM:med
06-135.med

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Senator Gary Stevens
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Sponsor Statement for Senate Joint Resolution 19
(February 16, 2006)

Some 2 million infections a year are acquired in hospitals and an estimated 90,000 people die as a result of these infections, making it the sixth-leading cause of death in the country. The cost to the consumers is between $4.5 and $11 billion a year. Given these alarming statistics, it is vital for consumers to have full knowledge of how medical facilities fare with infection rates. Passage of SJR 19 can help accomplish this goal by providing lawmakers, state health officials and medical professions the opportunity to craft workable legislative recommendations for the collection of data on hospital-acquired infection rates.

SJR 19 creates the Task Force to Assess Public Reporting of Health Care Associated Infections. This eleven member panel will consist of two senators, two representatives, the Chief of Epidemiology for the State of Alaska, one healthcare consumer from rural Alaska, one healthcare consumer from urban Alaska, a representative of the Alaska Native Tribal Health Consortium, a representative from the Alaska Chapter of the Association of Professionals in Infection Control and Epidemiology, and a representative of the Alaska State Hospital and Nursing Home Association.

During the 2006 Legislative Interim, the Task Force will be asked to:

(1) Review experience to date with public reporting of hospital-associated infections.
(2) Develop a white paper to be used for drafting legislation for reporting of healthcare associated infections. The white paper will address the unique healthcare challenges of Alaska and would encompass:
    (a) Mechanism(s) for reporting;
    (b) Identifying data sources and possible outcome and process measures to be reported;
    (c) Timeline for implementation;
    (d) Infrastructure needs for supporting a robust ongoing reporting system for dissemination of accurate data.

I ask for your support of this important legislation.

Senate District R
Senator_Gary_Stevens@legis.state.ak.us

Doug Letch

From: Jane Alberts
Sent: Monday, January 16, 2006 10:37 AM
To: Doug Letch; Katrina Matheny; James Shine; Sen. Gary Stevens
Subject: Kenai Peninsula Online - Alaska Newspaper -

another story on the same topic, in the same issue!
is it a slow newsday?
ha

Web posted Monday, January 16, 2006

Some care can threaten your health

By HAL SPENCE
Peninsula Clarion

At least a third of infections acquired in U.S. hospitals are considered preventable, according to the Center for Disease Control and Prevention.

Sen. Gary Stevens' bill (SB 208) would require hospitals to make public the rates of occurrence of five categories of infections named in the accompanying article.

Medical sources available on the Internet, including the CDC, define these "nosocomial infections," a term that literally means infections acquired in a hospital.

According to the CDC, approximately 500,000 surgical site infections occur per year. There are an estimated 27 million surgeries performed in the United States annually.

