

- The first article "Report Stirs doubts about criteria for special education; Minnesota is the state most likely to classify students as having behavioral disorders" talks about statistics regarding the number of special education students listed in Minnesota.

- The statistics are as follows: A new report to Congress shows that Minnesota has classified children with emotional and behavioral disorders at a rate more than twice the national average.

- The report is renewing questions of whether Minnesota is actually producing more children with disorders or whether public schools are just steering disruptive student into special education.

- With special education costs rising, legislators are pushing a bill into Minnesota Legislature that would tighten eligibility.

- The second article "A truer portrait of special ed in Minnesota" is contradicting to the previous article.

- This article says that the article used selective statistics. Data shows that Minnesota identifies 10.30 percent of its students as having a disability. The national average is 10.84 percent. Minnesota identifies 198 percent of its children as having emotional and behavioral disorders (EBD) while the national average is .92% but overall they are well within the average. Experts have cited that between 3 to 6 % of the population should be identified as EBD.

TO: BETHANY
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HERE'S SOME BACKGROUND
ON STATE OF SPEC. ED. IN
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TOGETHER

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Star Tribune (Minneapolis, MN)

March 28, 1999, Sunday, Metro Edition

SECTION: NEWS; Pg. 1A

LENGTH: 1428 words

HEADLINE: Report stirs doubts about criteria for special ed;
Minnesota is the state most likely to classify students as having behavior disorders.

BYLINE: Rob Hotakainen; Staff Writer

DATELINE: Washington, D.C.

BODY:

★ A new report to Congress shows that Minnesota has classified children with emotional and behavior disorders at a rate more than twice the national average and now ranks first among all states. ★

Minnesota, Maine, Connecticut and Wisconsin topped the latest federal list, while Mississippi, Arkansas, Idaho and California ranked at the bottom.

The report is renewing questions of whether Minnesota is actually producing more children with disorders or whether public schools are just steering more disruptive students into special education.

Although Minnesota has often been near the top in education rankings for such things as its high graduation rate and scores on college-entrance exams, not everyone's cheering this time.

"It's not good news, because it's costly," said state Rep. Mindy Greiling, DFL-Roseville.

With special education costs rising quickly in public schools, legislators from both the DFL and Republican parties are pushing a bill in the Minnesota Legislature that would tighten eligibility. Its backers expect the bill to pass.

"We don't need to be number one in this category," said state Sen. Martha Robertson, R-Minnetonka.

The rankings are part of an in-depth report on special education in the 1996-97 school year, released by U.S. Education Secretary Richard Riley. The report found great variation — a 33-fold difference — between the top and bottom states in classifying children with emotional and behavior disorders, or EBD as it's known in Minnesota.

Federal officials say there should not be such wide disparities between the states, but one top administrator said Minnesota is not classifying too many children.

"If those kids are getting a good education, Minnesota should be pleased," said Thomas Hehir, who oversees special education programs for the Education Department in Washington, D.C. "What we're more concerned about are these other states, like Mississippi, that we believe are underidentifying and underserving these kids."

The federal report comes after a 1997 state report found that Minnesota's eligibility criteria for EBD were confusing and ambiguous to educators, raising the possibility that too many children were being labeled. Some fear that teachers are pushing the EBD label as a way of getting unruly children out of their regular classrooms.

"We have overidentified kids as EBD because we don't want to deal with the behavior issues,"

Robertson said.

Black children and boys are overly represented in the EBD category, and the federal report cites some reasons why: Girls are more likely to internalize problems such as anxiety and depression that do not interfere with classroom management, while boys are more likely to disrupt classrooms. The report said higher classification rates for blacks could be due to teacher expectations of what constitutes "normative" behavior.

Minnesota's EBD caseload hit a high of 17,633 in December 1997 but actually declined slightly the following year, to 17,612, according to Norena Hale, a state supervisor in the division of special education. The drop came during a time when the overall student population was growing.

Hale said state officials have not done a study to determine what caused the decline, but she said EBD students have higher dropout rates and move more often than other students. She called EBD "an emerging category" that can be harder to deal with than other disability categories.

"It's not a disability that you can see, so it's harder to define what the disability really is," she said.

Indeed, no medical diagnosis is required for a school to label a child as suffering from EBD, leaving it open for individuals to interpret. Under federal guidelines, a student can be placed in the EBD category for such things as "showing an inability to build or maintain satisfactory interpersonal relationships with peers and teachers," for showing "inappropriate types of behavior or feelings under normal circumstances," or for exhibiting "a general pervasive mood of unhappiness or depression."

The federal report, citing a 1997 study, said the classification process used by schools "is often reactive [and] subjective."

Riley's office released the report to Congress earlier this month, but no congressional hearings are planned this year. "No one is hot to open this up to change the law in any way," said Jay Diskey, a spokesman for the Republicans who control the House Committee on Education and the Workforce. "It's a very difficult law to debate . . . [but] misidentification is a huge issue."

On the agenda

In Minnesota, legislators put special education back on the agenda this year after the 1998 Legislature approved the largest overhaul of the system since Congress passed the Individual with Disabilities Education Act in 1975.

Greiling and Robertson are among those supporting a bill that would amend the eligibility criteria in Minnesota "so that the standards reflect severe emotional disorders and professional standards." Legislators say the new definition is likely to reduce the EBD caseload, but they're uncertain by how much.

Even if the bill passes, any change won't necessarily come quickly: The bill asks the commissioner of education to make changes in the EBD criteria by using the state's rule-making procedures, a slow process that could take years.

"The goal would be to have less students identified as EBD," Greiling said. Of Minnesota's No. 1 ranking, she said: "It's a direct result of our overidentification because we haven't used the federal standard . . . I'm glad that the report came out right before we go to rule-making. Maybe that will beat some sense into us."

In 1997, the state office of the legislative auditor said EBD costs had soared 94 percent from 1988 to 1995, accounting for much of the extra spending on **special education in Minnesota**. Overall, special-education spending hit \$1.1 billion in 1995, accounting for more than a fifth of all school spending, the report said. It said schools were spending more than \$12,000 a year to educate a child with special needs, more than twice as much as they spend on a nondisabled child.

Robertson said Minnesota's costs will decline once its standards are in line with other states.

"We've said for a while that one of the reasons people came to Minnesota was because of our welfare benefits," Robertson said. "Another reason people come to Minnesota is we have very generous benefits for our special-needs population."

Sue Butler, special education director for the Anoka-Hennepin School District, speculated that some children with emotional and behavior disorders are being placed in other disability categories in other states.

"It was somewhat of a surprise to find out that we were at the absolute top," she said. "I don't know what to say about it . . . I don't believe that we're seeing kids that we shouldn't see."

Minnesota put 1.98 percent of its school-aged children in the EBD category in the 1996-97 school year, compared to a national classification rate of .92 percent, according to the study. Mississippi, the state with the lowest ranking, had a rate of .06 percent.

While federal officials questioned the size of the range in the EBD category, Butler said the report also raises questions in other disability categories. As an example, Alabama had the highest classification rate for mental retardation _ 2.85 percent of its school-aged population _ while New Jersey had the lowest, at .31 percent.

"I'm just confounded," Butler said. "With mental retardation, you really shouldn't have enormous fluctuations. I'm not sure what any of them mean . . . I'm really thinking there's some research that should be done to look at what this means in the United States. We have a lot of questions to ask."

In recent years, the EBD category has come under attack from critics who contend that special education has strayed from its original intent, such as serving mentally retarded students and those who are blind or deaf.

Minnesota's climb to the top of the charts dates to 1980, when the state ranked below the national average in its classification rate. When federal auditors said the state had not classified enough children with the disability, Minnesota hired "facilitators" to get the word out to school districts. By 1994, the number of EBD students in Minnesota had more than tripled.

LANGUAGE: ENGLISH

LOAD-DATE: March 30, 1999

FOCUSTM

Search: General News;special education in Minnesota

To narrow this search, please enter a word or phrase:

Example: House of Representatives

Copyright 1999 Star Tribune
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April 6, 1999, Tuesday, Metro Edition

SECTION: NEWS; Pg. 10A

LENGTH: 474 words

HEADLINE: A truer portrait of special ed in Minnesota

BYLINE: Sue Abderholden; Paula F. Goldberg

BODY:

Articles in the March 27 and 28 Star Tribune misrepresented **special education in Minnesota**. The reports left the misimpressions that Minnesota overidentifies children as having emotional or behavior disorders (EBD) and diverts funds intended for the regular classroom. Neither is true.

The articles used selective statistics from a recent report to Congress and failed to paint the full picture. Data in the report show that Minnesota identifies 10.30 percent of its students as having a disability. The national average is 10.84 percent. Minnesota identifies 1.98 percent of children as EBD while the national average is .92. So while Minnesota may have a higher percentage of children identified as having EBD, overall we are well within the national average. Experts cited in the same federal report said they believe that 3 to 6 percent of the population should be identified as EBD.

The articles do not mention that students with EBD often also have a learning disability. Many states with low numbers of children identified as EBD have high numbers identified as having a learning disability. Of the 27 states that are at or below the national average in identifying EBD in children, 21 identify more children with learning disabilities than does Minnesota. If you combine the EBD and learning disability categories, Minnesota identifies 6.44 percent, which is just below the national average of 6.45 percent.

One of the Star Tribune articles cited a 33-fold difference (really only 1.92 percentage points) between states with the lowest and highest percentages of children identified as EBD. The article doesn't compare the more significant spreads among states of other disability categories such as learning disabilities (5.07); mental retardation (2.35) and speech or language impairments (3.28).

Also, contrary to the articles, Minnesota's education funding system expects local districts to pay for part of special education costs. The issue currently before the Legislature is what percentage of the costs should be paid by the state and what costs should be reimbursed.

We are disappointed in the Star Tribune's coverage of this important issue. The real concerns emanating from that federal report are that children identified as EBD are far more likely to fail classes, and more than half will drop out of school. In addition, a disproportionate number of African-American children across the nation are labeled as EBD, leading one to suspect that cultural differences are not considered in assessment. The issue isn't that we are serving too many children. It is that we need to do a better job of meeting the educational needs of all children.

Sue Abderholden and Paula F. Goldberg. Associate director and executive director respectively, PACER Center Inc., Minneapolis.

LANGUAGE: ENGLISH

LOAD-DATE: April 8, 1999

FOCUSTM

Search: General News;special education in Minnesota

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Example: House of Representatives

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- **Pass or Fail: The Class of 2000**

- This article discusses that special education students in Minnesota are passing their basic skills graduation tests in numbers that far exceeded expectations especially in large metro area districts areas like Bloomington and Mounds View.

- For example in Bloomington, out of 60 special education seniors 37 have passed reading and 35 passed math. Only five were allowed to pass with lower scores. Eighteen were exempted.

- In larger districts, however, a different story is being told. Partial results from Minneapolis show lower passing rates and more exemptions for special education kids.

- For example out of 370 special education kids listed in the district, 87 passed the reading test and for 13 of those a lower passing score was set. Another 110 have been exempted from the reading test. An additional 173 have been listed as simply not passing the test.

- The decision to take the test is made up by teams of parents and teachers. Each team devises a customized education blueprint called an Individual Education Plan. The majority, however, take the test and often keep taking them despite repeated failures.

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May 30, 2000, Tuesday, Metro Edition

SECTION: NEWS; Pass or fail // The class of 2000; Pg. 1B

LENGTH: 1402 words

HEADLINE: Suburban special-ed kids make gains on skills tests;
Fears are proving unfounded that learning-disabled students would have trouble passing.

BYLINE: Norman Draper; Staff Writer

BODY:

Concerns that **special-education** students would be left by the wayside by Minnesota's basic-skills graduation tests are proving unfounded, at least in the metro area's largest suburban school districts.

Most **special-education** students in such large metro-area districts as Bloomington, Rosemount-Apple Valley-Eagan, Robbinsdale and Mounds View are passing the tests. Far fewer are being exempted from the testing or having their scores adjusted to let them pass.

The results are significant because **special-education** students, who usually have learning disabilities, were expected to be among those having the most trouble passing the tests. This year's seniors are the first class that must pass the reading and math tests to graduate.

"I'm pleased," said Barb Nelson, **special-education** coordinator for the Mounds View School District, where two-thirds of the district's **special-education** seniors have passed both tests. "I think we've all had concerns that there might be more of them [failing or requiring exemptions], and then what do you do?"

Statewide numbers are not yet available to show how many **special-education** seniors will wind up graduating _ either because they passed the tests outright or because they will get special consideration for their disabilities.

Minneapolis, St. Paul and Anoka-Hennepin, the districts with the largest **special-education** enrollments, are still gathering their information.

In some districts, **special-education** teams are still discussing whether to exempt students from the tests or let them pass with lower scores.

"Those kinds of decisions are going on right now," said Mike Lindstrom, facilitator for assessment with Anoka-Hennepin schools. "They have to be made within another week."

Heartening numbers

But the results available last week show that efforts to push **special-education** students toward achieving the same basic-skills goals as other students might have borne fruit:

- In Bloomington, out of 60 **special-education** seniors, 37 have passed the reading basic-skills tests and 35 have passed the math test. Only five were allowed to pass with lower scores. Eighteen were exempted from having to pass the tests at all.

- In the Robbinsdale area district, 48 of 75 **special-education** seniors passed reading and 44 passed math. Eighteen were given modified passing grades in reading; 19 in math. Eight were exempted from

reading, and 10 from math. Only one student still has to pass the reading and math test to graduate.

- In the Mounds View area district, 42 of 61 students have passed both tests. Of the remaining 19, all will qualify for graduation. Nine students passed with modified scores, and 10 were exempted.

- In the Rosemount-Apple Valley-Eagan School District, only three of the 182 **special-education** seniors still have to pass the tests. Scores were modified for 16 students in reading, 26 in math. Exemptions were given to 11 students.

"I think it's really interesting," said Sue Backman, Rosemount's **special-education** director. "What's good is we're holding all the kids to high standards. . . . You can see by the low number of exemptions that we have not used them generously."

In larger districts, a different story

Partial results from Minneapolis show lower passing rates and more exemptions for **special-education** kids. Out of 370 **special-education** seniors in the district, 87 are listed as having passed the reading test; for 13 of those, a lower passing score was set. Another 110 have been exempted from having to pass the reading test, but that figure might grow. An additional 173 of the **special-education** seniors are listed as simply not having passed the test. Dave Heistad, the Minneapolis schools' director of research, evaluation and assessment, figures many of those could end up being exempted.

The decision whether to test students is made by teams of teachers and parents. Each team devises a customized education blueprint called an Individual Education Plan (IEP). In many cases, say educators, the choices are cut and dried. Some students are so severely disabled that they are exempted before taking the basic-skills tests, first administered in the eighth grade.

The majority, though, are encouraged to take the tests, and often to keep taking them, despite repeated failures.

Special-education advocacy groups such as Arc Minnesota and PACER (Parent Advocacy Coalition for Educational Rights) think it's important for students to try the tests.

"We have a strong belief that accountability for schools ought to extend to all students, including those with disabilities," said Bob Brick, executive director of Arc Minnesota. "It's our belief that the vast majority of kids can participate in these tests with modifications and accommodations. . . . Clearly, we want to prevent a situation where schools automatically exempt kids with disabilities. We don't think that benefits anyone."

Nationwide, Brick said, about 2 percent of students with IEPs are excluded from similar tests. But, in **Minnesota**, according to preliminary findings by the state Department of Children, Families and Learning, less than 1 percent of IEP students are being exempted.

Parents balance benefits, cost

Still, the testing decision can be a tough one for parents.

"The concern is, 'I don't want my child to take the test one more time and fail,' " said Vava Guthrie, a parent advocate for PACER who runs a workshop on the basic-skills tests. But Guthrie has one son whom she pushed to continue testing, even though he had a learning disability that would have allowed him an exemption.

The first two times, he failed.

"He was humiliated by it," Guthrie said. "But we used it as a learning moment for him. It's not something you want to get out of. These are the skills you need to be a productive citizen. . . . He was able to hang in there and pass it on the third try."

Jan Grieser has discussed exempting her 15-year-old son, Matthew, with his IEP team, but she would rather not do it.

"My value is that we not exempt him yet," said Grieser, director of children's advocacy and public policy for Arc Anoka, Ramsey and Suburban. "The team agreed with that, to go ahead and try to get a handle on what he can do and what kind of progress he can make."

The ninth-grader, who has Down syndrome, got about a quarter of the questions right on his first math and reading tests last year. That's far from passing, but it's good news to Grieser.

"Actually, I was excited when I saw that he scored 25 percent," she said. "Do I wish he could score like a typical kid? You betcha, but that's not what's happening here. . . . When I got the score, I said, 'Look at this, he got a quarter of these things right; this is a good thing. Now, let's see how much further he can go.'"

Still, Grieser would have no qualms about exempting Matthew at some point.

"I fully expect that by end of senior year, he probably will be exempted," she said. "But then we will also have lots of good data to show us what kind of progress he has made through the years. On the other hand, I don't want to limit his opportunities to pass it. In my heart of hearts, do I believe that? Probably not. But I never want to limit his opportunity to try."

Staff writer Norman Draper can be contacted at ndraper@startribune.com.

Scoring **special education**

Statewide, about two-thirds of the **special education** students in 12th grade who took the latest graduation tests in April still have to pass or get special consideration.

<PRE>

| | Reading | Math |
|----------------------------|---------|-------|
| Total students tested | 567 | 1,309 |
| Total students passed | 262 | 614 |
| Special ed students tested | 118 | 219 |

Special ed students passed 41 66

</PRE>

A local example

Most Bloomington special ed seniors have passed the tests. For those who didn't, most were exempted, and a few had their scores modified.

<PRE>

| | Reading | Math |
|------------------------------|---------|------|
| Passed | 37 | 35 |
| Modified score | 5 | 5 |
| Exempted | 18 | 18 |
| Total cleared for graduation | 60 | 58 |

</PRE>

- Sources: Bloomington Public Schools and the Minnesota Department of Children, Families

GRAPHIC: CHART; PHOTO

LANGUAGE: ENGLISH

LOAD-DATE: May 31, 2000

FOCUSTM

Search: General News;special education, in Minnesota

To narrow this search, please enter a word or phrase:

FOCUS

Example: House of Representatives

- The article “ First Lady encourages students with Special Needs” and “ I’m not like other First Ladies” talks about Terry Ventura the First Lady of Minnesota and her commitment to special education.
- She discusses her 16-year old daughter Jade who has been diagnosed with a seizure disorder. She talks about her experience as the mother of a child with disabilities and how she can bring that to her role as her First Lady.
- She has started a non profit Jade Foundation with money her husband earned as a wrestler to benefit children like Jade.
- The other article discusses Jade becoming aware of her disorder and how painful that was for the Venturas so that they really took this on as a personal cause to champion.

