

SREB

*Educational Technology
Cooperative*

Cost Guidelines for State Virtual Schools

*Development, Implementation and
Sustainability*

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Cost Guidelines for State Virtual Schools

Development, Implementation and Sustainability

A state virtual school is an entity created by a state to provide Web-based academic courses to middle grades and high school students, using qualified online teachers. State virtual schools are generally designed to provide quality academic courses in schools where specific courses are not available or to help students retake courses needed to graduate, avoid schedule conflicts or accelerate an academic program.

States can realize significant cost efficiencies over time by creating and managing a state virtual school, because as each online course is developed or acquired, the state can copy and reuse the course with other teachers. In addition, the state can exercise quality control over all aspects of the online courses, creating course content, evaluating online teachers and monitoring student success.

The scenarios in this report identify the costs associated with the creation and implementation of a state virtual school at three levels of implementation. It is important for the state to consider all cost elements in planning and supporting a state virtual school as it is implemented initially and as it grows over time.

State Virtual School/Traditional School Cost Comparison Issues

A state virtual school and a traditional school are similar in that both provide courses to meet the academic needs of the students they serve. Both need teachers to teach the courses; resources for instruction; staff and a physical location to provide administrative, academic and technical support to students and teachers; and an infrastructure that supports reliable delivery of instruction.

The largest single cost for both types of schools is personnel. A traditional school typically spends between 70 percent and 80 percent of its operating budget on staff. The proportion of personnel costs in the operating budget for a state virtual school can be even higher, including online teachers, administrators, registrars, professional

development opportunities, clerical support and possibly, guidance counselors. This is a cost element of which state virtual schools should be mindful; they should explore ways of using technology and other strategies to contain or reduce personnel costs while ensuring high-quality student learning.

A Different Solution ---

Unlike a brick-and-mortar school, however, a state virtual school does not require a large, complex physical plant since students and teachers are not housed there. This eliminates the costs of transportation, cafeterias, meals, libraries, gymnasiums, utilities and many other related services of a traditional school. A state virtual school simply requires a sufficient physical location for the administration of the program, staff training and meetings, equipment and storage. Additional costs include those for course development or acquisition: a Learning Management System (LMS) on which to place and offer online courses, computers, printers, software, mobile phones or long-distance telephone service, and technical training and support.

In short, a state virtual school requires states and schools to approach teaching and learning differently as society moves rapidly into the digital age.

A Growing Need ---

The size, complexity and structure of a state virtual school or program may vary, but its mission is clear — to address the increasing academic requirements of middle grades and high school students through the use of Web-based courses. Today, the number of middle grades and high school students in SREB states in need of more high-quality academic courses is significant. Access to quality teachers, regardless of where students reside in the state, is a serious issue. Despite continual efforts over the years, states are not always successful in providing quality teachers in all subjects. Numerous schools also are not able to provide all of the courses their students need, to expand their course options and provide alternatives to traditional education, or to offer non-classroom provisions for students with physical disabilities or prolonged absences.

In fact, many schools in SREB states currently are unable to provide even the basic academic courses required by their states for high school graduation. In addition, most states are experiencing a significant gap between the number and range of higher-level academic and Advanced Placement (AP) courses offered in rural schools and those in suburban schools. Many schools do not offer any AP courses, even though by providing online options, any high school can offer more than 20 different courses.

Filling critical gaps in course offerings is only one benefit of online learning, however. Far too many students who enter ninth grade are failing courses and do not

graduate from high school. All too often, the only option for a student who does not pass a course is to retake the same course from the same teacher. This often results in failure a second time. While offering online courses will not fully solve this problem, it is a powerful option that has helped many students succeed.

Examples of how online learning benefits students are reflected in the following quotes.