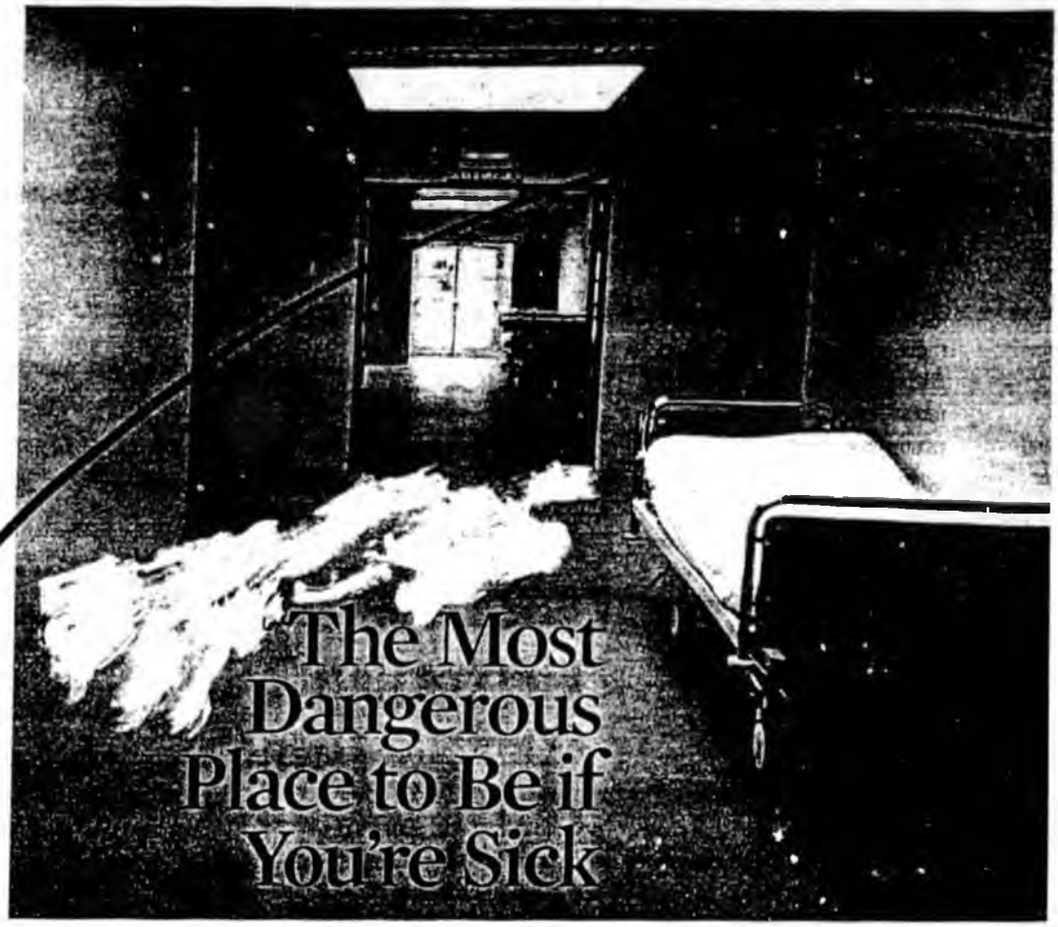
Pneumonia associated with ventilation — that is, mechanically assisted breathing — is another major source of in-hospital infections, accounting for about 15 percent of all hospital-associated infections. Better than half of those are associated with treatment in intensive care and coronary care units, according to the CDC.

Central line-associated blood infections are related to the use of venous catheters. An estimated 250,000 such infections occur each year in U.S. hospitals. One-eighth to 1/4 of infected patients die, the CDC said.

Urinary tract infections are the leading cause of nosocomial infections, accounting for more than 40 percent of the total reported and affecting an estimated 600,000 patients a year, said the CDC. Most (66-86 percent) follow use of urinary tract catheters, Brief use results in a low number of incidents, but infection is "virtually 100 percent" for patients with urethral catheters draining to open systems used longer than four days. Most infections clear up by themselves and some show no overt symptoms, the CDC reported.

The fifth category delineated in Stevens' bill provides room for future regulations adopted by the Department of Health and Social Services covering other infection sources.

[BULLETINBOA



The Most Dangerous Place to Be if You're Sick

When Leroy Rickabaugh had surgery to remove a bladder tumor at Mercy Medical Center in Des Moines, Iowa, last October, he expected to be in the hospital for just a few days.

Instead, he ended up staying for nearly three weeks after he contracted a bacterial infection that also hit several other patients on his ward. "I didn't get more seriously sick," Rickabaugh, 74, says, "but they wouldn't let me out until it cleared up."

In a way, Rickabaugh was lucky. Of the 2 million or so Americans each year who contract infections while in the hospital, about 90,000 die because of them. Hospital infections, in fact, are the nation's sixth-leading cause of death.

Health care and consumer activists have been pushing for laws that would require hospitals to publicly disclose their infection statistics, in the hope of pressuring them into adopting more effective anti-infection measures. So far they've scored victories in five states: Florida, Illinois, Missouri, Pennsylvania and Virginia. About 30 other states are considering similar legislation.

"It's a problem begging for attention, one that costs a lot of lives and money," says Lisa McGiffert, director of the Stop Hospital Infection Project for Consumers Union. "Clearly, hospitals aren't doing all that they can."

Now, with efforts in the states accelerati for a nationwide standard.

"We have an information shortage about h says Kenneth W. Kizer, M.D., president of th Forum, a Washington-based nonprofit organ have 50 different standards for measuring t have informat

First the bad news: About 90,000 Americans die each year from infections they contract while in the hospital.