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Good Housekeeping

August 1, 1999

SECTION: No. 2, Vol. 229; Pg. 29 ; ISSN: 0017-209X

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HEADLINE: "I'm Not Like the Other First Ladies"; **Terry Ventura**, wife of Minnesota's wrestler-turned-governor

BYLINE: LEIBY, RICHARD

BODY:

Terry Ventura, wife of Minnesota's wrestler-turned-governor, talks about her marriage, life in the spotlight, and what it takes to nurture a very special daughter

At last winter's inaugural ball for Minnesota Governor Jesse "The Body" Ventura, his wife made her entrance wearing a black leather jacket, a black suede miniskirt, and knee-high boots. "This is the way I dressed before, and I'm not changing," she said later. As rock music blared, she danced with her husband, who was sporting a Jimi Hendrix T-shirt and a long feather boa. It wasn't until 11:30 P.M. that the First Family left their party, surrounded by state troopers.

"I'm not like the other First Ladies with fourteen million college degrees and a husband who was groomed to be a politician," explains **Terry Ventura**, who got her first job as a preteen on her grandparents' farm, earning a dollar an hour weeding soybean fields, "but I do have common sense. If I just use that common sense and don't step on any toes, then I think it will work out fine."

A low-key attitude for someone married to a man who, in his professional wrestling days, entered the ring wearing shiny spandex tights, his hair dyed a half-dozen different colors. One might assume that Jesse's personal life is as wild and crazy as his flamboyant public persona. But the reality of the Ventura marriage is far more traditional. The couple has been married for 24 years, and though Terry, 43, runs her own horse-training business, her life has largely centered on raising their two children, Tyrel, 19, and Jade, 15.

It's a role that has placed some very tough demands on her. Politicians often trot out their family heartaches at campaign time, but the Venturas have seldom talked about their very real struggles with Jade, who was born with epilepsy so severe that the seizures caused brain damage. When the doctors told Terry that her infant daughter "would either be institutionalized or die," it was "the worst thing in the whole universe," she says simply.

Far less comfortable with the media than her husband is (she's likened being interviewed to painfully peeling off layers of clothing), Terry has nonetheless agreed to talk about her life, her marriage, and her family. Tucked under a floral cotton throw and sipping a mug of hot chocolate in a mahogany-paneled drawing room in the governor's mansion, she responds to all questions with frankness.

It was 1983--the Venturas had been married eight years, and Jesse was still a professional wrestler--when Terry gave birth to Jade. Their first child, Tyrel, now a six-foot-seven-inch aspiring film-maker, had been born a bit prematurely. But during her second pregnancy, Terry went three weeks past her due date, and labor had to be induced.

The problems were obvious right away. While still a newborn, Jade suffered epileptic seizures--sometimes more than 100 an hour. "The CAT scan made her brain look like a piece of Swiss cheese," Terry says bluntly. Jade's epileptic seizures were controlled with shots containing vitamin [B.sub.6], but she didn't take her first steps until she was 2 years old. Clearly, the family was in for a long, hard struggle.

Jesse and Terry decided from the very beginning that they would strive to make sure Jade lived as normal a life as possible. "We have never, ever let Jade wallow in her disability," says Terry. "We take her cross-country skiing. We taught her to swim. We expose her to everything we can think of to keep her mind active and her body coordinated."

Tyrel always felt protective of his little sister. "If he ever heard of any kids in the neighborhood bugging her, he'd be all over them," Terry says. One night Jesse and Terry left the kids at Jesse's parents' house so they could attend a Bob Dylan concert, and Jade had a seizure. It was Tyrel, then 8, who made sure the ambulance attendants read Jade's medical bracelet and who recited all her medications. The attendants later told Terry, "We've never seen a child so in tune with a sibling."

As a toddler, Jade was enrolled at Courage Center, a nonprofit facility in Minneapolis for children with disabilities. There she underwent physical therapy to improve her coordination, motor skills, and reflexes, including learning how to break her own fall. Afterward, she attended a special preschool, kindergarten (twice), and then a mainstream elementary school, where she received some special attention but was treated largely like any other student.

It was during junior high that Jade became painfully aware of her disabilities. "One day she came home and said, 'Mom, the kids are saying I'm stupid and weird,'" says Terry. "The kids who were friends with her from kindergarten did not want the stigma of being friends with a **special-education** student." Terry worked doubly hard to help her daughter fit in. When Jade took flute lessons, Terry took piano lessons; her daughter didn't know what the notes were supposed to sound like, so Terry played every note for her on the piano. "At her first concert, we all went and cried because you didn't hear a clink or out of her," Terry says.

Today Jade plays the flute as well as the piano and talks about becoming a country singer. An avid equestrian like her mother--"she has a natural affinity for animals"--Jade also plays basketball. "She's not the first person on the team, but she participates, she makes baskets," her mother says. "She can play in the game for three minutes every quarter."

Jade takes home-economics and shop classes as well as English and social studies, but she skips the harder math and science courses. "We're focusing on things to help her get through the rest of her life--functional skills." And school-work doesn't end when the afternoon buzzer sounds. "Last night we did a term paper together on the history of women's basketball until ten-thirty," says Terry. Teachers are often amazed by Jade's achievements, her mother adds. "Every year she does something miraculous."

Although Terry clearly adores Jade and is proud of her accomplishments, her son, Tyrel, comes in for lots of praise too. These days he holds down two jobs: selling hats at a mall kiosk and working at a video store. In his spare time, he writes screenplays. "He's very focused," Terry says. "All through his teens he never gave us a moment's worry. He hasn't even had a parking ticket." When Tyrel got the chance to accompany his father to the Oscars this year, he paid his own way to Los Angeles.

Each Sunday is devoted to church and Ventura family activities, with standing orders to the gubernatorial staff not to interrupt unless there's an emergency. Terry tries to cook family dinners whenever possible, usually nothing extravagant because, as might be suspected, "Jesse is a meat-and-potatoes kind of guy." In the mornings, the First Couple share time while exercising together on treadmills. "It's a semi-normal life," says Terry.

But it's hardly the kind of life that either Teresa Masters (her maiden name) or James George Janos (his real name) expected when they met. Terry was the eldest of four children raised by a working-class mother in Minneapolis and strict German-American grandparents. In high school she "was not quite

"cheerleader material" but "not quite at the low end of the food chain," she says wryly. Hoping to smooth out some of Terry's rough edges, her mom sent the 13-year-old tomboy to the Wendy Ward and JCPenney charm schools, where she learned the basics of ladylike behavior.

One September night in 1974, Terry, then 18 and working as a receptionist, caught sight of Jesse, a broad-shouldered, six-foot-four-inch blond with glacial-blue eyes, working as a doorman at a nightclub called the Rusty Nail. "Our eyes met, and it was just like they were locked there for a good minute," she says, sounding girlish at the memory. "I almost tripped down the stairs because I couldn't stop looking at him."

Terry flirted to no avail, until Jesse noticed her taking a drink outside, in violation of club rules. He chastised her, then chivalrously draped his size-50 brown-and-gold suit jacket over her five-foot-six-and-a-half-inch frame. "The bottom of the jacket came down to my knees, and I went, 'That's it, I'm in love with this guy.'"

Jesse, then 23 and an ex-Navy Seal, was enrolled at a community college. He told Terry of his dreams of becoming a famous pro wrestler. "Here's a person," she decided, "who will never live a boring life. And I was tired of living a boring life." Ten months later, Jesse proposed--over the phone. He called from Kansas City, MO, where he had a wrestling gig, saying, "I need you down here."

The couple honeymooned for one night in a fancy hotel, spent the next evening at a Black Sabbath concert, then struck out for the road. In the mid-seventies, wrestlers would travel from town to town, establishing their personas, hoping to win TV exposure.

Jesse and Terry endured frequent moves, long separations, and tough financial times. "One time he drove four hundred miles round-trip for twenty-five dollars," she recalls. "He wrestled sixty-three days in a row without one day off."

How did their marriage survive? In a telephone interview, Jesse says: "Your time together is so precious that you avoid fighting. You don't want to fight--you're so happy to see each other. Partly what made us strong is the fact that we would have such quality time together when I did come home." It doesn't hurt that Jesse is clearly smitten with his slender, pretty wife: "I don't need to look for an intern, rest assured," he told Jay Leno on The Tonight Show last year.

It was Terry's support on the home front that allowed Jesse to gain fame in the World Wrestling Federation. By the mid-eighties, brisk sales of a licensed Jesse-The-Body action figure allowed him such perks as a red Porsche. Later the couple was able to purchase a 32-acre ranch, where Terry got her horse-training business off the ground.

Jesse easily made the transition from wrestling to acting, costarring in such movies as Arnold Schwarzenegger's *Predator* (1987). The Venturas became friendly with Schwarzenegger and his wife, Maria Shriver. "Arnold would ask Jesse, 'When are you going to move to Los Angeles?' But we couldn't because the programs for Jade were here."

Just as Terry had backed Jesse when he pursued wrestling and acting careers, she was behind him when he decided to enter politics--at first. In 1990 he ran as an independent candidate for mayor of Brooklyn Park, MN, a city of 56,000. "I threw myself into that race," Terry says. "I went door-to-door." But when the Reform Party, best known for promoting two-time presidential candidate H. Ross Perot, asked Jesse to run for governor, Terry voiced her opposition, fearing an upheaval in their lives. To no avail. "Because," Jesse says, stealing from John Wayne's script, "a man's gotta do what a man's gotta do."

Neither of them thought he would win. As Jesse later put it: "The day after the election, we all looked at each other and said, 'My God, what the hell do we do now?'" His wife cried on election night, and not for joy. "One minute I was this person, and then I was First Lady," Terry says. It was her mother who supplied the advice that helped steady her: Be yourself. Don't try to live up to other people's expectations.

After weathering the first few months, which she says were a time of "stark-raving fear and terror," Terry feels more comfortable in her role. She can't help but bristle, however, at some of the media's treatment of her husband. She's no longer a fan of Garrison Keillor, the host of the radio program *Prairie Home Companion*, who penned a send-up of Ventura's life called *Me by Jimmy (Big Boy) Valente*. Keillor took "real low blows at my husband during the campaign," she says with annoyance, "and then has the gall to make money off of him by lampooning him in a book. Don't you think that's kind of mean?"

While still running her horse business on a smaller scale, Terry has adopted two causes for herself that reflect gut-level concerns: aid for farmers and **special education**. "Those are two things I knew about, so I figured I couldn't screw them up too badly," she says. She also enjoys public duties that involve "going out to the schools and talking and reading to the kids."

"All the rest of it," says **Terry Ventura**, a woman seemingly incapable of dishonesty or pretense, "you kind of put up with it, because that's what you have to do."

LANGUAGE: ENGLISH

IAC-CREATE-DATE: September 15, 1999

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The Associated Press State & Local Wire

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January 13, 2000, Thursday, BC cycle

SECTION: State and Regional

LENGTH: 424 words

HEADLINE: First lady encourages students with special needs

DATELINE: BRAINERD, Minn.

BODY:

Minnesota first lady **Terry Ventura** shared stories of her 16-year-old daughter to encourage college-age, borderline developmentally disabled students to achieve their goals.

Mrs. Ventura said Thursday that her daughter, Jade, has continually proven the experts wrong when people have advised that she can't or won't be able to do something.

"She's like her father," Mrs. Ventura said. "She does and she will."

The first lady, during an appearance at Central Lakes College in Brainerd, joked, answered questions, posed for pictures and gave hugs to students in the school's occupational skills program.

Mrs. Ventura will bring her experience as the mother of a child with disabilities to her new role as a member of the state advisory board on Occupational Skills Programs. Her first board meeting is Jan. 24.

Jade was born with a seizure disorder, her mother said, and has needed some special help with math and English. The first lady said her daughter has achieved skills some people said she would never be able to master, such as playing the flute, playing piano, and riding and showing horses.

"The reason I'm so passionate about this is that I see that if you have a lot of support...you can be a success," she told the students.

Her daughter has been educated in the public school system and she has benefited from the work of many caring professionals.

"The reason I like Minnesota is that we're all very focused on education," Mrs. Ventura said. "We're focused on the success of our children and families."

She emphasized to the teachers and students that she will not be a policy-maker in her role on the board. She will give advice and possibly serve as a mouthpiece for the program. It's up to advocates of these special programs to lobby their legislators to speak up for **special education** programs.

"You have to be involved," she said.

The first lady's own involvement includes starting up the nonprofit Jade Foundation with \$50,000 of the money that her husband earned with last summer's wrestling event.

The foundation is designed to help with specific projects of smaller charities dealing with children with a wide variety of disabilities. Grants will be in the \$5,000 to \$10,000 range.

The Brainerd OSP program serves about 22 students, and has to turn down many more requests for admittance. It's designed to help the students make the transition from home to work, trains them in a college setting and reduces their dependence on others. Most of the students live independently.

GRAPHIC: AP Photo MNBRA101

LANGUAGE: ENGLISH

LOAD-DATE: January 14, 2000

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- The two articles “Three Charities awarded \$5,000 each from Ventura merchandise sales” and “Fraser Community Services to Raffle a Home and Car; Funds go to Build a New Facility for Children with Autism” are related so Their synopses are together

- These articles talk about the Fraser Community that was established in 1935 as a home for children with disabilities. It was the first school of it's kind and eventually became a model for special education programs across the country.

- The other article details the Ventura's commitment to special education and this program in particular by detailing the auctioning off of Ventura merchandise with this organization being the beneficiary.

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October 6, 1999, Wednesday

SECTION: State and Regional News

DISTRIBUTION: TO STATE AND FAMILY EDITORS

LENGTH: 526 words

HEADLINE: Fraser Community Services to Raffle a Home and Car; Funds Go to Build a New Facility for Children With Autism

DATELINE: MINNEAPOLIS, Oct. 6

BODY:

Fraser Community Services has embarked on an aggressive fund-raising campaign: the Fraser Community Services Home Giveaway. 50,000 raffle tickets are being sold for \$5 and the first prize is a \$200,000 Rottlund Home, located in Apple Valley, Minn. The second prize is a 2000 Dodge Neon ES from John Adamich's Dodge of Burnsville. The third prize is a child-sized playhouse, accessible to children of all abilities.

The promotion is a way for Fraser to raise money to build a new facility for children with autism as well as other behavioral, emotional and neurological disorders. Currently, children with these types of disorders are being served at Fraser Child & Family Center in Minneapolis -- the only autism day treatment option in the Midwest. New space is needed to expand programs and reduce the waiting list, but equally urgent is the fact that commercial development surrounding our current site is progressing so rapidly that it is squeezing us out of our building. In order to continue to meet many vital needs of children, families and the community, Fraser is in desperate need of a new facility. Revenue from the Home Giveaway will allow Fraser to supplement our efforts to secure a new facility for Fraser Child & Family Center.

Tickets are being sold through November 13 and the drawing will be held November 20 at Fraser's annual benefit. Interested parties can call the ticket hotline 612-861-3133 for information on how to place orders. All of the prizes were donated, so every penny of each \$5 ticket goes to Fraser Community Services.

What is Fraser Community Services?

As a single parent of a child with disabilities, Louise Whitbeck Fraser was acutely aware of the lack of services available in the community. She believed that teaching and caring for children at an early age, while providing education and support for their parents, would vastly improve the family's chances of dealing successfully with the challenges before them. In 1935, Louise established Fraser Community Services as a home school for children with developmental disabilities. It was the first school of its kind in Minnesota and eventually became a model for special education programs throughout the country.

In the 64 years since its inception, Fraser has grown and changed considerably. It has become a multi-faceted human service organization that serves children with physical and cognitive disabilities; children who are at risk for abuse and neglect; children with autism and severe emotional and behavioral disorders; parents and families of children with special needs; and adults with developmental disabilities.

Fraser's mission is to serve children, adults and families with special needs to assist them in maximizing their abilities and reaching their potentials. This year Fraser will serve more than 2,000 children, adults and families primarily from the Twin Cities metropolitan area.

SOURCE Fraser Community Services

CONTACT: Joanne W. Herber of Fraser Community Services, 612-798-8340 work or 651-483-3217 home

LANGUAGE: ENGLISH

LOAD-DATE: October 7, 1999

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June 28, 1999, Monday, PM cycle

SECTION: State and Regional

LENGTH: 591 words

HEADLINE: Three charities awarded \$ 5,000 each from Ventura merchandise sales

BYLINE: By ROCHELLE OLSON, Associated Press Writer

DATELINE: RICHFIELD, Minn.

BODY:

Three charities are the first to receive \$ 5,000 grants from Ventura for Minnesota, Inc., the nonprofit organization that licenses the use of Gov. Jesse Ventura's name or likeness.

"I think this is just going to be the start of something that's going to really really continue to grow and continue to help Minnesota," first lady **Terry Ventura** said Monday at the Fraser School run by Fraser Community Services.

Fraser received a grant along with the Special Olympics of Minnesota and St. Joseph's Home for Children in Minneapolis. Mrs. Ventura said she hopes to spread future grants among organizations statewide. She sits on the four-person volunteer board that determined who would receive grants.

VMI profits come from royalties and licensing fees on Ventura dolls, T-shirts, key chains and other items. Board member and Ventura lawyer David Bradley Olsen said VMI collects roughly 12 percent from the sale of each item.

So far, VMI has taken in \$ 66,000, but that doesn't yet include much of the revenue from sales of the popular Ventura dolls, Olsen said. Revenue to VMI tends to lag a few months behind actual sales.

The state Reform Party and Ventura's campaign committee also profit from the sale of merchandise, but not through VMI. The two organizations operate as retailers, buying the goods from a wholesaler.

The party and Ventura's committee are subject to Minnesota campaign finance laws, which restrict the amount individuals can donate to a candidate and require disclosure of donor names. The state Campaign Finance and Public Disclosure Board ruled that VMI is a private company and not subject to the laws.

Olsen said he plans to release more detailed data on VMI soon. His hope is that 90 percent of the proceeds flowing to VMI will go to charity. The remainder would be used for administrative costs.

The board plans to take applications for consideration for future grants. Also on the board are VMI president Doug Friedline, Ventura's campaign manager, and Bill Hillsman, who created the campaign's television ads featuring the Ventura dolls.