“I wouldn’t have had the opportunity to take an AP class my senior year because my school doesn’t offer AP courses.” — 12th-grade student

“I get to read, actually read! If I don’t get it, I can go back and read again and again until I get it.” — Ninth-grade student

“My online course is cool — the online teacher is there when I need her, offering advice through e-mail and even over the phone.” — 12th-grade student

“I like the flexibility that allows me to design my own schedule based on how much time I need in a given subject.” — 11th-grade student

“It’s great having class with students from across the state. I really got to know them.”
— 10th-grade student

A 12th-grade student who had fallen behind in a traditional school noted that:

“It really allowed me to not only catch up, but now I’m actually even ahead. There’s no way I could’ve done this in my old school.”

“The course is not only teaching me English, but also useful computer skills, time management and discipline — lessons that will stay with me throughout college and life.”
— 12th-grade student

Funding Challenges

To meet student needs, successful implementation of a state virtual school or program in each SREB state is achievable. But careful and systematic planning by key persons and organizations is extremely important. The support of state and local school policy- and decision-makers is critical. Local districts and schools, the state department of education, higher education agencies, the private sector and others should participate appropriately. Moving from concept to significant impact on large numbers of students requires support, funding, attention to quality, and monitoring of growth and achievement.

How the state funds a state virtual school and the level of funding are the key issues that determine success. Currently, there are few funding models available for states. Most state virtual schools receive an annual allocation from the state based on projected need

for the next fiscal year. While this approach is important to financially support the initial implementation, it is not a reliable model to ensure sustainability. This approach is also questioned since it, in effect, provides two state funding streams for the same students. One alternative, which Florida implemented several years ago with the Florida Virtual School, provides direct funding to the school based on students' successful completion of an online course. The level of funding is equivalent to one-sixth of Full-Time-Equivalent (FTE) funding.

The cost guidelines in this report can help states determine a level of funding to ensure quality and success in meeting state student achievement goals. Regardless of funding level, there are some unique start-up costs that require greater funding during the first several years of any state virtual school. Initial efforts to organize and establish procedures, policies and regulations; obtain courses and teachers; secure the needed technology; train teachers and staff — and the extremely important work with local schools to gain their cooperation and willingness to provide online courses for their students — require more time and expense in the first several years of implementation.

It is important for the state to establish a sustainable and reliable funding program. Although the first several years require greater funding, economies of scale should benefit states in funding state virtual schools over time. The costs to acquire courses, maximize efficiencies in technology use, and reduce per pupil costs are the longer-term factors to consider once a state virtual school is well-established.

Costs Borne by Others

While this report focuses on the costs to create and sustain a state virtual school that benefits students across the state, it is important to understand that some costs are expected to be borne where the student attends school or resides. These include:

- **Schools and school districts:** While the direct costs of a state virtual school to a local school or school district are relatively modest, they are essential to success. The local school or district needs to provide a state virtual school contact person to address management and coordination issues and to ensure that students are enrolled, supported and monitored during each course. There also should be a staff member in each participating school to support students with academic or technical issues.
- **Technology** (including a computer, printer and Internet access for each student) should be provided by the local school, or provision must be made to ensure that each student has adequate technology available to access and use the Web-based courses. In addition, a location that is conducive to learning should be available when the student is online or working on the course at school. Depending on the course, other instructional materials also may be required.

- **Parents:** State virtual school students are likely to work from home for all or part of their course work. For some, this means working off-line, doing the equivalent of traditional homework — such as writing a paper or studying material provided in the course. Others may need their parents to provide a home computer with Internet access to receive course material.

Cost Scenarios

The three scenarios in this report provide cost estimates for a state virtual school based on three levels of implementation. Because costs vary significantly from state to state, approximate costs are provided where appropriate, and equivalent positions are provided for personnel. The estimates are based on information from several sources, including SREB reports, the *Occupational Outlook Handbook*, the *Statistical Abstract of the United States*, www.salary.com, the National Association of Secondary School Principals, and state virtual schools. They are intended to provide decision-makers and planners with general budget information for developing a state virtual school.

A planning worksheet also is provided in Appendix A to enable states to identify projected costs for initial implementation, sustainability and accelerated growth of a state virtual school. As the importance of state virtual schools increases, states should assure sustainability to meet growing and changing student academic needs.