Most infect ures aren't ne they're not lowed. Hun Ignaz Semm 1847 that the infections in reduced by hand washing. But many doctors staff members still do not wash their hands. Another simple but often overlooked precau surgery patients receive the correct antibiot before incisions are made.

"Doctors and nurses get so caught up in th don't even realize how far their own practic they see the data out there," says David Washington-based American Health Quality need to get that data to them."

CDC Department of Health and Human Services Centers for Disease Control and Prevention

Infectious Diseases in Healthcare Settings

The following are infectious diseases that may be transmitted and/or acquired in healthcare settings and therefore are possible Healthcare Associated Infections (HAIs).

Infectious Diseases that may be acquired in Healthcare facilities

- *Acinetobacter*
- Bloodborne Pathogens
- *Burkholderia cepacia*
- Chickenpox (Varicella)
- *Clostridium Difficile*
- *Clostridium Sordellii*
- Creutzfeldt-Jakob Disease (CJD)
- Ebola (Viral Hemorrhagic Fever)
- Gastrointestinal (GI) Infections
- Hepatitis A
- Hepatitis B
- Hepatitis C
- HIV/AIDS
- Influenza
- MRSA - Methicillin-resistant *Staphylococcus Aureus*
- Norovirus
- Parvovirus
- Poliovirus
- Pneumonia
- Rubella
- SARS
- *S. pneumoniae* (Drug resistant)
- Tuberculosis
- Varicella (Chickenpox)
- Viral Hemorrhagic Fever (Ebola)
- VISA - Vancomycin Intermediate *Staphylococcus aureus*
- VRE - Vancomycin-resistant *enterococci*

Date last modified: January 3, 2006
Content source: Division of Healthcare Quality Promotion (DHQP)

Hospital-Acquired Infections

Last Updated: September 1, 2004

Synonyms and related keywords: nosocomial infection, vancomycin-resistant enterococcus, VRE, methicillin-resistant *Staphylococcus aureus*, MRSA, *Pseudomonas*, candidiasis, *Legionella*, respiratory syncytial virus, thrush, *Clostridium difficile*

AUTHOR INFORMATION

Section 1 of 10 Next

Author: **Quoc V Nguyen, MD**, Assistant Professor, Department of Pediatrics, State University of New York at Syracuse

Quoc V Nguyen, MD, is a member of the following medical societies: American Association of Immunologists

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Disclosure

INTRODUCTION

Section 2 of 10 [Back Top Next]

Author Information Introduction Clinical Differentials Workup Treatment Medication Follow-up Miscellaneous Bibliography

Background: Hospital-acquired infections encompass almost all clinically evident infections that do not originate from patient's original admitting diagnosis. Within hours after admission, a patient's flora begins to acquire characteristics of the surrounding bacterial pool. Most infections that become clinically evident after 48 hours of hospitalization are considered hospital-acquired. Infections that occur after the patient's discharge from the hospital can be considered to have a nosocomial origin if the organisms were acquired during the hospital stay.

Pathophysiology: Within hours of admission, colonies of hospital strains of bacteria develop in the patient's skin, respiratory tract, and genitourinary tract. Risks factors for the invasion of colonizing pathogens can be categorized into 3 areas: iatrogenic, organizational, and patient related.

- Iatrogenic risk factors include invasive procedures (eg, intubation, indwelling vascular lines, urine catheterization) and antibiotic use and prophylaxis.
- Organizational risk factors include contaminated air-conditioning systems, contaminated water systems, and staffing and physical layout of the facility (eg, nurse-to-patient ratio, open beds close together).
- Patient risk factors include the severity of illness, underlying immunocompromised state, and length of stay.

Frequency:

- **In the US:** Nosocomial infections are estimated to occur in 5% of all acute care hospitalizations. The estimated incidence is more than 2 million cases per year, resulting in an added expenditure in excess of $2 billion. The National Nosocomial Infections Surveillance (NNIS) System of the Centers for Disease Control and Prevention performed a survey from October 1986 to April 1998. They ranked hospital wards according to their association with central-line bloodstream infections. The highest rates of infection occurred in the burn ICU, neonatal ICU, and pediatric ICU.