Friedline said he hoped the release of the financial information and the names of the grant recipients would clear up misperceptions about where money from Ventura merchandise was going.

"Since the beginning, I think most people have felt the governor profited personally," Friedline said.

Some 70,000 action figures have been sold and another 30,000 are on the way to stores. Friedline said three new action figures to be determined would be on the market by Christmas. Dolls reported to be under consideration are a Navy SEAL, Ventura in his tan fringe-leather jacket and a wrestling figure.

Mrs. Ventura said the common thread among the first three grant recipients is they focus on children. She found out about the Fraser center when she visited after the election.

Fraser provides a variety of services for young children with special needs and their families.

The Venturas' teen-age daughter, Jade, takes **special education** courses. Mrs. Ventura has focused her work as first lady on **special education** and children with special needs.

St. Joseph's Home for Children in Minneapolis provides services for troubled families and serves as an orphanage.

Linda Ewing, president of the Special Olympics in Minnesota, said the money would be used to recruit and train new athletes. The Special Olympics are for adults and children with mental disabilities.

The group recruited more than 500 new athletes last year and hopes to add another 200 this year.

LANGUAGE: ENGLISH

LOAD-DATE: June 29, 1999

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Search: General News;Terry Ventura, special education

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*To Assure the Free Appropriate Public Education of all Children with Disabilities - 1995***Special Education Funding in the States**

IDEA mandates FAPE for all students with disabilities. The States are primarily responsible for providing special education programs and services, and provide 56 percent of the financial support for them.

"Although States continue to bear the fiscal burden of educating students with disabilities, there is a paucity of recent data on the levels of funding actually provided by States and local governments. The most recent data available (from the 1987-88 school year) show the States providing 56 percent of the funds expended for special education programming across the nation, as compared to 36 percent from local sources, and 8 percent from the Federal government" (Moore et al. , 1988).

States are struggling to provide FAPE to students with disabilities with limited public resources that are being strained by the growing demand for other types of social services. As a result, many States are actively changing or considering changes in the ways they finance special education programs. In fact, State efforts to reform special education finance appear to be at their highest level since the enactment of IDEA.

State Special Education Finance Reform Movement

In 1994, CSEF conducted a telephone survey of SEA personnel in all 50 States to learn of any efforts States may be making to reform their special education finance systems. The survey revealed that 18 States have implemented some type of finance reform in the past five years.

Twenty-eight States are currently considering major changes in special education fiscal policy. Nine of these States expect to implement some variation of their existing funding system, or have a clear idea for a new one. The other 20 States are as yet undecided about the specific changes they will make. Of these 29 States, seven implemented some type of finance reform in the past five years and are considering reforming their special education finance systems again.

Table 5.1 describes the special education finance reform movement by State and by type of funding formula, (column 2), as defined in the table key. In addition, the basis on which the funding allocation is made is provided (column 3). The basis on which the allocation is made is important for understanding the policy implications of funding alternatives. For example, allocations based on type of student placement tend to afford the least flexibility to local decision makers. Allocations based on less specific criteria, such as total district enrollment, are likely to allow them much more discretion when identifying and placing students.

Another important factor is whether State special education funds must be spent exclusively on special education students (column 4). Although such a restriction favors fiscal accountability, it tends to reduce local control. In fact, although this restriction is often presumed to exist, 33 of the States surveyed *do not* require that all special education funds be spent exclusively on special education services.

Table 5.1 Special Education Finance Reform in the States

State	Current Funding Formula	Basis of Allocation	State Special Education Dollar for Target Population Only	Implemented Reform within Last 5 Years	Considering Major Reform
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Alabama	Pupil weights	Placement and condition		X	X
Alaska	Pupil weights	Type of placement			X
Arizona	Pupil weights	Disabling condition			
Arkansas	Pupil weights	Type of placement		X	X
California	Resource-based	Classroom unit			X
Colorado	Percent reimbursement	Allowable costs	X		X
Connecticut	Percent reimbursement	Actual expenditures			X
Delaware	Resource-based	Classroom unit		X	X
Florida	Pupil weights	Disabling condition			X
Georgia	Pupil weights	Disabling condition	For 90% of funds		
Hawaii	Pupil weights	Placement and condition	X	X	
Idaho	Percent reimbursement	Actual expenditures		X	
Illinois	Resource-based	Allowable costs	X		X
Indiana	Pupil weights	Disabling condition			
Iowa	Pupil weights	Type of placement			X
Kansas	Resource-based	Number of special education staff	X		X
Kentucky	Pupil weights	Disabling condition		X	X
Louisiana	Percent reimbursement	Actual expenditures	X		X
Maine	Percent reimbursement	Allowable costs			
Maryland	Flat grant	Total district enrollment	X		

Massachusetts	Flat grant	Total district enrollment		X	
Michigan	Percent reimbursement	Allowable costs			X
Minnesota	Percent reimbursement	Actual expenditures	X	X	
Mississippi	Resource-based	Number of special education staff			X
Missouri	Resource-based	Number of special education staff			X
Montana	Flat grant	Total district enrollment	X	X	
Nebraska	Percent reimbursement	Allowable costs	X		X
Nevada	Resource-based	Classroom unit	X		
New Hampshire	Pupil weights	Type of placement			X
New Jersey	Pupil weights	Placement and condition			X
New Mexico	Pupil weights	Type of placement			X
New York	Pupil weights	Type of placement			X
North Carolina	Flat grant	Special education enrollment	X		X
North Dakota	Actual expenditures	Percent reimbursement		X	X
Ohio	Resource-based	Classroom unit	X		X
Oklahoma	Pupil weights	Disabling condition			
Oregon	Pupil weights	Special education enrollment		X	
Pennsylvania	Flat grant	Total district enrollment	X	X	
Rhode Island	Percent reimbursement	Actual expenditures			X

South Carolina	Pupil weights	Disabling condition	X		X
South Dakota	Percent reimbursement	Actual expenditures	X	X	
Tennessee	Resource-based	Classroom unit		X	X
Texas	Pupil weights	Type of placement		X	X
Utah	Pupil weights	Type of placement		X	
Vermont ^{a/}	Flat grant	Total district enrollment		X	
Virginia	Resource-based	Classroom unit		X	
Washington	Resource-based	Classroom unit	X		
West Virginia	Flat grant	Special education enrollment			
Wisconsin	Percent reimbursement	Allowable costs	X		
Wyoming	Percent reimbursement	Actual expenditures	X		

^{a/} Vermont's special education funding formula also contains a substantial percent reimbursement component.

Table Key

Pupil weights - Two or more categories of student-based funding for special programs, expressed as a multiple of regular education aid.

Resource-based - Funding based on allocation of specific education resources (e.g., teachers or classroom units). Classroom units are derived from prescribed staff/student ratios by disabling condition or type of placement.

Percent reimbursement - Funding based on a percentage of allowable or actual expenditures

Flat grant - A fixed funding amount per student or per unit.

Source: Center for Special Education Finance (CSEF)

Issues Driving Reform. When respondents were asked to identify the issues driving reform, as a group they provided more than a dozen answers. However, the consensus was that (1) more flexible ways to provide special education services are needed, and (2) incentives that lead to restrictive placements need to be eliminated. Responses also indicated that reforms are also being driven by the more traditional goals of fiscal accountability, formula simplicity, ensuring adequate service, and equity. Two other important issues cited were rising special education costs and enrollments and the influence of widespread support for more inclusive educational practices on special education finance reform.

Nature of Reforms Underway

To address some of the issues discussed above, States have instituted a variety of fiscal and program reforms. Some States, like California and Oregon, have responded to growing fiscal pressures by

capping the growth of special education aid by limiting the number of students eligible for reimbursement (Beales, 1993). To try and remove fiscal incentives for identifying special education students, Massachusetts, Montana, Pennsylvania, and Vermont have revised their State finance formulas to decouple funding from the special education student count. These States now primarily provide funds to districts based on some form of a census-based funding system. With this type of funding arrangement, the amount of State special education aid received by a district is determined by the overall count of students enrolled in the district, rather than the number of students specifically identified for special education services. Such a system breaks the link between funding and local policies that determine how students with disabilities are identified and placed in special education programs.

At the same time, while some States are moving away from the more traditional special education funding approaches, such as pupil weights (see definition and States using this approach in table 5.1), other States are considering adopting them. For example, Oregon educators wanted to design a system that could be easily understood, that was placement-neutral, and that would dramatically reduce documentation and paperwork requirements. To these ends, Oregon adopted a single funding weight for all special education students. The per pupil special education allocation is twice that of the per pupil general education allocation.

Interviews conducted by CSEF staff with a broad range of interested persons in Oregon constituents in 1994 indicated a general consensus that the objectives cited above were largely being met by the new formula. However, concerns that a financial incentive still existed to continue to identify special education students up to the State funding limit of 12 percent were sometimes expressed (Montgomery, 1995).

CSEF believes there are some important issues that a State should consider when making decisions about the retention or adoption of a pupil weight funding formula. First, should the amounts of these weights vary by type of placement (as in Iowa), by type of disabling condition (as in Arizona), or should there just be a single weight that applies to all special education students (as in Oregon)? It is the opinion of the CSEF that weights based on placement have the advantage of being more closely linked to actual program cost, but may also create inappropriate financial incentives for more costly, and therefore sometimes more restrictive, placements. Weights based on disability type have the advantage of being placement-neutral (i. e., no financial incentives for one type of placement over another), but are generally not closely linked to variations in the actual costs districts face.

Any pupil weight system will create an incentive to identify students as needing special education services. Some consider this type of incentive to be appropriate, because it is thought to create a better link between State special education aid and the district cost of providing such aid. Others argue that this type of fiscal incentive for identifying additional special education students should be removed. States that agree with the latter argument have adopted the types of census-based funding systems described above.²

² For a more extensive discussion of the incentives and disincentives contained in alternative types of special education funding formulas, see Parrish (1994).

-###-

Funding for IDEA

During the most recent reauthorization of IDEA in June 1997, Congress revised the formulas for the distribution of funds for the IDEA, Part B programs. A new formula for allocating Part B funds under Section 611 of IDEA will go into effect when the Section 611 appropriation reaches approximately \$4.9 billion. A new formula for allocating preschool education funds under Section 619 of IDEA is effective for funds appropriated under that section beginning with Federal fiscal year (FY) 1998.

PURPOSE: To describe the new formulas for the Part B Grants to States Program (§611) and the Preschool Grants Program (§619). The module also highlights data collected by the National Association of State Directors of Special Education (NASDSE) on State use of set-aside funds.

Appropriation of Funds for Part B of IDEA

Under the Section 611 Grants to States Program, grants are determined by a December 1 child count, or at a State's discretion, a count taken as of the last Friday in October, that is submitted by States to OSEP. The grants are based on the total number of students ages 3-21 with disabilities reported by the States as receiving special education and related services. This count is used to determine the State's IDEA, Part B, Section 611 grant for funds that become available the following July 1. Under the IDEA Amendments of 1997, grants will continue to be based on counts of children served until the year for which Federal appropriation for Part B, Section 611 reaches approximately \$4.9 billion. At that time, State allocations for the year prior to that year become the base allocations for distributing funds in that year and all subsequent years. Eighty-five percent of additional funds above the base will be allocated based on population in the age ranges for which States mandate services, and 15 percent will be based on the number of children in the State living in poverty in those age ranges.

The legislation amended the Preschool Grants Program funding formula in similar ways. Under the new formula, each State's base allocation would be the amount it received in FY 1997. Eighty-five percent of additional funds beyond the base are allocated based on the popula-

tion of children ages 3 through 5, and 15 percent are based on the number of 3- through 5-year-old children in the State living in poverty. However, unlike the Grants to States Program, the new funding formula for the Preschool Grants Program takes effect for funds appropriated for Federal FY 1998.

Table III-2 summarizes the amount of IDEA, Part B Section 611 Grants to States Program funding appropriated to States for FY 1977 through FY 1997. The funds appropriated have increased from \$251,770,000 in 1977 to \$3,109,395,000 in 1997. During the same period, the per-child allocation rose from \$71 to \$535. The increase from 1996 to 1997 was \$785,558,000 or 34 percent. This is the largest 1-year increase in the history of the program.

The State Set-Aside Funds

In this section, information from a recent NASDSE survey of States on their use of set-aside funds is discussed. Because this survey was conducted before the 1997 reauthorization of IDEA, the grants provided to States were based on the following formula for Part B, Section 611 Grants to States.

Within the amount allocated to each State:

- A maximum of 25 percent, less amounts used for administration below, could be retained by the State educational agencies (SEAs) for discretionary/set-aside for providing direct and support services for children and youth with disabilities or for paying the administrative costs for monitoring and complaint investigations, to the extent that such administrative costs exceeded the costs of administration incurred during FY 1985.
- A maximum of 5 percent of the State's allocation (or \$450,000, whichever is greater) could be retained by the SEA for administrative costs in carrying out Part B, Section 611 of the Act.

Table III-2
IDEA, Part B Section 611 Grants to States Program:
Funds Appropriated, 1977-97

Appropriation Year	IDEA, Part B Section 611 Grants to States ^{a/}	Per Child Allocation ^{b/}
1977	\$ 251,770,000	\$ 71
1978	566,030,000	156
1979	804,000,000	215
1980	874,500,000	227
1981	874,500,000	219
1982	931,008,000	230
1983	1,017,900,000	248
1984	1,068,875,000	258
1985	1,135,145,000	272
1986	1,163,282,000	279
1987	1,338,000,000	316
1988	1,431,737,000	332
1989	1,475,449,000	336
1990	1,542,610,000	343
1991	1,854,186,000	400
1992	1,976,095,000	410
1993	2,052,728,000	411
1994	2,149,686,000	413
1995	2,322,915,000 ^{c/}	418
1996	2,323,837,000	413 ^{d/}
1997	3,109,395,000	535

^{a/} The figures from 1977 through 1994 include amounts appropriated to the Federated States of Micronesia and the Republic of the Marshall Islands. Since 1995, those entities have not received appropriations.

^{b/} The per-child allocation excludes children and funds for the Outlying Areas and Bureau of Indian Affairs (BIA).

^{c/} This amount includes \$82,878,000 added to the Grants to States appropriation because of the elimination of the Chapter 1 Handicapped Program.

^{d/} Starting in 1996, this allocation was derived by dividing the total appropriations for the 50 States, District of Columbia, Puerto Rico, Outlying Areas, and BIA by the total number of children served in all of those areas.

Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS) and the Office of the Under Secretary, U.S. Department of Education.

SECTION III. SCHOOL PROGRAMS AND SERVICES

- A minimum of 75 percent was required to be flowed through to local educational agencies (LEAs) based on local child counts.

Allocations for Part B, Section 619 Preschool Grants were distributed in a similar fashion.

In January 1997, NASDSE mailed a survey to all States and jurisdictions to gather information about the use of their set-aside funds from the Part B grant awards issued on July 1, 1994. States were allowed to use these funds from July 1, 1994, through September 30, 1996. With 48 of 50 States responding, the following results were found.

Nine States used less than the allowable amount for administration. Approximately \$257.2 million was used for direct and support services across all reporting States. Of this amount, approximately 56 percent was used to support statewide resource centers and support staff development, offset local education expenditures for student placements, and provide services to students with low-incidence disabilities. Because of flexibility allowed under the law, States also were able to use the remaining amount for other important activities. The following six activities were cited in the survey: school reform and restructuring, training mediators and hearing officers, extended school-year programs, model program development, infant and preschool services, and student transportation to offset LEA expenditures.

The greatest proportion of the direct and support monies was used to support resource centers (25.7 percent) followed by Comprehensive System of Personnel Development (CSPD) activities (11.6 percent). In all, 32 States used their set-aside monies to support resource centers. Table III-3 shows, in descending order, the functions carried out at these centers. States reported that without State set-aside money it would be extremely difficult to replicate these activities.

Personnel development is a critical component of State support to LEAs. As required by IDEA, each State must develop a CSPD plan. Although in FY 1994 more than \$7.6

Table III-3
Rank Order of Most Frequently Cited Functions of the Resource Centers

1. Personnel development for special and general educators and related service personnel.
2. Support services to low-incidence populations.
3. Material development and distribution (e.g., braille and large print text, library resources).
4. Parent training.
5. Assistive technology devices and services.
6. Student evaluation and assessment.

Source: NASDSE, 1997.

Table III-4
Most Frequently Cited CSPD Activities

1. Inservice for special and general educators and related service personnel.
2. Material development and distribution (i.e., professional development, recruitment, retention, and dissemination).
3. Training for paraprofessionals.
4. Collection, evaluation, and dissemination of promising practices.
5. Needs assessments pertaining to professional development.

Source: NASDSE, 1997.

million was distributed nationally to SEAs through OSEP-sponsored competitive grants for personnel preparation, 43 States used \$29.7 million of their set-aside for CSPD activities. In fact, 11 States used between 26 and 45 percent of their set-aside funds for this purpose. Combining the amount from the competitive grants with the set-aside grants, eight States devoted more than \$1 million to personnel development. The most frequently cited CSPD activities funded through set-aside monies in FY 1994 are shown in table III-4, in descending order.

Finally, States reported flowing through more than \$1.6 billion to local school districts. Although IDEA requires that a minimum of 75 percent of the grant award be flowed through to the local level, 32 of the States that responded to the survey reported a flowthrough of 76 to 95 percent. Eight States have developed policies through legislative, State-board, or State-plan-based mandates to flow more than the minimum amount to local districts (NASDSE, 1997).

The IDEA Amendments of 1997

Starting in Federal FY 1998, the IDEA Amendments of 1997 authorize States to set aside funds under Part B Section 611 at fiscal year 1997 authorized levels, plus either adjustments for inflation or the percentage increases in the State IDEA allocation, whichever is lower.

Up to 20 percent of the amount available for States to set aside or \$500,000 (adjusted by the cumulative rate for inflation), whichever is greater, may be used for State administration activities (20 U.S.C. 1411(f)(2)(A)(i)). These funds may also be used for the administration of Part C if the SEA is also the lead agency for that part of the Act. Currently 18 States have SEAs as their Part C lead agency. In two of the 18 States, the SEA is a co-lead agency.