SCENARIO ONE

To meet the course needs of at least 1,000 one-semester student enrollments
Approximate cost: \$1,500,000

This scenario is a relatively small implementation with limited staff. Although the same policies, regulatory and managerial issues of larger implementations need to be addressed, planners of a state virtual school of this size should seriously consider using third-party course content providers and teachers, especially in the first year. Each course should be evaluated to ensure that it conforms to state quality standards and that the contents align with state and/or national academic content standards, as appropriate. This should help ensure quality and accountability during initial implementation.

The state virtual school should provide students with a centralized registration system and create an effective and efficient means of working with and communicating with students, their schools and parents. The state virtual school should monitor the courses provided, remediate problems, and assess progress and success of students. The state virtual school also needs to collect and provide data for the state to ensure accountability and alignment between state goals and the state virtual school's success.

SCENARIO ONE	COSTS
Administration (\$104,000)	One full-time administrator, equivalent to a high school principal or a person in the state department of education at the director level.
Academic Coordination (\$705,000)	One full-time coordinator, equivalent to an assistant high school principal. Costs also include at least \$550,000 for course tuition, \$50,000 for course reviews and \$20,000 for instructional materials.
Public Information (\$50,000)	At least \$50,000 to develop information and marketing materials and programs. These should include publications, a Web portal and travel funds to enable face-to-face meetings across the state.
Information Technology Coordination (\$205,000)	One full-time position, equivalent to a technology coordinator in a large school district, plus costs of the centralized registration system.
Student Services (\$38,000)	One half-time position, equivalent to a district or high school guidance counselor.
Budget and Finance (\$45,000)	One full-time financial assistant, equivalent to a similar position in a large high school, plus the costs of related software, equipment and resources.
Evaluation (\$25,000)	At least \$25,000 for both an internal and external program evaluation, including customer surveys and needs assessment.
Administrative Support (\$38,000)	One full-time administrative assistant, equivalent to a comparable position in the state department of education, to handle the clerical and day-to-day routine operations of the school.
Equipment, Software and Materials (\$24,000)	At least \$4,000 for communication devices and materials for each person on the staff.
Facilities (\$120,000)	For offices, meeting rooms and storage areas for equipment and materials comparable to private-sector spaces where the state virtual school is located. (This cost may already be included in the state's budget since the facilities may be in an existing building.)
Unanticipated Costs (\$146,000)	All cost elements are estimates that can vary significantly from state to state. In addition, as with any new enterprise, there will likely be unanticipated costs that will need to be addressed to ensure successful implementation.

SCENARIO TWO

To meet the course needs of at least 5,000 one-semester student enrollments
Approximate cost: \$4,000,000

As with Scenario One, initial implementation requires the state virtual school to focus considerable attention on policy, regulatory and managerial issues. Subsequently, planners of a state virtual school at this level should seriously consider using third-party course providers and teachers during the first year. Each course should be evaluated to ensure that it conforms to state quality standards and that the contents align with state and/or national academic content standards, as appropriate. This should help ensure quality and accountability during initial implementation.

The state virtual school may acquire courses from school districts within the state that provide online courses, or from other state virtual schools or third-party providers of online courses. These courses should be evaluated and modified to ensure quality and alignment with state academic standards. During the year, the state virtual school also may need to develop specific courses that it cannot obtain from other sources.

As the state virtual school grows and becomes established, ownership of its courses and employment of teachers will help ensure quality and lead to cost savings. It should be understood, however, that course development is expensive and time-consuming and that staffing also requires significant time and cost.

The state virtual school should provide students with a centralized registration system and create an effective and efficient means of working with and communicating with students, their schools and parents. This registration system should be tied to the state's student information system, if feasible. The state virtual school also should have its own Learning Management System (LMS) contract. The state virtual school should monitor the courses provided, remediate problems, and assess progress and success of students. The state virtual school also needs to collect and provide data for the state to ensure accountability and alignment between state goals and the state virtual school's success.