Mortality/Morbidity: Nosocomial infections are estimated to more than double the mortality and morbidity risks of any admitted patient, and they probably result in about 20,000 deaths a year.

Respiratory Syncytial Virus Infection

Rhinovirus Infection

Staphylococcus Aureus Infection

Thrush

Toxic Shock Syndrome

Urinary Tract Infection

Continuing Education

CME available for this topic. Click here to take this CME.

Patient Education

Yeast and Fungal Infections Center

Yeast Infection Overview

History:

- Nosocomial infections are caused by viral, bacterial, and fungal pathogens. These pathogens should be investigated in all febrile patients who are admitted for a nonfebrile illness.
- During their hospital stay, many patients acquire viral respiratory infections in the winter (eg, influenza, parainfluenza, respiratory syncytial viruses), rotaviral infections in winter, or enteroviral infections in the summer. Viruses are the leading etiologies of nosocomial infections.
- Bacterial and fungal infections are less common. However they are significantly associated with more morbidity and mortality. Most patients who are infected with nosocomial bacterial and fungal pathogens have a predisposition caused by invasive supportive measures such as intubation and the placement of intravascular lines and urinary catheters. Fungal infections more likely to arise from the patient's own flora; occasionally, they are caused by contaminated solutions (eg, those used in parenteral nutrition).

Causes:

- Among 6,290 pediatric ICU patients surveyed between 1992-1997, the incidence of nosocomial invasive bacterial and fungal infections were as follows:
  - Bloodstream infections, 28%
  - Ventilator-associated pneumonia, 21%
  - Urinary tract infection (UTI), 15%
  - Lower respiratory infection, 12%
  - Gastrointestinal, skin, soft tissue, and cardiovascular infections, 10%
  - Surgical-site infections, 7%
  - Ear, nose, and throat infections, 7%
- Nosocomial etiologies in bloodstream infections include the

ıegative staphylococci, 40%

, 11.2%

%

:cus aureus, 9.3%

ır species, 6.2%

ads, 4.9%

ıgies in UTI include the following:

ive enterics, 50%

, 10%

ıgies in surgical-site infections include the

0%

ıads, 16%

negative staphylococci, 15%

, fungi, *Enterobacter* species, and *Escherichia*
ən 10% each

ıgies in fever include the following:

ɔns are most common causes of nosocomial

the second most common cause of nosocomial
ə hospitalized child.

Section 4 of 10 [Back Top Next]

ıical Differentials Workup Treatment Medication Follow-up Miscellaneous

Croup
Endocarditis, Bacterial
Endocarditis, Fungal
Enteroviral Infections
Hepatitis C
Influenza
Legionella Infection
Parainfluenza Virus Infections
Pseudomonas Infection
Respiratory Syncytial Virus Infection
Rhinovirus Infection
Staphylococcus Aureus Infection
Thrush
Toxic Shock Syndrome
Urinary Tract Infection

Other Problems to be Considered:

Sepsis
Streptococcal infection, group D (enterococcus)

WORKUP Section 5 of 10 {Back Top Next}
Author Information Introduction Clinical Differentials Workup Treatment Medication Follow-up Miscellaneous Bibliography

Lab Studies:

- A detailed physical examination and review of systems most likely reveal the involved organs or systems. Workup should be focused on these abnormal areas. Studies should be centered on infections of the bloodstream, UTI, and pneumonia, unless an obvious source (eg, surgical-site infection) is readily identified.
- Bloodstream infections
  - Quantitative blood cultures with samples from the intravenous line and peripheral vein are recommended to aid in differential diagnosis of line-associated bacteremia.
  - Fungal cultures should be requested, if they are suspected. The laboratory should incubate cultures longer for fungus detection than for other pathogens.
  - In immunocompromised patients, special studies such as cultures for nocardia and atypical mycobacteria, cytomegalovirus, and antigenemia detection, occasionally are requested.
- Pneumonia
  - Radiography, oxygenation, and hemodynamic status determination are required

in the evaluation of nosocomial pneumonia.