Each State may use any of the retained funds that it does not use for administrative purposes for other State-level activities, including:

- To provide support and direct services, including technical assistance and personnel development and training;
- To offset administrative costs of monitoring and complaint investigation, but only to the extent that those costs exceed the costs incurred for those activities during FY 1985;
- To establish and implement the mediation process, including providing the costs of mediators and support personnel;
- To assist LEAs in meeting personnel shortages;
- To develop a State Improvement Plan;
- To support activities at the State and local levels to meet the performance goals established by the State and to support implementation of the State Improvement Plan;
- To supplement other amounts used to develop and implement a statewide coordinated services system designed to improve results for children and families, including children with disabilities and their families, but not to exceed 1 percent of the amount received by the State under this section. This system shall be coordinated with and, to the extent appropriate, build upon the system of coordinated services developed by the State under Part C of this Act; and
- To supplement subgrants to LEAs for capacity building and improvement.

The IDEA Amendments of 1997 also require that SEAs award subgrants to LEAs for capacity building and improvement. In any fiscal year in which the percentage increase in a State's allocation exceeds the rate of inflation, the State must make subgrants to LEAs unless that amount is less than \$100,000, to assist them in providing direct services and in making systematic change to improve the results for children with disabilities (20 U.S.C.

1411(f)(4)(A)). The amount of these subgrants must be at least an amount equal to the difference between the State's maximum set aside from the prior year inflated and the State's maximum set aside from the prior year multiplied by the percentage increase in the State's total allocation.

Summary

Since the inception of IDEA in 1977, Congress has increased the annual appropriations for Part B. Funds for the Part B Section 611 Grants to States Program are distributed based on a count of all children ages 3 through 21 receiving special education services. However, the new legislation will change the funding formula from a child count-based formula to one that is based on a combination of prior funding, census data, and poverty data. A similar funding formula takes effect for funds appropriated for the Preschool Grants Program, beginning in FY 1998.

To learn how States were using their Part B Grants to States set-aside funds, NASDSE conducted a national survey. The study found that nine States used less than the total amount allowed for administration. The monies allocated for direct and support services were used for a variety of purposes. However, the greatest proportion of funds was used to support resource centers and CSPD activities. States flowed through more than the minimum amounts to LEAs.

Under the IDEA Amendments of 1997 for the Part B State Grants Program and the Preschool Grants Program, the percentages allowed for administration and other State-level activities are based on the maximum amounts that a State could set aside for Federal FY 1997 increased annually by the lesser of the rate of inflation or the rate by which a State's total allocation increases. The list of allowed State-level activities has been expanded, providing more flexibility for States to meet their individual needs.

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Competitive Strategies for Higher Education in the Information Age

BY RICHARD N. KATZ

Traditional revenue sources for U.S. higher education are, and will continue to be, under downward pressure. When faced with such pressure, colleges and universities have a limited set of responses. They can cut costs (with or without cutting quality), raise prices, exit existing markets, pursue new markets, create new products, or pursue any combination of these strategies.

A few institutions have pursued aggressively a set of academic strategies designed to extend the reach of their instructional offerings geographically or to offer for sale new or repackaged products in different markets. Many colleges and universities are only now engaging in structured dialogue about how emerging information technologies may be employed to enable such strategies.

This chapter identifies an important revenue opportunity for (or threat to) U.S. higher education, identifies strategies for exploiting this opportunity, and raises potential policy issues associated with it. The perspective offered here is unabashedly economic and entrepreneurial. At the same time, my premises honor the fact that colleges and universities are businesses in the ordinary sense, and I am mindful of the fact that important issues of public policy are overlooked in pursuing an economic perspective. Some of the ideas reflected in the discussion will cut against higher education's cultural grain. The corresponding hope is that the business case for action is sufficiently compelling to stimulate serious dialogue in the academy about an area of growing importance. . . .

Information Technology at the End of the Twentieth Century

In a 1995 speech, Vice President Al Gore stated, "The new marketplace will no longer be divided along current sectoral lines. There may not be cable companies or phone companies or computer companies, as such. Everyone will be in the bit business. The functions provided will define the marketplace. There will be information conduits, information providers, information appliances, and information consumers." Gore's bold but widely accepted vision raises the question of what role, if any, U.S. higher education will choose to assume in this evolving marketplace. After all, universities are both important providers *and* consumers of

information, and the evolution of the mass market for information technology will not leave such institutions unscathed.

To frame such a discussion, it is necessary first for colleges and universities to establish some general planning assumptions about information technology and to incorporate thinking about such assumptions into their missions and plans for delivering instruction. Information technology-intensive companies place the utmost importance on this kind of strategic thinking and, in many cases, have defined visions of the future that might surprise many in higher education. For example, according to Oracle chief executive Larry Ellison, "the goal of the great Library of Alexandria was nothing less than to collect all of the histories, all of the science, all of the philosophy that had ever been written—the collective knowledge of mankind. That's what this is going to be: all of the text, all of the image data, all of the tabular information, all of the audio, all of the video . . . will be stored for you [electronically] to call up and review" (Allen, Ebeling, and Scott, 1995, p. 31). Such a vision has tremendous implications for higher education.

Convergence

The most important phenomenon in the evolving information technology marketplace is referred to as convergence. Convergence is the "accelerating trend of companies involved in broadcasting, cable television, computers, entertainment, and retailing businesses to form various combinations in order to gain competitive advantage in the huge new information market" (Allen, Ebeling, and Scott, 1995).

The demise of both anti-vertical integration consent decrees in the motion picture industry and financial syndication ("fin-syn") limitations on broadcast television—and more recently the passage of the Telecommunications Act of 1996—has paved the way for the creation, by merger or alliance, of monolithic information conglomerates. These legal changes make it possible for information developers to also own elements of the information distribution channels or retail outlets delivering their product. The mergers and alliance-building activity taking place now is strategic in nature and is designed to align information creation (production), communications (distribution), and retail selling (the "set-top box"). Control of both production and distribution

has, since the 1920s, been discouraged due to the risk of fostering monopolistic practices. This risk of monopoly underlies the Justice Department's recent concern with Microsoft's Web browser. In this kind of competitive environment, colleges, universities, and other suppliers of instructional "products" will have to view the choice of information distributors as a strategic one, just as motion picture production companies have been strategically selective about their distributors.

Assumptions About Technology

The rush to merge, join, or enter a variety of joint ventures is based on a number of shared assumptions about the nature of evolving information technologies and about the mass market for interactive multimedia. There is general support for these assumptions across a number of firms and industries that will compete in this marketplace. Some of the most important planning assumptions include the following:

- The "converged" forces arrayed to support the delivery of interactive multimedia to the home will approach \$1 trillion (1993 constant dollars) in annual sales by the late 1990s.
- Organizations that produce "information content" will generate annual revenues of \$550 to \$600 billion, which will grow 15 to 20 percent annually. These organizations include film producers, software developers, publishers, and others.
- The most popular network service offerings will be movies on demand, home shopping, video games, instructional programs, participatory television, and remote banking.
- By the year 2000, switched broadband services will penetrate at least 40 percent of the residential and small business markets across the United States.
- Information (that is, educational) applications may be at least as important as entertainment in this evolving market.
- The most formidable competitors are expected to be strategic partnerships—especially between content providers and controllers of distribution channels. Among industry leaders, the key attributes for success are thought to be clear management vision, creative marketing, a risk-taking culture, and the right strategic relationships.
- Of the different stages of the infotainment value chain, control over information content has the highest relative importance.
- The requisite enabling technologies are available now. Therefore, the critical issues are business and regulatory issues, not technology issues. For U.S. higher education, the issues are predominately cultural, including those related to risk aversion, urgency, and the ability to assimilate change.
- Recent surveys confirm a strong interest in distance learning and related student services for residential use.

What prudent conclusions, then, can be drawn about this "convergence" from these planning assumptions?

First, it seems fair to conclude that both market forces and technology are converging to deliver many new capabilities in the very near future. Higher education, as both a major supplier and consumer of information resources, can neither sit this dance out nor wait to be asked. Inaction is making it possible, for example, for a variety of new and traditional educators to compete for students' time and allegiance in areas of high academic demand. The possible loss, to new competitors, of enrollments in areas like business or psychology will place new pressures on institutions with comprehensive curricula. In effect, new competition, enabled by information technology, will "cherry pick" those offerings that subsidize much of the academy.

Second, higher education—as a content producer—occupies the most potentially profitable niche in this convergence and is the producer of choice identified in many surveys of consumer preference.

Third, based on the potential for profit, newcomers are likely to be attracted to the business of selling courses electronically. The advantages that higher education enjoys both in accreditation and reputation may be tenuous (in some educational markets) when private industry suppliers weigh in with bigger budgets, better technology, more competitive institutional cultures, and more comfort with managing strategic alliances.

Competition in a Technology-Enriched Context

Although colleges and universities rarely express their policies, intentions, and practices in competitive terms, the pressure on traditional resources, coupled with the emergence of technology-based education delivery systems, will force competitive thinking. One particularly interesting case of the assimilation of certain business values in the higher education context is the University of Phoenix (UOP), which focuses on the educational needs of working adults. UOP is an accredited, degree-granting institution and is a subsidiary of the Apollo group, a publicly traded corporation. UOP's growth in revenues exceeds that of the higher education industry as a whole, by a considerable amount.

Several of the assumptions referred to previously will drive the need for competitive and strategic thinking in higher education. The primary drivers of a changed outlook include the following:

- Educational applications will be remunerative in the infotainment market.
- The size and growth attributes of this market are likely to attract new and nontraditional competitors.

- Innovative and entrepreneurial colleges and universities will enter into unusual alliances with nontraditional partners.
- The failure to innovate and invest relatively early will foreclose competitive options for many colleges and universities.
- Colleges and universities with the most intellectual capital will have a new and powerful source of competitive advantage.

The early signs of the changing rules of competition are already in evidence. An independent for-profit corporation called the Home Education Network has acquired the right to distribute the content of UCLA Extension's courses via CD-ROM, online services, and direct broadcast satellite. Motorola University contracts with colleges and universities around the world to develop and deliver a curriculum to Motorola Corporation employees. Elsevier Publishing is working with universities to deliver the full text of its materials science journals over the Internet. Microsoft Corporation is working with many colleges and universities to license the distribution and sale of these institutions' library holdings. Finally, as the price-performance ratio of important technologies, particularly network-based video, continues to improve, nearly every U.S. university will engage in offering "distance education." In such a context, competitive advantage will not follow simply because one delivers education this way. Importantly, competitive advantage will accrue to those who deliver such education cheaper, or in better, more targeted fashion (Porter, 1980, p. 39).

The Marketeer and the Academy

The very idea of marketing seems antithetical, to some, to the mission, values, and ideals of the academic community. The term, if not the concept, is avoided in favor of more noble ones such as *development*, *recruitment*, and *outreach*. Curriculum development, often the exclusive purview of the faculty, is an activity conducted with only secondary consideration given to market factors. Once students have matriculated, their choices are circumscribed by campus resource constraints, faculty schedules, and the underlying philosophy of *in loco parentis*. These forces are compounded by the fact that, at many of our institutions, faculty bereft of the gift of teaching are, for a variety of reasons, "sentenced" with their students to the classroom. This conspiracy of factors accounts for a portion of every campus's student attrition and is structurally unsuited to the likely competitive market for technology-enriched instruction.

A more likely structural and behavioral model is found in the context of university extension operations. Many university extension operations and other academic institutions that cater to the needs of the working adult student have

developed values, business systems, and capabilities that will be required in this new context:

- Each class produces marginal revenue, at a marginal cost.
- Instructional contribution can be (and usually is) a variable cost.
- Different courses have different appeal in different markets.
- Advertising can influence student choice.
- Close study of market demand allows the development of curricula that can either maximize earnings or fulfill noneconomic policy objectives.
- Unsuitable instructors are not "invited" back.
- Big name faculty attract students.
- Location and scheduling decisions have revenue implications and are treated as market factors for curriculum and program planning purposes.

I offer this characterization of the cultural, behavioral, and business attributes of a "market-sensitive" academic institution not for the purpose of advocacy but to accent the fact that the needs of resident students and distant students are likely to be markedly different. Further, it is almost axiomatic that the network-based consumer of higher education intellectual content will be peripatetic in the extreme and, eventually, will have unprecedented choice in course offerings and institutional affiliations. In the network-mediated context, physical location, student events, or other traditional factors will not likely influence loyalty to an institution. In this context, capabilities like market-influenced curricular planning, technical sophistication, advertising, and instructional quality control will be necessary elements of the instructional delivery system. Institutions that choose to follow this path must assess the compatibility of such value systems, competencies, and business systems with their existing academic cultures and business systems.

Of all the competencies and values that must accompany an institutional decision to pursue opportunities in the delivery of technologically enriched instruction, probably none is as important as the ability to differentiate among the size, dimensions, and other attributes of various academic market niches. For example, many analysts suggest that the market for life-long learning is larger (and is growing faster) than the degree-granting segment (Davis and Botkin, 1994). If, following this example, much of the market growth (that is, public demand) for postsecondary education is to occur outside the traditional residential undergraduate context, institutions must be prepared to assess what serving such different markets might mean for the faculty as well as for the residential student body, and what requirements such service will place on the business systems of the campus. For example, business systems that assume that students will stand in line to register for classes are unlikely to meet the needs of the distant learner.

These needs are not likely to be met, in the long term, by a traditional course catalog, a traditional registrar, and a traditional admissions process. The consumer of geography-independent instructional offerings and information resources may—in his or her worst manifestation—be an educational “channel surfer,” scouring the Internet and World Wide Web for timely, relevant, and well-priced courses. Such an individual will likely expect more than a short narrative description, will assume that registration and payment can occur online, and will expect online digital library privileges and a host of other services mediated over the network. Colleges and universities will want this individual to know about ancillary products that are available: related video and audio programs, online tutorials and books, and so forth. In all, the support environment for a college or university curriculum delivered over a network will require much greater integration and sophistication than does the counterpart support environment offered on campus. Raising the integration standard for off-campus offerings will, in turn, raise the expectations of resident students and the campus’s capacity to meet these expectations.

A market-sensitive, planning-based approach will be important to the campus’s decisions about whether to pursue certain opportunities and will consider what the possible financial implications of such decisions are likely to be. The market plan will be at least three-dimensional and should address

- The product (both the discipline and the delivery medium)
- The market (resident learners? distant learners? degree-program learners? non-degree program learners?)
- The geographical focus (campus? local? regional? national? global?)

Although this three-dimensional model greatly oversimplifies the market planning process that information-age educators should consider, it does introduce the choice of instructional technology into curricular planning and decision making. Curriculum planning in a place-bound (that is, campus) context is framed by the questions of curricular need, faculty availability, enrollment size, enrollment demand, and classroom size and availability. In the context of technology-enriched teaching and learning, the number of planning variables expands to include choices of instructional technology, market geography, customer attributes, and time. Asynchronous-learning technologies such as instruction via CD or broadcast or taped video or audio can actually mitigate the constraint of faculty availability, whereas synchronous-learning technologies (such as online “global” office hours) offer possibilities for customizing and personalizing instruction in ways that will likely increase the demand for faculty.

As Figure 1 indicates, campuses that choose to extend

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Figure 1. Product-Market Segmentation Chart

Education/Media/Products									
	Traditional Classroom-based	Educational TV	Multimedia Video	Electronic Faculty Office Hours	Audio-cassette	Self-Contained Educational Technology	Information Resources on Demand CD/Network	Full Interactive Multimedia	
Education/Market	Undergraduate Degree								
	Graduate Degree								
	Professional Degree								
	Continuing Education								
	Executive Education								
	Agricultural Education								
	Corporate Training								
	Campus Training								
	ESL/Continuing Legal/Medical								
	Intersegmental Education/K-12								

their instructional reach with the use of technology have many competitive options. For example, what is the demand for a technology-enriched Ivy League MBA curriculum in Russia? What might be the market for university-developed practical agricultural course material on cassette? What elements of U.S. corporations' training needs can be met by U.S. higher education and by any campus in particular—and in what format or medium? What is the educational role of credentialing and certification in this environment?

If this wealth of capabilities, markets, and intellectual capital represents an untapped opportunity for U.S. colleges and universities in the emerging marketplace, the realization of this opportunity depends on: faculty vision and business execution; the creation of, and investment in, new academic and business strategies; creative marketing; risk taking; and the development of strategic relationships. Absent early institutional intervention in establishing a framework for exploiting this opportunity, colleges and universities run the risk of

- Diluting our intellectual resources through the willy-nilly application of network technologies to the instructional delivery system
- Dissipating our intellectual resources through unregulated deal making between individual faculty and their "electronic" publishers
- Cheapening our intellectual resources by failing to ensure that technology-enriched course offerings are, in fact, enriched relative to traditional offerings
- Draining our intellectual resources by trying to cover every product market niche in the absence of an overall strategy
- Abdicating a potential leadership role in this emerging market to new competitors such as Times-Mirror, Microsoft, or Oracle

It should be noted that those who do not produce course content in this marketplace are likely to become consumers of others' content.

Expanding U.S. Higher Education's Instructional Franchise

The objective of this chapter is to organize information about the environmental context in which higher education may operate in the near future and to raise questions about how such contextual observations may be translated by the higher education industry and individual institutions into new strategic directions and programs. For this reason, this discussion is long on themes and short on recommendations. If the underlying premise that the convergence of technologies will enable new ways to fulfill higher education's teaching mission is true, then leading institutions have a range of strategic

options that can expand both their geographical instructional reach and their sources of revenues. This range of options extends from achieving cost efficiencies by leveraging course offerings among existing university students to seeking new, potentially global, markets by franchising courses and information assets to students not currently served by higher education.

The first and primary recommendation is for our educational leadership to *develop strategic frameworks for addressing the changing environment that is described here*. Any institution's ability to exploit new instructional opportunities effectively depends on its establishing an *institutional* context for program development and institutional investments to "jump start" such development. Although U.S. colleges and universities are prepared, for example, to create the data communications networks that will carry instructional content and information resources, is it appropriate (to their missions) for these institutions to "seed" the development of best-in-their-class technology-enriched instructional offerings? Many of our institutions have achieved academic recognition and excellence by localizing the responsibilities for curriculum development and execution as deeply as possible. The development of truly enriched, technology-intensive course offerings—worthy of the reputation of U.S. higher education—will be costly and risky. The governance and organizational infrastructures for making such investment decisions are not well developed currently.

