Nomination Form

Please complete entire form. ***All nominations must be postmarked no later than Monday, July 15, 2002.***

Title of Nomination:_____West Virginia Department of Education _____

_____Basic Skills/Computer Education Project_____

Project/System Manager: ____Kathy Boone _____

Job Title:_____Assistant Director, Office of Instructional Tcchnology_____

Agency:_____West Virginia Department of Education_____

Department:_____Office of Instructional Technology_____

Address:_____1900 Kanawha Blvd., East_____

_____Building 6, Room 346_____

City: _____Charleston_____

State:____West Virginia_____ Zip:_____25305-0330_____

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Email:___kboone@access.k12.wv.us_____

Category for judging (please list only one):____State IT Management Initiatives_

Person Nominating (if different than above):___Vicki Allen _____

Job Title:___Technology Coordinator, Office of Instructional Technology_____

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Please return nominations to:

2002 NASCIO Awards
167 West Main Street, Suite 600
Lexington, KY 40507
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2002 NASCIO Awards
State IT Management Initiatives Category
West Virginia Department of Education
Basic Skills/Computer Education Project

Executive Summary

During the past decade, West Virginia has revolutionized our public education system to embrace the rapid changes in the education environment, while strengthening the core values of educational tradition. West Virginia has been committed to giving students an educational experience that has as its foundation the basic skills of reading, writing, and mathematics, while incorporating the critical skills associated with computer literacy. West Virginia has become a recognized national leader in the use of educational technology.

The educational climate in West Virginia is uniquely receptive in terms of size and structure to such systemic reform. The state is small and control from a central authority allows policy to be communicated readily across the system. This structure also allows for equity in funding which puts accountability on a more level plane.

The WVDE has implemented several highly successful statewide technology initiatives. Under the early leadership of Governor Caperton, who now serves as chair of the College Board, the West Virginia Legislature passed legislation in 1989, and amended it in 1996, to provide for the utilization of technology in the elementary grades for high quality basic skills development. Governor Caperton united his program for the state under the motto "Education First: Our Future Depends on It." In response to this 1989 mandate, the WVDE organized a committee of educators to develop a request for proposals to be issued to vendors of educational technology. In June 1990, the WVDE signed contracts with the IBM Corporation and Jostens Learning Corporation to provide turnkey (prime vendor) services for educational technology solutions for basic skills development for K-6 students. The highly successful Basic Skills/Computer Education program was thus launched**.**

The program has three components:

- Engaging software that supports and is correlated to West Virginia's Instructional Goals and Objectives, as well as to national standards in English language arts and mathematics.
- Computers in sufficient quantity to provide regular and equitable access for all students in grades K-6 (3-4 per classroom or equivalent).
- Professional development for all K-6 teachers in software use and integration techniques.

Envisioned by the West Virginia Legislature as a long-term effort, the legislature has appropriated approximately $7.5 million annually to fund the project, ensuring that all schools have a critical mass of computers, sound instructional software, and teachers who are prepared to integrate the software into daily instruction. Today, on-going staff development, a refreshment cycle for hardware, infrastructure and updated software provide for continued growth and success.

Education in West Virginia is largely dependent on the vision established by strong leadership. The Basic Skills program began under the leadership of a committed State Board of Education, the state superintendent and then Governor Gaston Caperton. The technology programs came to fruition as one arm of a reform package that included a renewed emphasis on quality instruction. The results of that reform are well documented.

With strong leadership and more than a decade of continued effort, the State of West Virginia continues to invest significant resources toward the goal of preparing its students for the future, a future where they will not only reap the rewards of personal productivity, but also lend their resources to a state that continues to struggle with a declining population and a changing economy. Our future depends on producing a generation of students skilled to meet those challenges personally and professionally. The role of educational technology in meeting that challenge cannot be underestimated.

Description

In response to the 1989 mandate from the West Virginia Legislature, the West Virginia Department of Education organized a committee of educators to develop a request for proposals to be issued to vendors of educational technology. In June 1990, the West Virginia Department of Education (WVDE) signed contracts with the IBM Corporation and Jostens Learning Corporation to provide turnkey (prime vendor) services for educational technology solutions for basic skills development for K-6 students. The highly successful Basic Skills/Computer Education program was thus launched. Two providers – IBM for hardware standardized throughout the state – and IBM and Jostens Learning for the software – allowed teachers the choice to select packages that best fit their local needs and philosophy. Since that time, more than 25,000 student workstations have been installed.

Early phases of the implementation included IBM Model 25 workstations and baseband networks. Software included Jostens' *Basic Learning System* and several software titles from IBM, including *Writing to Read; Measurement, Time, and Money;* and *Exploring Math Concept.* Implementation began in kindergarten and moved upward through the grades as funding was appropriated annually by the West Virginia Legislature.

In June of 2002, a new Request for Proposals resulted in a single contract with IBM Corporation serving as the Prime Vendor. All contracts were written to permit upgrades to the software and hardware technology. To illustrate, the July 2002 renewal of the current contract provides Pentium IV, 1/8 GHz machines, the latest versions of software, and structured Category 5 infrastructure. Intermediate phases between 1990-1999 included 10Base2 networking and computers of the 486 and early Pentium varieties. Workstation operating system software being used includes DOS, Windows 3.1, Windows 95 and Windows 98. Network operating system software ranges from Novell NetWare 2.2 through 5.1 and Microsoft NT Server 4.0. While the most recent purchases include modern technology, some of the original hardware, software, and networking infrastructure still exists and is operational in schools today.