SCENARIO TWO	COSTS
Administration (\$156,000)	One full-time administrator and one half-time administrator, equivalent to a high school principal or a person in the state department of education at the director level.
Teachers (40 full-time teachers at \$49,000, or \$1,960,000)	Costs for full-time and part-time teachers, including salaries and benefits, vary from state to state and within a state. Salary and benefits should be equivalent to compensation in the teacher's school district or to the average teacher salary in the state. State virtual school teachers should have extensive teaching experience and, if possible, advanced degrees. How many teachers will be needed and the teacher-pupil ratio per course should be important considerations for the state virtual school.
Academic Coordination (\$830,000)	Two full-time coordinators, equivalent to an assistant high school principal. Costs also include at least \$450,000 for course tuition, \$140,000 for course reviews and \$50,000 for instructional materials.
Public Information (\$75,000)	At least \$75,000 to develop information and marketing materials and programs. These should include publications, a Web portal and travel funds to enable face-to-face meetings across the state.
Information Technology Coordination (\$205,000)	One full-time position, equivalent to a technology coordinator in a large school district, plus costs of the centralized registration system.
Student Services (\$56,000)	One full-time position, equivalent to a district or high school guidance counselor. Costs also include software and related print materials.
Budget and Finance (\$84,000)	One full-time bookkeeper, equivalent to a similar position in a large high school, and one full-time financial assistant. Costs also include related software, equipment and resources.
Evaluation (\$50,000)	At least \$50,000 for both an internal and external program evaluation. Formative and summative evaluations should be conducted annually to provide data for accountability and for continued improvement. In addition, limited research should be funded on an annual basis as the state virtual school grows.
Administrative Support (\$74,000)	Two full-time administrative assistants, equivalent to comparable positions in the state department of education, to handle the clerical and day-to-day routine operations of the school.
Equipment, Software and Materials (\$265,000)	A minimum of \$200,000 for a Learning Management System (LMS) contract. Funds should be allocated for each person on the staff for communication devices and materials.
Facilities (\$120,000)	For offices, meeting rooms and storage areas for equipment and materials comparable to private-sector spaces where the state virtual school is located.
Unanticipated Costs (\$125,000)	All cost elements are estimates that can vary significantly from state to state. In addition, as with any new enterprise, there will likely be unanticipated costs that will need to be addressed to ensure successful implementation.

SCENARIO THREE

To meet the course needs of at least 10,000 one-semester student enrollments
Approximate cost: \$6,000,000

As with Scenarios One and Two, initial implementation costs should be higher than in subsequent years and efforts should focus on establishing policies, rules and procedures to ensure success. In addition, considerable time should be devoted to marketing the state virtual school to inform and obtain the support of local and state decision-makers and practitioners.

At this level, the state virtual school should plan to acquire courses in order to benefit from scaling — once owned, each course can be relegated and reused as needed. Use of third-party courses should gradually decrease and occur only when a course is needed for a small number of students or when it cannot be developed. All courses and teachers should be evaluated for conformance with state quality standards, and the contents should be aligned with state and/or national academic content standards, as appropriate. Course development, modification and revision should be a continuous process to ensure high-quality content.

The state virtual school should provide students with a central registration system and create effective and efficient means of working with and communicating with students, their schools and parents. This registration system should be tied to the state's student information system, if feasible. At this level, the state virtual school also should have its own Learning Management System (LMS). The state virtual school should monitor the courses provided, remediate problems, and assess the progress and success of students. The state virtual school also should collect and provide data for the state to ensure accountability and alignment between state goals and its success.