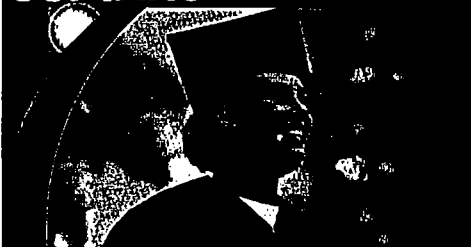
A strategic framework must also *address the very sensitive issue of who owns the rights—for distribution and sale purposes—to institutions' instructional materials and collections*. In this area, the nature of the new technologies and the need for unprecedented investments will change or challenge the traditional model wherein faculty course notes belong exclusively to their authors. In the extreme case of fully franchised multimedia course productions, course notes may become more analogous to theatrical scripts, and faculty roles may become more analogous, variously, to those of scriptwriters, producers, directors, and "stars." The evolving roles created by the new potential to "export" course materials beyond the campus suggest the need for new thinking about property rights, risk sharing, royalties, residuals, and other cost-sharing and compensation strategies. What might it mean, for example, in cultural, ethical, and legal terms, for one institution's faculty member to contract with another party to produce a multi-media course (including electronic office hours) for distribution—for use in credit-granting courses—to other universities? Many of the possibilities created by new approaches to delivering instruction are not natural extensions of the traditional relationships between faculty, their home campuses, and their publishers.

The implementation of distance education within U.S. higher education should force us to *rethink the issues surrounding the awarding of campus credit*. The deployment of instruction beyond the borders of a campus should foster (or force) a national dialogue about the interchangeability of credits among participating institutions. If, for example, a student enrolled at one institution enrolls in an electronic course "produced" by another and completes successfully the exams and papers necessary for the award of course credit at the producing campus, can this student be awarded course credit at the "home" institution? If the answer is no, then the speed of adoption of new delivery approaches is likely to be retarded, and instructional innovations are likely to occur first in private industry, where increasing numbers of unusual providers will seek and receive degree-granting accreditation. If the answer is yes, then many approaches to offering technology-enriched instruction have the potential to alter fundamentally the nature and meaning of our student bodies and faculties, to each other and to our institutions.

A strategic framework should *focus simultaneously on the issues of public policy, institutional priorities and identity, and*

business. Beginning with a product-market segmentation, as represented in Figure 1, the nation's higher education leadership should address the issues of how technologically enriched course offerings affect institutional image, access, quality, and cost as well as the question of whether or not (and how big!) a market exists for new instructional offerings. For example, the creation of courses under the auspices of many universities' schools of business and engineering may have significant revenue potential in the executive education and staff training markets. Clearly, the potential geographical market for such courses is global. (For example, one top-twenty graduate school of management is considering a corporate technology partnership to deliver the MBA curriculum via distance learning technologies to a major Third World nation.) On the one hand, in this market segment the revenue potentials are high, whereas negative public policy impacts are likely to be negligible. On the other hand, a decision to develop a best-in-its-class multimedia course on world civilization may have lower revenue potentials but significant potential in the public policy arena. Such course programming—and the associated investments—could raise the

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standard of instruction in key areas, but it also carries with it the risks of "homogenizing" course content and reducing instructional and intellectual diversity.

Whatever the institutional and public policy implications, it is clear that demand for remote instruction in a variety of postsecondary disciplines exists. The key questions for policymakers are

- Whether or not to get involved.
- What it may mean—pedagogically, culturally, and economically—to get involved.
- Whether or not noninvolvement is sustainable. (Deciding to be a consumer of others' intellectual content is as consequential as deciding to become a supplier of content.)

The strategic planning exercise should also *address the issue of technology risk*. This discussion has been long on optimism concerning the potential of new educational technologies and short on assessment of the risks of such technologies. Those who were involved in higher education's early euphoria over the transformational potential of educational television are especially mindful of the risks of overselling new technology. It is clear that the full potential for registering students electronically, receiving funds electronically, exchanging transcript information electronically, delivering enriching multimedia courses, transmitting test scores and grade reports electronically, and keeping electronic records of all registered students cannot be realized with today's technology. If an institution's strategy in this area embraces this kind of target environment, the development of the strategic framework should include an assessment of the underlying technology requirements of such an environment and a forecast of when needed technology will be available commercially.

Finally, *a strategic framework should address the institutional policy concerning the formation of new strategic partnerships and acknowledge their operational and economic implications*. A discussion of strategy should include an assessment of the institution's capabilities across the media production value chain and should identify the kinds of partners that will be needed to maximize the opportunity and minimize the risks of early adoption of a technological approach. Grant opportunities for early test cases should be explored.

Summary

In sum, technology will, in the intermediate term, be the least important determinant of success in the new delivery of postsecondary instructional offerings. The determinant of market success in this arena will continue to be the quality of the intellectual content. Although intellectual content will be king as this market evolves, short-term advantages will accrue to those who move first into this market, as there are many consumers who will sacrifice perceived quality in favor of course offerings that address their lifestyle needs (time and distance) more closely. This likelihood, in concert with the fact that elite institutions may view themselves as having more to lose in reputational terms than they have to gain, may allow the more visionary and less conservative institutions to dominate

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certain instructional niches. The conservatism and consensual governance model characteristic of higher education institutions, collectively, may make it possible for the earliest adopters to come from private industry. The public policy ramifications of the private industry alternative are enormous.

U.S. higher education is the envy of the world. Our faculty, facilities, and holdings are sought after beyond the traditional reaches of our campuses. New information technologies will make it possible for this reach to extend well beyond the ivory tower. Significant demand for higher education—on an anytime, anyplace basis—exists and will grow as the creative application of these technologies to teaching and learning matures. The application of new technologies to postsecondary education creates a significant likelihood that new players—those without fixed investments in physical plants or tenured professors—will obtain accreditation and will compete with traditional colleges and universities in a number of markets. In particular, technology firms will likely attempt to leverage their networks and technology bases to produce highly sophisticated courses at lower costs than can colleges and universities that need to amortize “bricks and mortar” across their offerings. In many cases, instructional offerings from private firms will be produced, prepared, and delivered by our faculty—who may be paid royalties based on the size of the “gate.” This possibility has the potential to change U.S. higher education in profound ways.

For these reasons, U.S. colleges and universities must overcome the natural conservatism of their faculties regarding this opportunity. The potential exists to produce new revenues through technology-enriched extensions of our instructional programs. These new revenues can reinforce the traditional, campus-based instructional environments we have created with much success. The role of the college or university as a center of culture, a community of scholars, and a physical place is secure. The mission of the college or university is also secure. The global need and demand for higher learning is growing. Thoughtfully applied, new information technologies will make economically possible a new level of investment in collegiate instruction. Such investment can sustain our collective vigor and excellence—if we can rise to the challenge. ER

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What then of American teenagers' disappointing showing in TIMSS, a four-year, 40-country, 500,000-student study that even critics such as education consultant Gerald Bracey grant is the "largest and best controlled methodologically" of all such tests? Some, such as Iris C. Rotberg of the Institute for Educational Policy Studies at George Washington University, have argued that it is unfair to compare U.S. students with those in countries that require more years of school or more science courses. Bracey similarly complains that in several of the high-scoring nations, secondary school seniors are older and much less likely to hold jobs than American kids are.

William H. Schmidt, who coordinated the U.S. arm of TIMSS, counters that these criticisms entirely miss the point of doing an international study, which is to clarify how different ways of running schools affect what students learn. After all, he points out, the U.S. could extend the age of compulsory schooling and give students stipends (as Sweden does) so that fewer need work, if those policies seem to be prerequisites for success.

In fact, TIMSS shows, they are not. Much more informative than the study's national rankings are its clues that ideas sometimes touted as necessary or sufficient for good schools are neither. Among many of the high-scoring nations, for example, students typically get less homework than their American peers and often attend larger classes. They spend no more, and sometimes less, classroom time on math and science. Few divide students into slow and fast tracks. Most make less use of technology than schools in the U.S. do.

Textbooks, however, do seem to matter. TIMSS researchers analyzed some 800 of the math and science texts most commonly used in the participating countries. With few exceptions, American texts covered many more topics than the foreign books and covered them over and over and over. "U.S. students make very small gains from fourth to eighth grade in all the areas tested, but large gains in none," Schmidt says. "High school simply continues the trend."

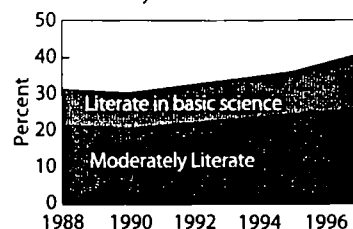
Thus, American teenagers score a bit lower than many peers overseas on a battery of mostly multiple-choice questions emphasizing basic facts and procedures. So what? "I am not convinced that a high score on TIMSS is equivalent to being scientifically literate," says Angelo Collins, who led the development

Dumb but not Dumber

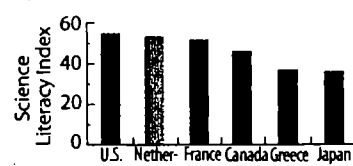
In spite of the doom-and-gloom rhetoric popular among science educators, what scant data there are indicate that Americans are getting better at science, not worse. Biennial surveys conducted by Jon Miller of the International Center for the Advancement of Science Literacy in Chicago reveal that science literacy has increased among U.S. adults since 1985 (*upper chart*) and that 18- to 29-year-olds perform slightly better on the surveys than those older than 40 do. The scores of 17-year-olds on the National Assessment of Educational Progress in science and math have also risen slowly since 1982, although they are still below record highs set in the late 1960s.

The fact that U.S. 12th graders fall behind on international tests does not mean that Americans know less about science than adults in other nations do. In fact, U.S. residents have consistently demonstrated a firmer grasp of basic science facts than have denizens of many countries that dramatically outperformed the U.S. on TIMSS (*lower chart*). Miller attributes the good showing of the U.S. to its college attendance rates, which are higher than those

Americans know more about science than they used to ...



... and they know more than adults in other countries



SOURCE: Jon Miller, ICASL

SARAH DONELSON

elsewhere. College students in the U.S. are also more likely than their international counterparts to take general science courses.

Americans have no reason to gloat, however. U.S. adults may know more middle school science than most of the world, but they are shockingly ignorant nonetheless—most, for example, cannot recall the definition of a year (*below*). —D.F.

QUESTIONS FROM THE SCIENCE LITERACY SURVEY:

1. What is a molecule? (11 percent answered correctly)
2. What is DNA? (22 percent)
3. Do lasers work by focusing sound waves? (39 percent)
4. How long does it take the earth to circle the sun? (48 percent)

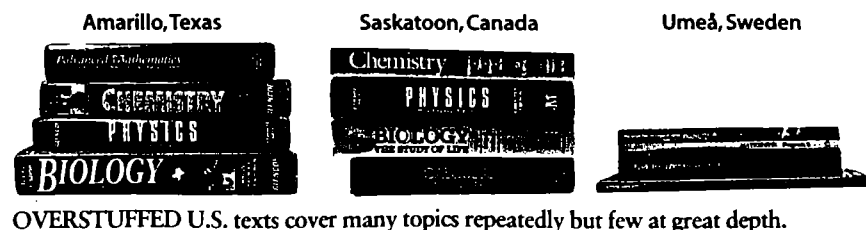
of the National Science Education Standards. "The tests don't get at long-term problem-solving skills and concepts about the nature of science," agrees J. Myron Atkin of Stanford. "Trying to raise TIMSS scores is a regressive step, because those tests don't correspond to what we want our kids to know."

In an education crisis, the question of what schools *ought* to teach about science and math gets overlooked in a rush to raise test scores. That is the third reason to doubt that howls of crisis are help-

ful. A consensus has begun to emerge among science education researchers, teachers and practicing scientists that schools should turn out scientifically literate citizens, not more candidates for the academic elite.

Throughout U.S. history, Hurd maintains, precollege science courses have served as screens to filter out all but the brightest and most motivated students. "If you are good at memorizing jargon and formulas, you move on," Atkin

Continued on page 92



OVERSTUFFED U.S. texts cover many topics repeatedly but few at great depth.

STEVE STARR: SABA
ROBBIE MCCLARAN: SABA
JOHAN GUNSEUS: Perrent Bild/SABA

The False Crisis in Science Education

by W. Wayt Gibbs and Douglas Fox

On a cold and rainy day this past February, Bruce Alberts wore a grim expression as he stepped up to the microphones at the National Press Club in Washington, D.C. The final results of the Third International Mathematics and Science Study (TIMSS) had just come in, and America's high school seniors had placed near last.

"There is no excuse for this," President Bill Clinton had already chided. "These results are entirely unacceptable," admonished the secretary of education. The head of the National Education Association declared U.S. schools to be in a state of crisis. And now Alberts, president of the National Academy of Sciences, said that he, too, saw in this report "all the elements of an education tragedy."

"Americans have always risen to a crisis," he added. "We see clearly that the future is threatened. Let us act now to heed this important wake-up call." And so, with editorial writers and educators across the country obligingly sounding the alarm, American education lurched yet again into crisis mode.

It is a cyclical ritual, repeated in every decade since the 1940s, observes Gregory J. Cizek of the University of Toledo. The launch of Sputnik in 1957 set off an orgy of anxiety, culminating in Admiral Hyman Rickover's 1963 book *American Education: A National Failure*, in which he famously predicted that "the Russians will bury us" thanks to their more rigorous science and math courses. Beginning with the 1983 publication of *A Nation at Risk*, one blue-ribbon panel after another warned that massive educational failure had ceded the U.S.'s technological lead to Japan and other competitors—a conclusion that proved premature.

Although the particulars vary from one education crisis to the next, common threads connect these episodes. Each event has surged into public discourse on an unrelenting torrent of angst flowing from the educational research profession, Cizek says. Combing through the education literature of the past 30 years, he recently turned up more than 4,000 articles and books in which scholars declared some sort of crisis in the schools—but rarely bothered to spell out what cataclysm was imminent.

Each episode has also eaten away at public confidence in schools, which fell 38 percent from 1973 to 1996, according to surveys by the National Opinion Research Center.

Most important, the crises all share a central logic. U.S. economic and scientific dominance is on the verge of collapsing because the schools are not producing enough scientists, engineers and other technically skilled workers. The schools crisis thus jeopardizes the nation's ability to compete in the global economy and to raise U.S. standards of living.

Cizek urges, however, that "we ought to be more skeptical of claims of crisis," and other educational historians agree. Despite researchers' fondness for this recurrent political phenomenon and the infusions of cash that it brings, there are three reasons to doubt its usefulness. One is that past crises have led to lots of spending and legislation—Paul DeHart Hurd of Stanford University counts nearly 1,000 laws passed since the 1970s to force reforms on schools—but have made little change in what students learn. In a crisis, Hurd observes, politicians tend to launch big reforms based on shaky evidence.

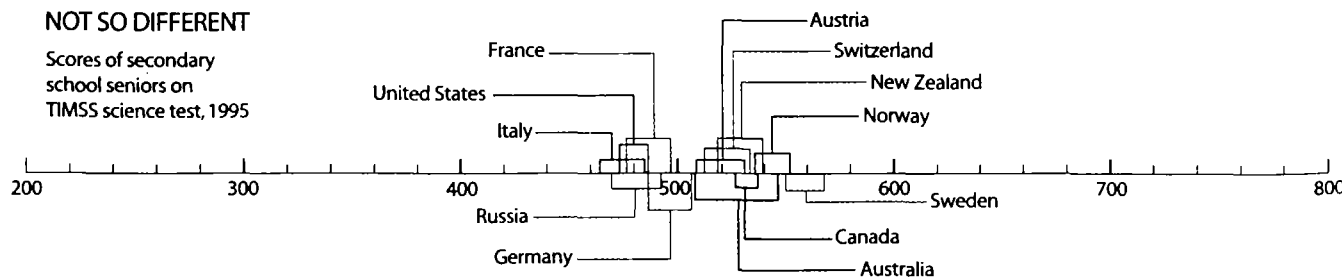
California, for example, spent \$3.7 billion to reduce class sizes after Tennessee had rapid success in a small trial. After three years, student scores have barely budged. Yet the federal government has budgeted \$12.4 billion to shrink classes.

A second reason for skepticism is that a close look at the statistical evidence reveals no sudden decline in the science and math knowledge of those leaving high school. To the contrary, teenagers' scores on national tests have been inching upward for more than a decade, and surveys show that the average young adult knows slightly more basic science than his parents and grandparents do [see box on next page].

From 1980 to 1995 college enrollments swelled 29 percent, despite a falling population of college-age kids—a decline, incidentally, that will reverse next year. Teachers boasted twice as many master's degrees and years of experience in 1996 as those in 1966 did. High school student-teacher ratios shrank 27 percent in the same period. This decade has seen the number of college degrees awarded in science and engineering soar.

NOT SO DIFFERENT

Scores of secondary school seniors on TIMSS science test, 1995



LOW RANK OF AMERICAN TEENAGERS on TIMSS made headlines, but that crude statistic belies how closely the average

scores of the U.S.'s major competitors were clustered, especially when margins of error (*brackets*) are taken into account.

U.S. Research Feels No Crisis

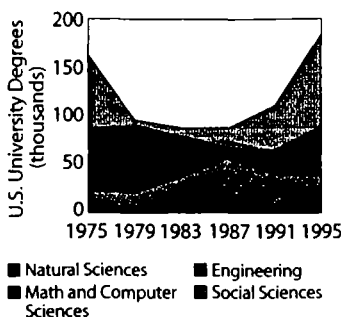
Whatever the state of secondary school math and science education, the university departments that produce the elite corps of scientists and engineers for the U.S. suffer no shortage of bright students (*left*). Annual production of science and engineering Ph.D.'s has soared 130 percent since 1966, while the U.S. population grew just 35 percent. Some disciplines have done better than others, of course—enrollment in physics Ph.D. programs is down 27 percent since 1992. But Patrick J. Mulvey of the American Institute of Physics claims that the dip merely reflects a sagging post-cold war job market for defense-related disciplines.

In other fields, forecasters worry more about a flood of new scientists than about a shortage of them. Last year a National Research Council report urged universities to freeze the size of their biology graduate programs for this very reason.

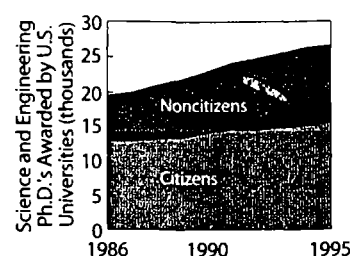
Part of the growth in U.S. Ph.D. production stems from a steady rise in international stu-

dents (*right*). After graduating, a large fraction of these Ph.D. recipients have traditionally remained in the U.S. to work, and that proportion is growing. In 1996 about 68 percent of foreign citizens who received science or engineering doctorates planned to stay in the U.S., up from 49 percent in 1980. —D.F.