Funds for the BS/CE program are currently allocated to counties on a net enrollment basis. There are 55 counties, as well as the West Virginia Schools for the Deaf and Blind, with a total enrollment of approximately 290,000 students. Annual county allocations for the BS/CE program currently range from $28,000 to $730,000, depending upon the county's net enrollment figures. There are approximately 834 West Virginia public schools. Of that number, approximately 620 schools with numerous grade configurations house grades K-6. A solid planning effort is vital to this program's success. The creation and approval of county and school technology plans, based on input from School Technology Teams, is the first requirement for a county's eligibility to spend project funds. The WVDE Office of Technology and the contract vendor provide assistance to schools in developing plans for implementation of systems and services.

County and school plans take into consideration the technology already in place at the schools and the curriculum needs of the schools. Existing technology is integrated where it is compatible and cost effective to do so. Legacy technology coexists with new technology as long as it reasonably can do so. Counties and schools are responsible for determining the hardware, software, and services to be procured from the contract for each school based upon a plan approved by the WVDE. Configurations are done on a county-by-county or school-by-school basis. The vendor works with county contacts to develop configurations that ensure that compatibility issues are addressed and that all pieces necessary for the installation are included in the order. The WVDE issues a written Blanket Release Order (BRO) to the vendor for the equipment and services covered by the contract. Invoices are paid at the State level.

The West Virginia Basic Skills project provides computers for both classroom and lab use with instructional software aligned to instructional goals and objectives. The technology is delivered in a turn-key solution that is standardized across the state. Teachers have the availability of statewide support though both a statewide help desk and the support services of the RESAs. Teachers can

control the delivery of the content from their classrooms while accessing reporting options that allow decision-making across all parts of their instruction, not just the use of technology. The Internet and standard productivity tools enhance and broaden the application of technology. On-going staff development allows teachers to set improvement goals specific to technology. However, the program has changed delivery of instruction to a different model that is center-based, constructivist in nature, and open to growth and enhancement.

The BS/CE program is considered the nation's most comprehensive statewide approach to computers in education. Since implementation, student scores have risen steadily on both the state standardized testing instrument and the National Assessment of Education Progress (NAEP).

Significance, Benefits and Return on Investment

West Virginia's Basic Skills/Computer Education program has had a powerfully positive impact on student achievement, as detailed in a study released by researchers from Columbia University and Hofstra University. Commissioned by the Milken Exchange on Education Technology, an independent research team studied the effectiveness of the statewide learning technology program (*The West Virginia Story: Achievement Gains From a Statewide Comprehensive Instructional Technology Program*, Dale Mann, Ph.D., Charol Shakeshaft, Ph.D., Jonathan Becker, J.D., Robert Kottkamp, Ph.D.)

The West Virginia program was cited for its effective use of technology that led directly to significant gains in math, reading and language arts skills. The study noted that educational gains through technology were cost-effective and increased socio-economic and gender equity. West Virginia was also tagged a national leader in recent years by *Education Week's* "Technology Counts" report.

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The West Virginia Story: Achievement Gains from a Statewide Comprehensive Instructional Technology Program (Mann, et.al.) documents the following reasons for the success of the BS/CE program.

- Clear, defined focus on the teaching of the basic skills
- Implementation of a critical mass of computers to ensure student access
- Standardization of computer hardware and software
- Turnkey approach to providing hardware, software, cabling, professional development, installation, and support.

Dr. Mann has continued his analysis of technology in education in his recently published study, "In God We Trust: All Others Bring Data." Along with co-author Charol Shakeshaft, Ph.D, he considers the implications for technology in the context of recent federal legislation and the need for accountability in education.

Several findings in *The West Virginia Story: Achievement Gains from a Statewide Comprehensive Instructional Technology Program* (Mann, et.al.) have regional and national impact. The study found that the BS/CE program was successful in equalizing opportunity for low-income and rural students, particularly for those children who do not have computers at home. Further, the study found, in opposition to other widely reported observations, that girls and boys had equal access to computers, thus promoting gender equity.

Dr. Lew Solmon, writing an analysis of the study, reported that West Virginia's educational gains resulting from the program were cost-effective and actually more efficient than other interventions including class size reduction. Cheryl Lemke, Executive Director of the Milken Exchange when the

study was published, wrote, “West Virginia’s BS/CE program deserves our scrutiny because of its scale, consistency, and focus. The issues of system design, training, technology capacity, technical support, and means of measurement are all powerfully present in the West Virginia experience, and provide important lessons for other states making investments in learning technology.”

What greater benefit or Return on Investment than the growth in student achievement and the preparation of our children for lifelong learning? The Basic Skills program is a long-term effort that, as documented in the Mann research, is gaining even greater acceptance as time goes on. The growth in student achievement to which it contributes continues. The program is part of a larger systemic reform in education in the state of West Virginia. The use of technology is providing all of our students an educational experience that prepares them for a productive life.