- Examination of the sputum, endotracheal aspiration material, and pleural effusion fluid with Gram staining and culturing may be useful.
- A rapid diagnostic test may be uniquely useful. Examples include the direct fluorescent antibody test for *Legionella* organisms or those causing pertussis; immunofluorescence tests for influenza, respiratory syncytial virus (RSV), which is transmitted by contact, and *Pneumocystis carinii;* and modified acid-fast stains for mycobacteria.

ıary tract infection

- UTIs are expected in patients who require an indwelling urinary catheter.
- Efforts should be made to differentiate colonization, cystitis, and frank pyelonephritis by means of urinalysis, urine Gram staining, and culturing.
- Early removal of the urinary catheter is always helpful in the treatment of catheter-associated UTI.

itis

- A stool Gram stain should be performed to detect white blood cells.
- Tests for *Clostridium difficile* toxin are useful in the workup for nosocomial fevers and loose stool. (Rotavirus spreads among susceptible infants during local epidemics in cold months. In infants, colonization with *C difficile* often does not cause problems.)

er laboratory studies

- General viral cultures from the throat and rectum can be helpful in management.
- Acute and convalescent titers against viral agents also can be helpful.
- Antigen for *Legionella pneumophila* serotype 1 can be detected in the urine.

Studies:

ecial imaging techniques (eg, sonography, CT, or MRI) may be helpful in evaluating icure site infections.

ATMENT Section 6 of 10 [Back Top Next]

ıation Introduction Clinical Differentials Workup Treatment Medication Follow-up Miscellaneous Bibliography

Care:

f shock, hypoventilation, and other complications is provided,
tion of empiric antibacterials, antifungals, and antivirals.

hicillin-resistant *Staphylococcus aureus* (MRSA) are not
by susceptible *S aureus*. MRSA requires treatment with a
pathogenicity does not differ from that of susceptible strains

d be considered if the line is suspected in the cause of sepsis.

tibiotics should be selected according to the local
:rns of microbial susceptibility.

:onazole, amphotericin B) are added to empiric antibiotics in

:iclovir, acyclovir) could be used in the treatment of suspected
infections.

ıtibiotics are used, with guidance of the results from rapid
sputum, endotracheal suction material, and bronchial lavage

:s are indicated in legionellosis.

ntadine and rimantadine for influenza A, and neuraminidase
nfluenza A and influenza B) are used if viral pneumonia is

mantadine can be used for either prophylactic or therapeutic
have not been approved for use in infants younger than 1
lack of data.

the use of neuraminidase inhibitors in children have not been

apy has been used to treat symptomatic patients and patients
ɜncy or chronic lung diseases to limit morbidity and mortality.

:ost-effective prevention measure is vaccination against

rs should be removed, if feasible.

- Empiric antibiotic and antifungal therapy is based on the preliminary results of urinalysis and urine Gram staining.
- Surgical-site infections should be managed with a combination of surgical care and aggressive antibiotic therapy that is guided by the results of deep-tissue Gram staining and culturing. Of special concern is fasciitis, which is associated with mucoid group A streptococci and high morbidity and mortality rates.

Surgical Care:

- Surgical debridement is an integral part of management of surgical-site infections or superinfected decubitus ulcers.

Consultations:

- Many nosocomially infected patients require expert care from an ICU team.
- Infectious disease specialists, burn care specialists, and surgical teams usually are involved in the care of these complicated cases.

MEDICATION Section 7 of 10 [Back Top Next]
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Pharmacologic treatment depends on the underlying etiology.

FOLLOW-UP Section 8 of 10 [Back Top Next]
Author Information Introduction Clinical Differentials Workup Treatment Medication Follow-up Miscellaneous Bibliography

Patient Education:

- For excellent patient education resources, visit eMedicine's Yeast and Fungal Infections Center. Also, see eMedicine's patient education article Candidiasis (Yeast Infection).

MISCELLANEOUS Section 9 of 10 [Back Top Next]
Author Information Introduction Clinical Differentials Workup Treatment Medication Follow-up Miscellaneous Bibliography

Medical/Legal Pitfalls:

- Outbreaks of nosocomial invasive infections may become the subject of adverse publicity and legal suits against institutions and medical personnel.
- Many states have adopted educational courses emphasizing infection control, as well as strict enforcement and reporting of violation of hand washing codes. Many hospitals have reorganized the physical layout of hand washing stations and have adopted

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)revent the spreading of pathogens. They also have restricted the
ny antibiotics that are used to combat nosocomial infections.

ltiple-resistant organisms, such as vancomycin-resistant
ptide-resistant *S aureus*, and inducible beta-lactamase gram-
are a constant threat.