Technical degrees are rising ...



... fueled by an influx of foreign students



SOURCE: National Science Foundation

Wanted: Strong Thinkers

When the economy is bad, schools always get the blame," observes J. Myron Atkin of Stanford University. "But when the economy is good, they never get the credit."

Atkin has a point. Two independent analyses of global economic competitiveness this year ranked the U.S. in first or second place (behind tiny Singapore). And yet a co-author of one of those reports, Harvard University economist Michael E. Porter, warned at a press conference in July that "although the U.S. is very competitive and pumping out innovations at a feverish pace today, the scientists that are creating those innovations graduated from university five to 20 years ago."

"Among the drivers of innovation," Porter concluded, "the biggest problem in the U.S. is a growing crisis in science and technical personnel." He and Harvard colleague Jeffrey Sachs called out the nation's public schools as a prime suspect.

Many take it as axiomatic that the science and math skills of high school graduates are critical to the health of the U.S. economy. But several lines of evidence contradict that assumption. To start, the detailed microeconomic analyses by Porter and others on which the competitiveness reports are based list dozens of variables, from trade policy to the zeal of antitrust prosecutors, that influence a nation's ability to succeed in the global economy. "Adequacy of schooling" is low on the list—beneath "port infrastructure quality," for example. "Quality of scientists and engineers" falls even lower. Both are among the hardest for politicians to change.

Furthermore, Porter's alarm notwithstanding, university production of scientists and engineers has been increasing overall [see box above], despite competition from a strong job market and a collapsing population of 20- to 24-year-olds. No one can predict whether recent graduates will be as productive as their predecessors. But it is interesting that many innovators who left university "five to 20 years ago" were schooled during the science education "crisis" of the early 1980s.

Anthony P. Carnevale, a labor economist with the Educational Testing Service in Princeton, N.J., raises a third point. "Just because technology is the major ingredient in the economic pie doesn't mean the pie then slices up into technology jobs," he says. Around the last turn of the century, new technologies based on electricity, aluminum, automobiles and rayon created some jobs for technical specialists, notes Harvard historian Claudia Goldin. But the chief results were more office jobs and a higher demand for basic literacy and numeracy.

Advances in information technology are having a similar effect, Carnevale says. Between 1959 and 1997 the nation added more than five times as many office jobs as technical positions. From a detailed survey of census statistics, Carnevale concluded that at most 13 percent of American workers require higher math (trigonometry or calculus) for their jobs. But roughly 57

At most, 13 percent of American workers require higher math for their jobs.

percent need significant analytical and verbal reasoning abilities.

There are many ways to teach high-level reasoning, Carnevale points out: "We used to teach Latin; math serves that function now. But it's the general ability that's more and more in demand, not the specific one." If that is true, then traditional math and science instruction, with its emphasis on memorizing facts and procedures, does students a disservice.

With a 96 percent employment rate, shortages of hot technical skills are inevitable. But public school reform is a slow and uncertain way to address them. "When the personnel department wants people who have three years of experience with a technology that's only 18 months old," remarks William Aspray, head of the Computing Research Association in Washington, D.C., "they're not going to find them." —W.W.G. and D.F.

A Day in the Life of Three Schools by W. Wayt Gibbs

TASCOSA HIGH SCHOOL, AMARILLO, TEXAS

Most Americans would find much at Tascosa High that is familiar. Students bustle past massive cases full of athletic trophies; they address certain teachers as "Coach." After the bell, hall monitors stop kids without passes. Among the 2,100 students here, "attendance is the biggest problem," principal Bob Daniels says, between loudspeaker announcements about sports teams and social events.

The science and math classes at Tascosa also follow century-old American traditions. In Room 221, Rebecca Evans projects questions reviewing the semester's work in her ninth-grade physical science class. Nearly all the items ask only for definitions or formulas: What is refraction? What is specific heat? What does a diffraction grating do?

Copying from the overhead, several of the students ask nonsensical questions. "What's the unit for welk?" one asks, misreading "work." "Is that $(m + m)/s$?" asks another, misreading the units for momentum.

"The demos are cool," one freshman remarks. He recounts one in which Evans filled a bottle with water and compressed gas, then shot it into the air. "We found that the more water in the bottle, the higher it went." Why? "Because the more water in the bottle, the more compressed the air," he states with confidence, betraying a fundamental misconception about how rockets work. Their 800-page textbook devotes only three sentences to explain that thrust is proportional to the mass of the expelled propellant (the water).

In Michael Miller's chemistry class, senior Clay Estes says that "many science teachers just want you to take notes and learn on your own. But here we often have class discussions; everyone participates." "Coach Miller is a really, really good teacher," agrees Lainie Kitser, also a senior. "But chemistry didn't seem as relevant as biology did. The labs were just following a recipe, and we jumped right into memorizing formulas and the periodic table. If they decided to build



MATH CLASS, same as it ever was.

a chemical plant in Amarillo, I don't feel like I'd be very informed."

Many reform experts suggest that high school should teach kids science they can apply to real life. But the teachers at Tascosa have few incentives to do that. Jo Meaker created a hands-on marine science course, through which the students become certified to monitor water quality in local reservoirs. Terri Slaughter started a course in anatomy and physiology that made frequent field trips to hospitals and veterinary clinics. But both had their classes cut this year from three to one.

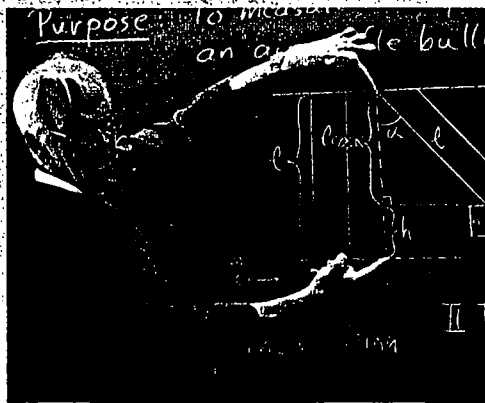
"The dilemma is that the state-required science courses are aimed at college-bound kids," notes Teresa Railsback, a chemistry teacher. "You would like to teach them consumer chemistry so that they can be informed citizens. But you don't want them getting to college and facing two semesters of remedial chemistry." College science courses are rife with memorization and abstract computational problems. And so the tradition continues.

DRAGONSKOLAN, UMEÅ, SWEDEN

Lena Björklund, in white lab coat, glances at a dial on the device into which she pushes a vial of violet liquid. Crowded around her, students compare her actions to the step-by-step instructions on their handouts. In a few minutes, they will mimic the procedure. "The goal of this lab," Björklund explains, "is to learn how to use the spectrophotometer."

Down the hall, Gunnar Källström lectures for 10 minutes on the photoelectric effect. There is no clock on the dingy walls, no bell to signal the start or end of the lesson, no loudspeaker. "Any questions?" he asks, but the only reply is a stifled yawn. He returns to the board, and the seniors dili-

gently copy his notes as he races in 15 minutes through the theories of atomic structure, energy levels, electron excitation. "Any questions?" Silence. "Okay. On to relativity...."



Many in the U.S. might envy Sweden's high schools. On the last international science test, Swedish seniors scored highest in the world. The 2,000 teenagers in Dragonskolan are quieter and more attentive than their Texan peers. Science classes are a paragon of traditional instruction. "We focus on procedures to solve various classes of problems," says Andreas Lindgren, who teaches physics and math. "Ap-

AN OLD-FASHIONED LECTURE, with Källström at the board.

plications are barely touched on. The emphasis has been on filling the pipeline with good research people." To that end, sophomores must choose among 16 tracks. Only two lead to college, and those paths commit them to rigorous, theoretical courses in biology, chemistry, physics, and math up to calculus.

Yet the Swedes themselves are unhappy with their schools and have forced the education ministry to make sweeping reforms. Since 1994 it has abolished its national exams and replaced the national curriculum with standards that local schools can achieve however they see fit. It cut back on required courses. And science and math classes are supposed to emphasize applications, historical context and social issues as much as theory and calculation.

After five years, these changes have seeped only into corners of Dragonskolan. In one room, groups of kids in an environmental science class make presentations on how carbon dioxide, phosphorus, freshwater and ozone move through

ecological and economic cycles. Anna Malmros, their teacher, asks leading questions that provoke animated discussions on farming practices and government regulations. "The students are encouraged to form opinions on problems and to suggest ways to address them," Malmros explains. "Now we'll work with this information."

Källström's math class is more typical. To American eyes, it is stunningly challenging—these sophomores are already learning basic calculus taught solely in English, a foreign language. But several of the students say that only the English seems interesting and useful.

"May I ask a stupid question?" one girl pipes up at a pause in the lecture. "Is this what is called an integral? Because I don't understand what an integral is." Källström reiterates the terminological distinction between an integral and an antiderivative. The girl's face retracts in frustrated confusion, and she stares again at her book.

BEDFORD ROAD COLLEGIATE INSTITUTE, SASKATOON, CANADA

As in Sweden, high school seniors in Canada earned notably higher science and math marks on the 1995 TIMSS tests than American students did. And since then, Canada, like Sweden, has pushed its schools to overhaul those subjects. But at Bedford Road, a typical school in this city of 108,000 in the Saskatchewan breadbasket, the changes are much more visible than at Dragonskolan or Tascosa High.

"I used to teach in a rigid sequence," says Richard Dybvig, who heads the science department. "But eventually I realized that I was turning out little robots." Dybvig helped to write new curriculum guidelines for the province urging teachers to rely more on open-ended experiments and to talk about the social issues raised by science and technology.

In his advanced biology class, clusters of students puzzle over letters representing a genetic sequence. Dybvig has asked them to find a match in the sequence for a small DNA fragment, and none of the kids have realized yet that they must search for the letters that complement those in the fragment. For 10 minutes he stands aside, answering their questions with his own, until each group figures it out.

He then explains how this same principle is used to do DNA fingerprinting in court cases. Without prompting, the kids pepper him with questions. "If you have the sequence for a certain disease, does that mean you are guaranteed to get it?" (Dybvig talks about genetic propensities, using breast cancer as an example.) "If you could alter genes for aging, could you live longer?" (He admits that he does not know, but he summarizes recent research on the limits of cell division.)

"For 90 percent of the course, I let them choose their own curriculum," Dybvig says. "The topic is energy, I'll say. Tell me what you want to learn. As we move toward where they want to go, they invariably realize that they have to know certain basic facts and principles. But they want to know them."

The students have come to expect what they learn to make sense and be relevant. In a precalculus class for juniors, Kevin Sawatzky graphs an equation on the board, describing each step of the process. At every turn, several students call out "How do you know that?" He stops, explains and moves on only when they are satisfied.

"What's this useful for?" one fellow asks. "I'll give you some



DEDUCING A THEORY,
Bonny (in yellow) gets advice from Stonehouse.

electrical engineering problems that use rational functions," the teacher promises. "How's that?" "Cool," the boy says.

"When we do labs, we usually head into them blind. Later we work up our own theory and compare it to what's in the book," says junior Jordan Bean. "It's more fun that way," adds Jesse Campbell. "And it keeps you from cooking your results."

Upstairs, Norman Stonehouse is jumping about a chaotic room full of seniors as they collide wheeled carts on tabletops. Ticker tapes and one ancient PC measure the carts' speed before and after the collision. "I told them to find out whether momentum and kinetic energy will be conserved," Stonehouse explains. "But it's up to them to decide how, and they won't know the answer until they compile their data."

"What I like is that we get the skills to get knowledge rather than having the knowledge force-fed to us," remarks Ellie Bonny, a senior. "Their next challenge is to determine the velocity of a marble coming out of a slingshot," Stonehouse says. As he straightens the room at the end of class, and the students trickle out the door, the boys and girls talk animatedly, but not about gossip, or sports, or music. They talk about physics.

Continued from page 88

concur. "It is preparation for further schooling, not for real life."

The evidence suggests that in practice the supply of scientists and engineers is controlled by universities, not by secondary schools [see box on page 89]. Of the 305,000 students who took introductory college physics courses in 1988, only 1.6 percent went on to get a bachelor's degree in the subject. The crop yielded a scant 700 doctorates. If the U.S. needs more scientists, says Glen S. Aikenhead of the University of Saskatchewan, the quickest and most reliable solution is to weed out fewer aspiring undergraduates.

There is good reason, too, to doubt that public school science has much influence on economic competitiveness or productivity [see box on page 89]. And if science education is in fact a weak and clumsy lever for boosting research or for moving the economy, then much of the science and math that schools try to teach is pointless.

"When I and other researchers looked at the science that people need to know for decisions that adults actually make—whether they were judges in court cases, politicians on planning committees, poor people budgeting for energy costs or parents who have children with special medical conditions—we found that idealized, abstract science is completely useless," Aikenhead says.

The false crisis in science education masks the sad truth that the vast majority of students are taught science that is utterly irrelevant to their lives—and that "scientists are a major part of the problem; many think that the system is a good system because it produced them," argues William F. McComas of the University of Southern California.

"There is plenty of time after high school for scientists-to-be to learn the minute facts of science," he says. What they need from the schools, Hurd elaborates, are the higher thinking skills "to distinguish evidence from propaganda, probability from certainty, rational beliefs from superstitions, data from assertions, science from folklore, theory from dogma." And opportunity from crisis. ■

W. WAYT GIBBS and DOUGLAS FOX both live in San Francisco. Gibbs is senior writer for *Scientific American*. Fox is a freelance science writer.

For an enhanced version of this article, go to the *Scientific American* Web site at www.sciam.com

Six Steps toward Science and Math Literacy

SCIENTIFIC AMERICAN asked experts in science education for feasible, proven ways to improve science and math instruction in the public schools. Here are some of their responses.

1 Replace memorization with exploration and invention. *Arthur L. White, executive secretary, National Association for Research in Science Teaching*

Traditional science instruction follows three steps. First, teachers use textbook readings and lectures to introduce new terms and concepts. Next, they solve sample problems at the board and assign practice work. Finally, they hand out step-by-step instructions for a controlled laboratory experiment, the outcome of which the students are already supposed to know.

Well over 30 years of cognitive science research and trials in classrooms have revealed serious flaws in this technique. At root, the problem is that children, when faced with new information, make different connections than adults do. "Density equals mass divided by volume," a child is told—and immediately tries to relate this to firsthand experiences: attending Sunday "mass," turning the "volume" knob on the radio, being called "dense" by a sibling. Too often the child gives up in frustration.

We now know of a better approach,

called a learning cycle. It also uses three steps. But the experiment comes first, and students are encouraged to explore phenomena however they wish. The teacher then helps the students to find patterns in the data and to form hypotheses—just as a scientist would—about the underlying rules. Only then does the teacher put labels and terms to what the kids have observed and invented. The final critical step is to apply the knowledge through field trips, more experiments, realistic problems, readings and other means of connecting the new knowledge to what students see as "real life."

Numerous studies have found that students taught using this approach retain more of what they learn, look at science with greater enthusiasm, perform high-level reasoning tasks better and solve real science problems more adeptly.

2 Focus the high school curriculum. *William H. Schmidt, U.S. national coordinator, Third International Math and Science Study (TIMSS)*

The results of TIMSS confirmed a longstanding criticism of American schools: that the curriculum they teach is a mile wide and an inch deep. With few exceptions, U.S. schools try to cover far more topics than those in other countries do. American



REAL-WORLD RESEARCH
that allows kids to test their own theories is best for teaching science, many experts say.

13 Pages

TO: Bethany Little

FROM: Curtis Richards

RE: MORE SPECIAL EDUCATION INFORMATION

As mentioned in my prior memo, this is a package of materials taken from our STILL TOP SECRET FY 2001 Budget Request. I thought it would be helpful for you to see some detailed information about three critical areas.

The first three pages describe the network of Parent Training & Information Centers begun in the Clinton-Gore Administration. These centers have become critical networks for empowering families of disabled children as well as involving parents of these disabled children more substantively in the work of schools.

The next two pages are background about the shortage of special education teachers, and the need for a substantial investment in professional development.

And, the final seven pages offer the detail of the Clinton-Gore proposal for a Primary Education Intervention program. This was an FY 2000 budget proposal for \$50 million that Congress has so far rejected, and we will again request in FY 2001.

Research shows that the earlier we meet the needs of children with disabilities, the better the results. To put this research into practice, the Primary Education Intervention program would demonstrate how research-based interventions, coupled with early identification, can improve results for children with developmental delays. This program would help school districts meet the needs of children ages five through nine whom have marked problems learning to read or who have behavioral problems. This initiative would help schools develop and implement research based strategies to identify and address reading problems in the early grades to reach children sooner and give them the extra help they need to become good readers.

The Primary Education Intervention program would target children with developmental delays who are experiencing significant problems

in learning to read and who are exhibiting behavioral problems. These children often do not receive special education services until the late primary or middle grades when their problems have worsened due to inattention. The proposal would fund model demonstration projects that would apply research-based knowledge to local practice. Funds would also be used to provide technical assistance and program evaluation activities.

Lastly, please be sure to reach out to Judith Raskin (603.224.7005) who heads the parent training and information center and Larry Robinson (603.228.9680) who heads the Independent Living Center in Concord. These are two key networks for people with disabilities and their families.

If you need anything else, please do not hesitate to contact me.

SPECIAL EDUCATION

National activities: Parent Information centers

(Individuals with Disabilities Education Act, Part D, Subpart 2, Chapter 1, Sections 682-684)

FY 2001 Authorization (\$000s): Indefinite

Budget Authority (\$000s):

<u>2000</u> <u>Predicted Appropriation</u>	<u>2001</u> <u>Request</u>	<u>Change</u>
\$22,535	\$27,000	+\$4,465

PROGRAM DESCRIPTION

The Parent Information Centers program is one of the primary vehicles under the IDEA for providing information and training to parents of children with disabilities. The program supports awards to assist parents to:

- Understand educational and early intervention services, and procedural safeguards under IDEA;
- Understand the nature of their children's disabilities and their educational and developmental needs; and
- Communicate effectively with personnel responsible for providing special education, early intervention, and related services, and participate in the decision-making processes and development of individualized educational programs.

Three types of projects are authorized -- parent training and information centers, community parent resource centers, and technical assistance for parent centers.

Parent training and information centers must serve parents of children with all types of disabilities. Awards are made only to parent organizations as defined by the Individuals with Disabilities Education Act. The training and information provided by the centers must meet the training and information needs of parents of children with disabilities living in the areas served by the centers, particularly underserved parents and parents of children who may be inappropriately identified. At least one award for a parent training and information center must be made in each State, subject to the submission of acceptable applications. Large and heavily populated States have multiple centers.

Community parent resource centers are parent training and information centers, operated by local parent organizations, that help ensure that underserved parents of children with disabilities, including low-income parents, parents of children with limited English proficiency, and parents with disabilities, have the training and information they need to enable them to participate effectively in helping their children. Community parent resource centers are required

SPECIAL EDUCATION

National activities: Parent information centers

to establish cooperative partnerships with the other parent training and information centers in their States.

Technical assistance is also authorized to assist parent training and information centers, including community centers, in areas such as coordinating parent training efforts, disseminating information, self-evaluation, and promoting the use of technology.

While parent centers act as direct resources for parents and families they also serve as referral points to other resources such as those available under the Technical Assistance and Dissemination program. Technical Assistance and Dissemination activities are coordinated with Parent Information Centers activities to ensure that parents participating in parent training projects as well as other parents have access to validated information that is designed to address their needs.

The budget periods of most awards include parts of the fiscal year of appropriation and the subsequent fiscal year. The duration of awards varies from 1 to 5 years.

Funding levels for the past 5 fiscal years were:

	(\$000s)
1996	0 ¹
1997	0 ¹
1998	\$18,535
1999	18,535
2000	22,535

¹ Prior to 1998, funding for parent training activities such as those under the Parent Information Centers program was provided under the now expired Special Purpose Funds activities.

FY 2001 BUDGET REQUEST

The request for the Parent Information Centers program is \$27 million, \$4.5 million more than the projected level for 2000. The Department believes that parents are an underutilized resource in our efforts to improve results for children with disabilities, and that the Parent Information Centers program provides one of the best means for tapping this resource. Increased funding for the program is particularly important because the IDEA Amendments of 1997 significantly expanded the opportunities for parents to participate in the planning of their children's educational programs.

Family involvement in children's learning is critical to achieving high-quality education. Three decades of research show that positive school-family partnerships can be built to inform and involve families in their children's learning. Studies show that all families can take concrete steps that significantly help their children succeed in school, regardless of their income, education, or knowledge of the English language. The training and information provided by the parent centers helps ensure that parents have the knowledge and skills to help their children succeed. In addition to helping parents better understand the nature of their children's

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National activities: Parent information centers

disabilities and their educational and developmental needs, the centers provide training and information on how parents can work with professionals serving their children. For school-aged children, this includes participating with administrators and teachers in the development of their Individualized Education Programs (IEPs). For infants and toddlers receiving early intervention services, it means participating with a multidisciplinary team in the development of Individualized Family Service Plans (IFSPs).

The increased funds requested for Parent Information Centers will allow the centers to reach more parents and to provide information parents need to improve results for their children. This includes information on the expanded roles for parents in decisions regarding their children's eligibility for special education, evaluations of their children, development of IEPs for their children, and meetings to discuss placements. Parent centers also provide information to parents regarding what they should expect from States and from local educational agencies. This includes information on new State requirements to include children with disabilities in general assessments, conduct alternative assessments for children who cannot participate in general assessments, and report on the results of assessments, as well as the new requirement that regular education teachers be a part of IEP teams if a child is or may be placed in a regular education class.

The parent centers also play an increasingly important role in dispute resolution by explaining to parents the benefits of alternative methods of dispute resolution, such as the mediation process that the IDEA Amendments of 1997 now require that every State put in place. As part of that role, parent centers are now required, at the option of State educational agencies, to contract with those agencies to provide individuals who will meet with parents to explain the IDEA mandated mediation process to them.

About \$4.2 million of the increase would be distributed among 73 new and continuing State parent training and information center projects, including two special focus centers that target the needs of parents of children who are served in schools operated by the military and parents of children served in schools operated by the Bureau of Indian Affairs. This is the same number as supported in 2000. The average award would be increased from about \$253,000 to \$309,000. The additional funds would be used by the centers to address unmet demand for information through a variety of means such as conducting more training workshops, expanding telephone access, and translating information on local programs into foreign languages. The remaining additional funds requested would be used to support a new special focus center to address the needs of migrant families. State centers typically do not have the capacity or expertise for addressing the needs of these parents. The special focus center for migrants would fill this gap by identifying migrant parents and providing them with information and training on how to deal with changing State and local environments as their children move from one educational jurisdiction to another.

The requested level would also provide \$1 million for 10 new awards for Community centers and \$1.4 million for a new award to provide technical assistance to the parent training centers.

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National activities: State improvement

appropriations language authorizing it to award more than the \$2 million currently authorized for individual States.

The request for a major increase in funding is in recognition of the significant potential that these resources have in making a positive difference in the education of children with disabilities over the next five to ten year period. It is well-documented that teacher shortages and inadequately trained teachers in special education are among the most pressing and chronic problems facing the field, and the State Improvement program is an excellent vehicle for addressing the States' needs in these important areas.

There is a need for fully-certified, and highly qualified personnel to work with children with disabilities.

When discussing the chronic personnel shortages in special education, one needs to consider two distinct types of teacher shortages. First, there is a quantity shortage, because the number of individuals who are available to fill all established and funded positions is insufficient to fill those positions. In addition, there is a quality shortage, because of the insufficient number of teachers who are fully certified and adequately trained for their positions.

Each year, approximately 28,000 teachers are needed for new hires, and an additional 36,000 are needed to replace teachers who are not fully certified. Some of the uncertified teachers may be working toward full certification, others may be teaching out of field temporarily with the intention of returning to a previous position for which they are fully certified, and others may spend years in the classroom without ever becoming fully certified as special education teachers.

One obvious way that a State or local district can address its need for teachers is through university-based teacher preparation programs, but the numbers of new teachers graduating from these programs each year fall far short of those needed. For example, in 1994, the number of degree graduates from special education teacher preparation programs was only 18,250, insufficient to address the need for even new hires, let alone the need for certified teachers.

While teacher shortages exist in general education, as well, the problem is more chronic in special education for a number of reasons: the annual demand for entering teacher hires in special education is greater than in general education; the annual supply of degree graduates of teacher preparation programs in special education has been exceptionally low in comparison with general education; and evidence shows that considerably more special education teachers switch to general education annually than the other way around.

There is still one more component of the personnel shortage issue that often gets overlooked. Of those teachers who are fully certified, many still may need upgraded skills each year in areas such as technology, instruction, and assessment. The field of education, including special education, is changing at an increasingly rapid pace. All teachers need to be adept at integrating the latest technologies into classroom instruction, and be able to employ new strategies to solve the novel problems with which they are faced. Changes in the laws governing special education also lead to new requirements that may necessitate training for

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National activities: State improvement

existing teachers. Also, special education students are spending more and more time in the mainstream environment – which means that general education teachers need to be skilled at employing many of the same strategies as special education teachers. For many special and general education teachers, the only practical way to gain the necessary skills is through professional development provided by State and local educational agencies.

The State Improvement program is one of the best vehicles for addressing States' needs for highly-qualified personnel.

By statute, at least 75 percent of the State Improvement grant award must be used for professional development activities. A State Improvement grant award will be a critical source of funding to ensure, through inservice and preservice preparation, that all special education and general education personnel who work with children with disabilities have the skills and knowledge necessary to meet the needs of those children.

Based on activities outlined in their State Improvement grant proposals, States are planning on meeting their needs in a number of innovative and creative ways:

- Michigan is using SIG funds to develop a novel system of "hubs", a statewide system that will (1) identify promising practices through research; (2) disseminate research and promising practices information; (3) provide staff development to instructional staff to support the dissemination; and (4) provide support to local districts in the dissemination and adoption of promising practices.
- In Virginia, the State Department of Education will be providing extensive statewide professional development to align special education instruction with their high stakes Standards of Learning (SOL) that all student will have to meet. The outcome should be greater achievement for special education students in the SOL testing process.
- California is also making subgrants to IHEs to ensure that special education coursework that leads to special education certification is offered at times and places that are convenient and accessible to school staff in order to decrease the number of teachers who work under emergency certification. Subgrants will also be used to expand the number of courses that are available because the IHEs have waiting lists for students who wish to access special education coursework.
- Alabama is supporting the development of web-based instructional modules that will support widespread professional development in the areas of reading and positive behavior supports. The State Improvement grant will also support the development and dissemination of web-based special education content syllabi to be used by IHE staff involved in the instruction of future general and special educators in order to systematize and upgrade the course offerings across the State.
- Maryland is making subgrants to institutions of higher education (IHEs) in order to broker changes in the IHE preservice offerings to general education majors and special education majors. They hope that this will result in: (1) aligning IHE curricular offerings for both special

SPECIAL EDUCATION

National activities: Primary education intervention

(Individuals with Disabilities Education Act, Part D, Subpart 2, Chapter 1, Section 672)

FY 2001 Authorization (\$000s): Indefinite

Budget Authority (\$000s):

<u>2000</u> <u>Predicted Appropriation</u>	<u>2001</u> <u>Request</u>	<u>Change</u>
\$50,000	\$100,000	+\$50,000

PROGRAM DESCRIPTION

Funding for the Primary Education Intervention program was first included in the 2000 budget request to Congress. The program would be funded under the authority of section 672, which also authorizes the Research and Innovation program. The program would support competitive grants to local educational agencies to develop, demonstrate, and evaluate research-based model interventions for children with developmental delays ages 3 through 9. Children with developmental delays include those with delays in physical development, cognitive development, communication development, social or emotional development, or adaptive development. These grants would focus specifically on two areas: reading and emotional or behavior problems. These areas have been chosen because of the large number of children with developmental delays in these areas and because early intervention in these areas has been identified as being particularly effective in improving results for children, but services have typically been delayed because of late identification and a lack of appropriate early childhood interventions. Awards would be made for a period of up to 5 years.

In 1991, IDEA was amended to allow States the option of using a developmental delay category for preschool children, ages 3 through 5, being served under Part B of the Act (Grants to States and Preschool Grants programs). Congress further expanded the developmental delay category in the IDEA Amendments of 1997 to cover children through the age of 9 at the discretion of States and LEAs. This change provides a significant opportunity for improving services to children with disabilities. Because of the difficulties in appropriately identifying young children using specific disability categories, many children who could benefit from early intervention have not received services until their disabilities have become substantially worse. In addition to encouraging services to be provided earlier, when they can be most effective in addressing the needs of children, the use of the developmental delay category could actually reduce the need of these children for special education services as they grow older.

The program would also support technical assistance to grantees to help them in implementing projects and rigorous evaluations to determine effective practices.

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National activities: Primary education intervention

Funding levels for the past 5 fiscal years were:

	(\$000s)
1996	0 ¹
1997	0 ¹
1998	0 ¹
1999	0 ¹
2000	\$50,000

¹ Prior to 2000, no funding was requested or appropriated.

FY 2001 BUDGET REQUEST

The Department is requesting an increase of \$50 million for 2001, double the amount requested for 2000, to demonstrate how effective interventions coupled with early identification can improve results for children with disabilities. Two specific populations of children with developmental delays would be targeted under this initiative: those with significant problems in learning to read, and those exhibiting behaviors that have been found to lead to significant discipline problems or emotional disturbance as they get older. These children typically do not receive special education services until the late primary grades when their problems have worsened due to lack of appropriate interventions to address their needs. Research shows clearly that the earlier the needs of these children are met, the higher the likelihood that they will achieve better results.

A substantial and compelling body of research tells us how to assess, identify, and help these children. For instance, research indicates that: (1) both populations of children, those having marked problems learning to read, and those who exhibit behavior problems that often lead to significant discipline problems or emotional disturbance as they get older, can be assessed and identified early and with relative ease and accuracy; (2) both populations of children, based on the nature of their disabilities, are at high risk for dropping out of school, becoming discipline problems, and for failing in school; (3) valuable time, which is essential to learning in both populations of children, is often lost because these children do not receive appropriate services early; and (4) both populations can make tremendous gains when provided with effective early childhood services. In practice, however, teachers, school administrators, and school board members simply do not have the knowledge to implement effective research-based early interventions to meet the needs of these children. Each population is described briefly below.

Children with Marked Difficulties Learning to Read

Approximately 5 percent of all children currently in public education are identified as having a learning disability. The vast majority of these children (approximately 80 percent) experience their primary difficulties in learning to read. Research suggests that learning disabilities related to basic reading skills are primarily caused by deficits in a child's phonological awareness. According to the Committee on the Prevention of Reading Difficulties in Young Children, these deficits can be identified in late kindergarten and early first grade using relatively inexpensive and straightforward testing. Currently, however, the most widely accepted criterion for the

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National activities: Primary education intervention

identification of students with learning disabilities is a discrepancy between a student's intelligence, as measured by standardized IQ tests, and their ability to achieve academically in school. Due to the widespread use of this discrepancy criterion, most schools do not identify students with learning disabilities until after they have already experienced significant failure in school and are reading well below grade level, generally somewhere around the third or fourth grade. In addition, those children who are identified with difficulties learning to read while in the third grade are found to be still reading significantly below grade level in the ninth grade. Research also strongly suggests that children with learning disabilities who are at risk for reading failure should be identified well before the age of nine, if interventions are to be successful.

Children Who Exhibit Behaviors that Lead to Later Emotional Problems

Currently, approximately 447,000 (8.5 percent) of children ages 6 through 21 served under IDEA are identified as having emotional disturbance. Research indicates that children described as having significant emotional or behavioral problems can often be identified very accurately by the age of 3 or 4 years. Some experts also believe that unless the behavior patterns of these children are changed by the age of 9, the likelihood that we can change these behaviors decreases substantially. In addition, these emotional or behavior patterns tend to become more destructive over time. Beginning as early as the fourth or fifth grade, these children frequently develop a support system of other children with similar problems. The long term results for these children are often quite bleak, including low achievement and school failure, low self-esteem, early teen pregnancy, drug and alcohol abuse, poor school attendance, truancy and juvenile delinquency. The National Longitudinal Transition Study of Special Education Students reported that almost half of students attending high school and identified as having emotional disturbances left school by dropping out.

Much of the research conducted over the last decade has consistently shown that some early childhood intervention programs can significantly reduce the prevalence of emotional and behavioral problems in young children. The most effective of these approaches have been multi-dimensional; going beyond the school setting to treat children in their broader environments. These approaches involve the child's family, as well as other social institutions, such as child-care and child-welfare services, community health, and mental health. According to some researchers, early detection, and intervention with these children in home, school, and community environments is the single best hope we have of successfully addressing this complex problem and reducing discipline problems with children with disabilities in schools and communities.

The program would consist of three components: model demonstrations, technical assistance, and evaluation.

Model Demonstrations

About \$46.5 million of the requested increase would be used to support new model demonstration awards. This would increase funding for demonstration awards from \$44.9 million to \$91.4 million. These awards would support development, demonstration, and

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National activities: Primary education Intervention

evaluation activities designed to help LEAs apply research-based knowledge to local practice. Competitive grants would be made to LEAs using the developmental delay category. For LEAs located in States that do not use this category, the LEA would be able to use its own definition of developmental delay. However, a competitive preference would be provided to LEAs located in States that use the developmental delay category.

Projects are expected to be located in a wide range of schools and school districts across the country.

Although funding would be limited to LEAs, LEAs would be encouraged to collaborate with institutions of higher education (IHEs) and other appropriate organizations at all stages of their projects. This collaboration is expected to help the translation of validated research findings into model practices and to help ensure the quality of evaluation findings.

The size of awards would vary based on the number of schools that the LEA proposes to include in its demonstration, the numbers of children to be served, the type of interventions included in the demonstration, and whether the demonstration would include interventions dealing with reading or behavior problems or both. It is expected that about 75 awards would be made in 2000. The request would allow an additional 78 new awards to be made in 2001.

Technical Assistance

An additional \$2 million would be used to increase technical assistance under the program from \$3 million to \$5 million. Technical assistance activities would include developing and distributing information on research-based practices and the establishment of a network of experts who would be available to respond to district-specific technical assistance requests. Technical assistance would address project design, implementation, and evaluation.

Evaluation

An additional \$1.5 million would be used to increase funds available to evaluate the relative effectiveness of the models from \$2 million to \$3.5 million. Evaluation is a critical part of the program. Model demonstrations would be evaluated taking into consideration a variety of factors including school settings, such as schools in urban and rural districts, and an array of demographic and socioeconomic variables. In addition, the evaluation would look at which models are most cost-effective, and therefore most affordable for other districts to replicate. To accomplish this, the evaluation would describe the circumstances under which models are effective, including the characteristics of the schools and districts in which the models are implemented. The evaluation would also consider questions related to the infrastructure of LEAs, including what is done to facilitate or impede the success of schools in implementing model practices.

The evaluation would make comparisons between children who receive interventions and those who do not. For this reason, the establishment of baseline data will be particularly important. It is anticipated that the evaluation would continue beyond the end of projects. This would allow

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National activities: Primary education intervention

evaluators to make longitudinal comparisons between children who receive services early and those who are not identified and do not receive services until later in school.

This initiative would complement activities funded under the Reading Excellence Act (REA). Research has demonstrated that the majority of children who fail to learn to read will learn to read if they are provided with high quality reading instruction. The REA addresses this need by providing funds to high-needs schools to improve early reading instruction, and to help ensure that children with reading difficulties are not inappropriately referred to special education. Some children, however, have special needs that will not be met by improved regular education instruction alone. The Primary Education Intervention program will address the specialized needs of these children.

SELECTED PROGRAM PERFORMANCE INFORMATION

This section presents information on performance goals and objectives and selected performance indicators and strategies for measuring the progress made toward achieving program results. Desired interim and end targets are identified for each performance indicator where a baseline has been determined. Achievement of targets will be based on the cumulative effect of the resources provided in previous years and those requested in FY 2000 and future years, and the resources of other programs supporting the performance goals and objectives.

Other performance indicators and strategies for this program are included in the Department's Annual Program Performance Plan.

Performance goal: To improve results for children with disabilities by assisting State and local educational agencies to provide children with disabilities access to high-quality education that will help them meet challenging standards and prepare them for employment and independent living.

Objective: Improve the educational results of children with disabilities.

<u>Indicator</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Performance on assessments: The gap between the average score of children with disabilities and children without disabilities in reading will decrease. <i>Baseline to be determined.</i>				

This indicator is part of a broader indicator dealing with mathematics, science, and other academic subjects. It is being measured through the analysis of data collected by the National Assessment of Educational Progress (NAEP) conducted by the National Center for Education Statistics. Data on reading were collected during 1998. However, data on children with disabilities and children without disabilities are still being analyzed and will not be available until 2000.