)id spread of respiratory syncytial virus (RSV) among pediatric
SV epidemic poses a threat to susceptible children who require
g winter months.

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Differentials Workup Treatment Medication Follow-up Miscellaneous Bibliography

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FISCAL NOTE

STATE OF ALASKA
2006 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: SJR 19
() Publish Date:

Revision Date/Time (Note if correction):
Dept. Affected: Legislature
Title: Task Force on Hospital Infections
RDU
Component
Sponsor: Stevens, G
Requester: Health, Education, & Social Services
Component No.

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2006) cost: 0.0
Mark this box (X) if funding for this bill is included in the Governor's FY 2007 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

Prepared by: Jason Hooley
Phone 465-3762
Division: Office of Senator Fred Dyson
Date/Time 2/27/06 3:38 PM
Approved by: Senator Fred Dyson
Date 2/27/2006
Agency: Chair, Senate Health, Education, & Social Services Committee

(Revised 9/7/2005 OMB)

SENATE COMMITTEE REPORT
First Committee of Referral

DATE: 2/14/06

FURTHER: Finance

Date of 5-Day Notice: _____
(In accordance with Uniform Rule 23)

DATE TURNED IN TO OFFICE: 2,27,06

Health, Education and Social Services Committee considered SENATE JOINT RESOLUTION NO. 19

SJR 19 TASK FORCE ON HOSPITAL INFECTIONS

Relating to creating the Task Force to Assess Public Reporting of Health Care Associated Infections.

and recommends:

[ ] be **replaced** with _____ **CS** _____ (_____)

[ ] adopt **previous** _____ **CS** _____ (_____)

[ ] attached amendment(s)

[ ] adopt Letter of Intent by _____ Committee

[ ] further referral to _____ Committee

CS Senate Bill:
[ ] Same Title
[ ] New Title

SCS House Bill:
[ ] Same Title
[ ] Technical Title Change
[ ] New Title w/ SCR #_____

NEW FISCAL NOTE(S):

LEG	2/28		S	X

PREVIOUS FISCAL NOTE(S):

[ ] **APPROPRIATION - no fiscal note**

			✓	
	✓			
	✓			
CHAIR:	✓			

HB

16

ALASKA STATE HOUSE OF REPRESENTATIVES

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FAX# (907)-465-3258
State Capitol
Room 204

REPRESENTATIVE JOHN COGHILL

SPONSOR STATEMENT

HB 16 SECONDARY BOARDING SCHOOLS

HB 16 puts into statute DOE's current practice. This legislation expands existing programs for students who don't have access to grades 9 through 12 qualify for a stipend in boarding schools by changing the entrance requirements.

Students get a choice of going to a school that has something different to offer than may be available in their hometown. This legislation by statute reimburses some boarding schools costs incurred by the district operating the program.

The legislation limits the program to schools already operating boarding schools on January 1, 2005 and sunsets in 2010 (five years). Three schools would qualify for the reimbursement: Nenana, Galena, and Bethel.

A per-pupil stipend will help pay for the students' monthly residential care, which includes meals and supervision twenty-four hours a day, seven days a week. In addition a one round-trip between the student's community of residence and the school during the school year will be reimbursed if the district expends money for the trip.

The hold harmless section of this bill allows a student's district of residence to count a student for the ADM count even though the student is attending a secondary boarding school.

The department is required to submit a report to the legislature with performance evaluation and recommended actions for the future of funding boarding schools in the future at the end of the five year pilot project.

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State Capitol
Room 204

REPRESENTATIVE JOHN COGHILL

Sectional For Committee Substitute for House Bill 16(RLS)

Section 1. (a) Provides that a school district that was operating a secondary boarding school prior to January 1, 2004 could be reimbursed for the cost of operating the boarding school providing they have a suitable student dormitory and provide daily access to a public school offering the grades 9-12 classes.

(b) The district can be reimbursed for a per-pupil stipend determined by the Department of Education and for one round trip per student that travels from their community.

(c) Defines district as "a city or borough school district or a regional educational attendance area.

Also defines district secondary school boarding program as " a public school operated for a full school year by a district in which the domiciliary services are provided for students in grades nine through 12. The full school year was added to the language in the Special Committee on Education and this resulted in a reduction in the fiscal note of $227,700.

Section 2. Provides a hold harmless clause for school districts that have children move out of the district to attend a secondary boarding school. The students moving from the district would be counted in the average daily membership of the home district.

Section 3. This is a sunset clause that repeals the substance of this bill on July 1, 2010.

Section 4. Requires the Department of Education to submit to the governor and the legislature a report on the effectiveness of the boarding school programs and make recommendations that may include draft legislation for future boarding school programs.

Section 5. Puts into place an effective date of July 1, 2005.

FISCAL NOTE

STATE OF ALASKA
2005 LEGISLATIVE SESSION

Fiscal Note Number: 1
Bill Version: HB 16
(H) Publish Date: 3/3/05

Revision Date/Time (Note if correction):
Dept. Affected: Education & Early Development
Title "An Act relating to funding for school districts operating secondary school boarding programs.....
RDU K-12 Support
Component Boarding Home Grants
Sponsor Representative Coghill
Requester (H) Special Committee on Education, HESS, Finance
Component No. 148

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims	1,227.0	1,227.0	1,227.0	1,227.0	1,227.0	0.0
Miscellaneous						
TOTAL OPERATING	**1,227.0**	**1,227.0**	**1,227.0**	**1,227.0**	**1,227.0**	**0.0**
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	1,227.0	1,227.0	1,227.0	1,227.0	1,227.0	0.0
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type–Do not abbreviate)						
TOTAL	**1,227.0**	**1,227.0**	**1,227.0**	**1,227.0**	**1,227.0**	**0.0**

Estimate of any current year (FY2004) cost: 0.0
Mark this box (X) if funding for this bill is included in the Governor's FY 2006 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

This Act would create a pilot program, making available a monthly stipend to districts currently providing a residential boarding home program. This pilot program will be in place for five years, ending July 1, 2010. In addition to the monthly stipend, districts will be reimbursed for one round trip ticket per year for any boarding home student to travel within the state to attend the school in the district with the dormitory.

A community with an ADM of less than 10 will still be counted as a school if the decline is due to students enrolling in another district's secondary school boarding program.

Prepared by: Eddy Jeans, Director
Phone 465-8679
Division School Finance
Date/Time 1/26/05 3:16 PM
Approved by: Karen Rehfeld, Deputy Commissioner
Date 1/26/2005
Agency Education & Early Development

(Revised 12/2003 OMB)

Alaska Department of Education & Early Development
Residential Programs
Prepared by Elwin Blackwell

Fiscal Note No. 1 - HB 16

District	Community	Capacity	FY05 Monthly Stipend	Yearly Cost	Estimated Round trip	Annual Airfair	Estimated Grant	Comments
Galena	Galena	100	577	519,300	800	80,000	599,300	180 day program
Lower Kuskokwim	Bethel	35	490	154,350	500	17,500	171,850	180 day program
Nenana	Nenana	96	472	407,808	500	48,000	455,808	180 day program
Totals		231		1,081,458		145,500	1,226,958	
Iditarod	Takotna	40	490					Inactive program
Northwest Arctic	Kotzebue	40	577					Inactive program
Nome - Beltz HS.	Nome	40	577					2 week Voc-Ed program

NOTE: CPI not available to update rates for FY06 at time of preparation.

Actual Cost of Boarding Schools

Galena Boarding School	Actual Costs	HB 16 Share
Daily rate	$51.00	$15.73
Monthly Rate	$1,516.00	$472.00
Annual Rate	$13,362.00	$4,248.00

Nenana Boarding School		
Daily rate	$33.00	$15.73
Monthly Rate	$1,000.00	$472.00
Annual Rate	$10,000.00[1]	$4,248.00

[1] Nenana Boarding School has a ten month school year

Nenana Student Living Center...