SPECIAL EDUCATION**National activities: Primary education intervention**

Objective: Schools will provide appropriate behavioral interventions for children with disabilities whose behavior impedes their learning or that of others.

<u>Indicator</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Positive behavior interventions: The percentage of children with disabilities who have been suspended or expelled will decrease. <i>Baseline: During school year 1993-94, 6.2 percent of children with disabilities in elementary and secondary schools were suspended.</i>				

This indicator is currently being measured through data collected by the Office for Civil Rights for its Elementary and Secondary School Civil Rights Compliance Report. This report collects data on the number of students suspended for one or more days. The next data from this report will be for the 1997-98 school year, which is expected to become available in December of 1999. Starting with the 1999-00 school year, data will be collected by the Office of Special Education and Rehabilitative Services just on children with disabilities who have been suspended or expelled for one or more days. This data will become available in fiscal year 2002.

21st Century Community Learning Centers Program

1999 Grants by State Funding 41 States and Territories

Rank	Application #	Applicant Name	City	State	Federal Request*	Totals per State
ALASKA (5)						\$2,954,848
80	R287A990994	Kenai Peninsula Borough School District	Soldotna	AK	\$485,422	
85	R287A990913	Iditarod Area School District REA#11	McGrath	AK	\$873,412	
94	R287A991457	Fairbanks North Star Borough School District	Fairbanks	AK	\$1,013,953	
97	R287A992010	Kodiak Island Borough School District	Kodiak	AK	\$409,770	
163	R287A990265	Chugach School District (REAA #21)	Anchorage	AK	\$172,291	
ARIZONA (5)						\$1,535,171
53	R287A990865	Chinle Unified School District #24	Chinle	AZ	\$183,731	
105	R287A991919	Omega Academy Charter School District	Phoenix	AZ	\$162,383	
113	R287A991453	Northern Arizona Academy	Show Low	AZ	\$450,140	
140	R287A990762	Kayenta Unified School District #27	Kayenta	AZ	\$243,917	
155	R287A991321	Prescott Unified School District #1	Prescott	AZ	\$495,000	
ARKANSAS (2)						\$337,206
107	R287A991588	Plainview Rover Schools	Plainview	AR	\$98,201	
174	R287A991167	Holly Grove School District	Holly Grove	AR	\$239,005	
CALIFORNIA (26)						\$13,993,137
5	R287A991384	Oakland Unified School District	Oakland	CA	\$375,000	
7	R287A990498	Los Angeles Unified School District	Los Angeles	CA	\$2,624,983	
11	R287A991918	Firebaugh-Las Deltas Unified School District	Firebaugh	CA	\$429,530	
19	R287A991509	Ukiah Unified School District	Ukiah	CA	\$125,000	
22	R287A991978	Antelope Valley Union High School District	Lancaster	CA	\$444,483	
23	R287A991371	Pixley Union School District	Pixley	CA	\$155,972	
24	R287A991608	Laton Unified School District	Laton	CA	\$349,780	
30	R287A992058	Pajaro Valley Unified School District	Watsonville	CA	\$432,685	
39	R287A990824	Oakland Unified School District	Oakland	CA	\$567,944	
45	R287A991032	Santa Ana Unified School District	Santa Ana	CA	\$599,925	
60	R287A991294	Alameda Unified School District	Alameda	CA	\$300,000	
68	R287A990399	Pasadena Unified School District	Pasadena	CA	\$1,200,000	
75	R287A990646	Windsor Hill Magnet School	Los Angeles	CA	\$132,954	
88	R287A991543	Tahoe Truckee Unified School District	Truckee	CA	\$305,481	
95	R287A990812	Hueneme Elementary School District	Port Hueneme	CA	\$749,785	
101	R287A991010	Sanger Unified School District	Sanger	CA	\$267,515	
108	R287A990470	Ocean View School District	Huntington Beach	CA	\$178,438	
109	R287A991654	Placentia-Yorba Linda Unified School District	Placentia	CA	\$577,656	
112	R287A991200	Eureka City Schools	Eureka	CA	\$452,852	

21st Century Community Learning Centers Program

1999 Grants by State Funding 41 States and Territories

Rank	Application #	Applicant Name	City	State	Federal Request*	Totals per State
117	R287A990481	Oakland Unified School District	Oakland	CA	\$375,000	
119	R287A991664	Tehama County Department of Education	Red Bluff	CA	\$1,391,908	
128	R287A992033	Vallejo City Unified School District	Vallejo	CA	\$407,569	
144	R287A990013	Vaughn Next Century Learning Center Charter School	San Fernando	CA	\$123,200	
160	R287A991422	Enterprise Elementary School District	Redding	CA	\$389,479	
161	R287A990905	Oxnard School District	Oxnard	CA	\$674,930	
164	R287A990201	San Diego Unified School District	San Diego	CA	\$361,068	
COLORADO (3)						\$1,138,874
3	R287A991207	School District #1, City & County of Denver	Denver	CO	\$690,428	
122	R287A991948	Adams/Arapahoe 28J	Aurora	CO	\$171,749	
149	R287A990834	Jefferson County Public Schools	Golden	CO	\$276,286	
CONNECTICUT (1)						\$313,874
69	R287A990327	Integrated Day Charter School	Norwich	CT	\$313,874	
DELAWARE (2)						\$917,716
70	R287A990984	Red Clay Cons. School District	Wilmington	DE	\$756,701	
125	R287A991179	Colonial School District	New Castle	DE	\$161,015	
DISTRICT OF COLUMBIA (1)						\$1,788,090
151	R287A990247	District of Columbia Public Schools	Washington	DC	\$1,788,090	
FLORIDA (6)						\$4,883,169
67	R287A990195	Duval County School Board	Jacksonville	FL	\$1,516,510	
74	R287A992025	St. John's County School District	St. Augustine	FL	\$263,320	
78	R287A990409	Highlands County School Board	Sebring	FL	\$1,427,668	
133	R287A991642	Hillsborough County Public Schools	Tampa	FL	\$929,144	
152	R287A990468	School District of Indian River County	Vero Beach	FL	\$383,048	
172	R287A990564	Lake County Schools	Tavares	FL	\$363,479	
GEORGIA (5)						\$1,791,321
44	R287A990037	Sumter County Board of Education	Americus	GA	\$250,000	
127	R287A990339	McDuffie County Board of Education	Thomson	GA	\$474,682	
130	R287A991977	Greene Taliaferro Middle School	Greensboro	GA	\$252,489	
154	R287A990512	Muscogee County School District	Columbus	GA	\$465,587	
168	R287A990107	Macon County Board of Education	Ogelethorpe	GA	\$348,563	
HAWAII (2)						\$1,400,000
17	R287A991957	Hawaii State Department of Education	Honolulu	HI	\$600,000	
48	R287A991908	Hawaii State Department of Education	Honolulu	HI	\$800,000	

21st Century Community Learning Centers Program

1999 Grants by State Funding 41 States and Territories

Rank	Application #	Applicant Name	City	State	Federal Request*	Totals per State
ILLINOIS (2)						\$1,474,209
104	R287A990924	Chicago Public Schools	Chicago	IL	\$1,134,289	
141	R287A991768	Wilmington C.U.S.D. #209-U	Wilmington	IL	\$339,920	
IOWA (2)						\$645,238
40	R287A991169	Central Decatur Community School	Leon	IA	\$450,000	
121	R287A991460	Fort Dodge Community School District	Fort Dodge	IA	\$195,238	
KANSAS (9)						\$3,210,035
1	R287A990373	Salina Public Schools	Salina	KS	\$210,883	
2	R287A990338	Unified School District #353	Wellington	KS	\$380,612	
14	R287A991981	Northeast Kansas Education Service Center	Lecompton	KS	\$359,063	
18	R287A991331	Unified School District #457	Garden City	KS	\$1,083,046	
38	R287A991691	Pittsburg USD #250	Pittsburg	KS	\$367,776	
42	R287A990051	Ogden Elementary School	Ogden	KS	\$162,877	
99	R287A991714	Unified School District #500	Kansas City	KS	\$354,289	
100	R287A990346	Spring Hill School District U.S.D. 230	Spring Hill	KS	\$158,935	
171	R287A990949	Unified School District #446	Independence	KS	\$132,554	
KENTUCKY (1)						\$1,115,536
169	R287A991229	Letcher County Board of Education	Whitesburg	KY	\$925,102	
MARYLAND (5)						\$1,982,627
51	R287A990462	Carroll County Public Schools	Westminster	MD	\$448,670	
98	R287A990324	Talbot County Public Schools	Easton	MD	\$298,836	
134	R287A990147	The Board of Education of Dorchester County	Cambridge	MD	\$530,308	
138	R287A990179	Baltimore City Public School System	Baltimore	MD	\$399,193	
148	R287A991613	Charles Carroll, Barrister Elementary School #34	Baltimore	MD	\$305,620	
MASSACHUSETTS (1)						\$1,221,799
61	R287A991034	Worcester Public Schools	Worcester	MA	\$1,221,799	
MICHIGAN (5)						\$4,540,943
33	R287A991638	Orchard View Schools	Muskegon	MI	\$352,249	
37	R287A990023	Albion Public Schools	Albion	MI	\$440,914	
91	R287A991879	Big Rapids Public Schools	Big Rapids	MI	\$1,147,780	
129	R287A990990	Romulus Community Schools	Romulus	MI	\$300,000	
142	R287A991283	School District of the City of Kalamazoo	Kalamazoo	MI	\$2,300,000	

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MINNESOTA (4)						\$1,744,643
57	R287A990508	Mille Lacs Band of Ojibwe	Onamia	MN	\$242,650	
79	R287A990602	Northwest Service Cooperative	Thief River Falls	MN	\$1,059,449	
84	R287A990544	New Visions Charter School	Minneapolis	MN	\$126,917	
92	R287A990417	Cloquet Independent School District 94	Cloquet	MN	\$315,627	
MISSISSIPPI (2)						\$744,903
16	R287A991609	Coffeetown School District	Coffeetown	MS	\$318,821	
137	R287A990065	Perry County School District	New Augusta	MS	\$426,082	
MISSOURI (3)						\$1,367,908
8	R287A991141	East Newton R-VI	Granby	MO	\$394,703	
135	R287A991827	East Prairie R-2 School District	East Prairie	MO	\$614,725	
165	R287A990656	Bloomfield R-14 Schools	Bloomfield	MO	\$358,480	
NEBRASKA (1)						\$232,689
9	R287A991813	Westside Middle School	Omaha	NE	\$232,689	
NEVADA (1)						\$1,149,433
86	R287A990260	Washoe County School District	Reno	NV	\$1,149,433	
NEW HAMPSHIRE (1)						\$339,959
120	R287A991324	Conway School District SAU#9	North Conway	NH	\$339,959	
NEW MEXICO (4)						\$1,104,543
46	R287A990108	Farmington Municipal Schools	Farmington	NM	\$319,195	
66	R287A990476	Mosquero Municipal Schools	Mosquero	NM	\$40,379	
73	R287A990850	Las Cruces Public Schools/MVYF Inc.	Las Cruces	NM	\$432,469	
166	R287A990945	Na'Neelzhiin Ji Olta - Eastern Navajo Agency School Area	Cuba	NM	\$312,500	
NEW YORK (9)						\$5,344,769
12	R287A991823	Community School District 3	New York	NY	\$1,949,525	
32	R287A991383	Newburgh Enlarged City School District	Newbough	NY	\$375,000	
56	R287A990170	LaFayette Central School District	LaFayette	NY	\$252,098	
90	R287A990256	Community School District 13	Brooklyn	NY	\$634,524	
106	R287A991935	Lackawanna City School District	Lackawanna	NY	\$501,929	
131	R287A990166	Oneonta City School District	Oneonta	NY	\$693,720	
150	R287A990821	Community School District 17	Brooklyn	NY	\$392,449	
153	R287A990764	Community School District 28	Forest Hills	NY	\$545,524	
175	R287A990211	Community School District 6	New York	NY	\$957,413	

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NORTH CAROLINA (4)						\$2,051,340
43	R287A990160	Children's Village Academy	Kinston	NC	\$299,395	
55	R287A990808	Madison County Public Schools	Marshall	NC	\$475,725	
77	R287A990785	Wilkes County Board of Education	Wilkesboro	NC	\$899,930	
170	R287A990537	Cleveland County Schools	Shelby	NC	\$376,290	
OHIO (5)						\$4,220,624
47	R287A991548	Massillon City School District	Massillon	OH	\$482,216	
59	R287A990678	Preble County Educational Center	Eaton	OH	\$621,250	
103	R287A991501	Scioto County Joint Vocational School	Lucasville	OH	\$1,998,320	
115	R287A990874	Columbus Public Schools	Columbus	OH	\$566,397	
167	R287A991332	Springfield City School District	Springfield	OH	\$552,441	
OKLAHOMA (5)						\$1,551,955
50	R287A991593	Byng School District	Ada	OK	\$386,368	
71	R287A991295	Skelly School	Watts	OK	\$179,704	
114	R287A991238	Oklahoma City Public Schools	Oklahoma City	OK	\$375,017	
147	R287A991091	Madill Public School District	Madill	OK	\$207,132	
158	R287A991600	Coalgate Public Schools	Coalgate	OK	\$403,734	
OREGON (9)						\$4,274,008
25	R287A990823	Klamath County School District	Klamath Falls	OR	\$743,542	
83	R287A991098	Beaverton School District 48J	Beaverton	OR	\$353,632	
96	R287A991583	St. Helens SD #502	St. Helens	OR	\$287,100	
116	R287A991101	Oregon Trail School District 46	Sandy	OR	\$372,379	
123	R287A990387	Three Rivers/Josephine County School District	Murphy	OR	\$348,070	
126	R287A991301	Lane Education Service District	Eugene	OR	\$1,377,613	
143	R287A991853	Crook County School District	Prineville	OR	\$353,375	
156	R287A990854	La Grande School District No. 1	La Grande	OR	\$179,825	
173	R287A991863	Jefferson School District 14J	Jefferson	OR	\$258,472	
PENNSYLVANIA (7)						\$2,653,988
6	R287A991522	West Greene School District	Waynesburg	PA	\$100,379	
41	R287A991786	Allegheny-Clarion Valley School District	Foxburg	PA	\$233,119	
49	R287A991672	Harmony Area School District	Westover	PA	\$965,639	
81	R287A991859	School District of Philadelphia	Philadelphia	PA	\$540,192	
93	R287A991290	Family Charter School	Philadelphia	PA	\$355,955	
159	R287A990469	Bethlehem Area School District	Bethlehem	PA	\$291,000	
162	R287A991175	School District of the City of Allentown	Allentown	PA	\$167,704	

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SOUTH CAROLINA (7)						\$4,113,709
13	R287A992032	Sumter School District 17	Sumter	SC	\$875,000	
15	R287A990520	Allendale School District	Allendale	SC	\$762,411	
52	R287A990723	Education Redirection Charter School	Charleston	SC	\$143,140	
62	R287A990528	School District of Greenville County	Greenville	SC	\$903,848	
63	R287A990524	The School District of Edgefield	Edgefield	SC	\$84,964	
64	R287A990840	Dillon School District 3	Latta	SC	\$913,617	
89	R287A990774	Lexington County School District Three	Batesburg-Leesville	SC	\$430,729	
SOUTH DAKOTA (2)						\$698,439
124	R287A991041	Sioux Falls School District 49-5	Sioux Falls	SD	\$397,783	
136	R287A991959	St. Francis Indian School/ Sicangu Oyate Ho	St. Francis	SD	\$300,656	
TENNESSEE (2)						\$1,924,011
4	R287A990660	Memphis City Schools	Memphis	TN	\$1,720,629	
145	R287A991939	Kingsport City Schools	Kingsport	TN	\$203,382	
TEXAS (6)						\$6,394,795
28	R287A990618	Lubbock Independent School District	Lubbock	TX	\$1,069,104	
82	R287A990221	ODEM-EDROY ISD	Odem	TX	\$221,558	
110	R287A990467	Austin Independent School District	Austin	TX	\$558,298	
132	R287A990883	San Antonio Independent School District	San Antonio	TX	\$513,157	
146	R287A990241	Dallas Independent School District	Dallas	TX	\$1,731,119	
176	R287A990768	San Benito Consolidated I.S.D.	San Benito	TX	\$2,301,559	
UTAH (3)						\$2,423,272
20	R287A991594	Granite School District	Salt Lake City	UT	\$972,856	
72	R287A991686	Salt Lake City School District	Salt Lake City	UT	\$768,025	
76	R287A990355	Provo City School District	Provo	UT	\$682,391	
VERMONT (3)						\$824,378
28	R287A991180	Burlington School District	Burlington	VT	\$498,915	
29	R287A990215	Barre Town School District	Barre	VT	\$200,000	
54	R287A990818	Putney Central School	Putney	VT	\$125,463	
VIRGIN ISLANDS (1)						\$499,854
157	R287A990028	US Virgin Islands Department of Education	Charlotte Amalie, St. Thomas	VI	\$499,854	

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Rank	Application #	Applicant Name	City	State	Federal Request*	Totals per State
VIRGINIA (4)						\$1,218,959
22	R287A990573	Washington County Public Schools	Abingdon	VA	\$141,563	
24	R287A990081	Staunton City Schools	Staunton	VA	\$192,181	
34	R287A990029	Accomack County School Board	Accomac	VA	\$162,620	
140	R287A990151	Northampton County Public Schools	Machipongo	VA	\$722,595	
WASHINGTON (7)						\$1,746,830
11	R287A990248	Spokane School District #81	Spokane	WA	\$716,618	
33	R287A990909	Goldendale School District #404	Goldendale	WA	\$104,037	
56	R287A991315	Shoreline School District	Shoreline	WA	\$254,902	
65	R287A990283	White Salmon Valley School District	White Salmon	WA	\$124,750	
87	R287A991029	Highline School District - Tyee Service Area	Seatac	WA	\$241,226	
101	R287A991078	Wellpinit School District #49	Wellpinit	WA	\$163,435	
117	R287A991121	Pacific Middle School	Des Moines	WA	\$141,862	
WISCONSIN (3)						\$2,535,463
27	R287A990203	Columbus School District	Columbus	WI	\$152,302	
51	R287A990702	Racine Unified School District	Racine	WI	\$999,710	
110	R287A990816	Milwaukee Public Schools	Milwaukee	WI	\$1,383,451	

Total Funds Available = \$93,478,635

* Funding Request for 1st Year of up to 3 Years