Developing Alaska's Most Valuable Resource

Sixty-six high school students from across the state of Alaska could be accepted to live in the state's most modern dormitory called Nenana Student Living Center (NSLC) and attend Nenana City School. In the past four years, over 250 students (with their parents support) have already made this choice. Of these students, about 80% have either returned this past year or have put in application to return next school year.

Why do students come to Nenana for an education? The reasons for coming are as diverse as the students living there. Students from larger areas seek more individualized attention; students from rural areas want more class offerings with certified teachers. A few students, coming from families currently experiencing some tough times, need the structure and stability dorm living offers. Most students come from stable families, but want to experience living more independently. In an application one parent spoke of the 'regression of funds for rural districts taking its toll'; many others expressed this same sentiment but in different words. Many parents of NSLC students feel that (for various reasons) their child's educational needs were not being met locally and thus they sought a quality education elsewhere. Why Nenana? What makes Nenana Student Living Center and Nenana City School unique?

In the state of Alaska there are three boarding schools: PERS in Galena, BABS in Bethel; and Mt. Edgecumbe in Sitka. They are just that—a school where students are also boarded; these schools are separate from the local public school at each site. The NSLC is unique in that it is a community wide project, planned and built to be used as a comfortable dormitory for students who want to attend the public school of Nenana. NSLC students attend school and freely interact with Nenana students. Another unique feature of NSLC is that four apartments were built within the facility enabling dorm parents to make the Living Center their home along with the students on a '24/7' basis, theses dedicated dorm parents are able to provide nurturing support, guidance and consistency. There are many elements that make the NSLC a safe and secure environment: the security system with cameras that are in place, a night watchman hired throughout the week, as well as the dorm parents living on site.

NSLC is currently the only boarding home on the road system, only 50 miles from Fairbanks. This makes for easy access to medical facilities, college events, and cultural activities; many students also have extended families to visit there on weekends.

As well as adding diversity to the school, the addition of NSLC students has spurred implementation of may unique innovations (largely as a

result of Federal grants to education). These students perform better in our system than those of the schools that sent them. Why is that? We think it is due to innovations implemented in several key areas:

Academic

Transitional classes strengthen Math and English skills, meeting under-prepared students where they are and accelerating them to grade level. A study skills class further helps struggling students achieve academic standards. A computer based (Carnegie) math class is making a huge difference in students who have been unable to achieve "math success" in the past. Sunday through Thursday nights, students attend a mandatory study hall, operated by four skilled tutors. Those students who have completed all assignments have free choice of study activities, while those students who have been referred by teachers get additional tutoring to improve academic performance.

Cultural

Nenana students have many opportunities to learn from cultural instructors. They are offered training in how to mush a dog team and set up a winter camp using traditional and modern winter survival skills. Other projects include snow shoe and canoe building, beaver trapping and skinning, skin sewing, creating articles such as gloves, skin boots, beading dream-catchers, practicing Native singing and language, and putting on a potlatch. Our Inter-Tribal Dance Group has preformed around the state and is in great demand.

Personal Development

Leadership such as Close Up, summer camps, student orientation leadership training and an active NSLC student government help students mature and gain real life skills. Vocational training in career pathways including culinary arts, entrepreneurship, computer skills, business education, and more pathways are being developed. Art classes teach seeing and painting the world we live in, building and painting rustic furniture, painting Native and wildlife subjects, and marketing art.

Personal Support

Grandparent mentors work in the schools and Living Center with students, providing a caring presence and guidance in traditional values and skills. Three counselors assist with personal, academic and vocational development. There is a full time drug and alcohol prevention counselor for all grade levels utilizing Project Success curriculum. A vocational counselor teaches school to work and grant support offers students opportunities to explore careers and work as interns. A personal counselor meets individually with students to prepare for college or vocational schools at every step from awareness to scholarship and admission applications. A College Prep. class for juniors and seniors further assists students realize their dreams. Our proximity to

University of Alaska Fairbanks affords students a well-used resource for job fairs, career and college exposure and enrichment.

Finally, students maintain strong ties to home while living here. Communication is encouraged and supported through newsletters and by grant-funded parent visits to the Living Center, encouraging parents to remain involved in the education of their young people.

As a regional educational center, the Nenana Living Center is proving both innovative and successful.

For Further Information, Contact:

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