SCENARIO THREE	COSTS
Administration (\$208,000)	Two full-time administrators. The lead person should be the equivalent of a high school principal or a person in the state department of education at the director level. The second person should be at least an assistant or associate principal, or a director. Management of the initiative will increase significantly as more students, teachers and courses are added.
Teachers (60 full-time teachers at \$49,000, or \$2,940,000)	Costs for full-time and part-time teachers, including salaries and benefits, vary from state to state and within a state. Salary and benefits should be equivalent to compensation in the teacher's school district or to the average teacher salary in the state. State virtual school teachers should have extensive teaching experience and, if possible, advanced degrees. How many teachers will be needed and the teacher-pupil ratio per course should be important considerations for the state virtual school.
Academic Coordination (\$1,220,000)	Three full-time coordinators, equivalent to an assistant high school principal. Costs also include \$300,000 for course tuition (500 students at \$600 per course seat), \$500,000 for course reviews and \$150,000 for instructional materials.
Public Information (\$100,000)	At least \$100,000 to develop information and marketing materials and programs. These should include publications, a Web portal and travel funds to enable face-to-face meetings across the state.
Information Technology Coordination (\$330,000)	Two full-time positions, equivalent to a technology coordinator position in a large school district, and at least two part-time assistants with appropriate technical skills. This category also includes costs of the centralized registration system.
Student Services (\$112,000)	Two full-time positions, equivalent to a district or high school guidance counselor. Costs also include software and related print materials.
Budget and Finance (\$120,000)	One full-time bookkeeper, equivalent to a similar position in a large high school, and two full-time financial assistants. Costs also include related software, equipment and resources.
Evaluation (\$100,000)	At least \$50,000 each for both an internal and external program evaluation. This should be conducted on an annual basis for at least several years until the state virtual school is well established. This will provide reporting data for accountability purposes, as well as information to improve products and services. In addition, limited research should be funded on an annual basis as the state virtual school grows.
Administrative Support (\$111,000)	Three full-time administrative assistants, equivalent to comparable positions in the state department of education. These persons will fulfill the clerical and day-to-day routine roles key to efficient operation of the school.
Equipment, Software and Materials (\$400,000)	A minimum of \$300,000 for a Learning Management System (LMS) contract that should include an LMS and a repository in which to place and retrieve digital course content. Funds should be allocated for each person on the staff for communication devices and materials.
Facilities (\$120,000)	For offices, meeting rooms and storage areas for equipment and materials comparable to private-sector spaces where the state virtual school is located.
Unanticipated Costs (\$238,000)	All cost elements are estimates that can vary significantly from state to state. In addition, as with any new enterprise, there will likely be unanticipated costs that will need to be addressed to ensure successful implementation.

Appendix A

STATE VIRTUAL SCHOOL PLANNING WORKSHEET			
	Projected Costs		
	Initial Implementation	Sustainability	Accelerated Growth
Administrator			
Key roles include:			
Leadership and coordination			
Strategic planning and budget			
School district relations			
Recruitment, hiring and benefits			
Policy and regulation development			
Management and supervision			
Teachers			
Key roles include:			
Instruction			
Course management			
Student evaluation			
Communications			
Academic Coordinator			
Key roles include:			
Hiring, training, supporting and evaluating			
Assessment to ensure quality control			
Curriculum management			
Course development or acquisition			
Course review			
Instructional materials			
Public Information			
Information Technology Coordinator			
Additional funding required for:			
Equipment			
Web site development and support			
Student information system integration			
Repository management			
Help desk			
Software support			
Managing the Learning Management System			

Appendix A (continued)

STATE VIRTUAL SCHOOL PLANNING WORKSHEET			
	Projected Costs		
	Initial Implementation	Sustainability	Accelerated Growth
Information Technology Coordinator <small>(continued)</small>			
Additional funding required for:			
Security			
Network management			
Records management			
Student Services Staff			
Key roles include:			
Guidance services			
Registration			
Progress report			
Coordination of on-site facilitators			
IEP for students			
Budget and Finance Staff			
Key roles include:			
Development and processing			
Accounts			
Invoices			
Payroll			
Contracts			
Budget requests			
Facility management			
Procurement			
Insurance			
Grants			
Evaluation			
Administrative Support			
Equipment, Software and Materials			
Facilities			
TOTAL			

Appendix B

STATE VIRTUAL SCHOOL OPERATING BUDGET*

Department	Staff	Budget
Basic Instruction		
Total salaries and benefits		
Professional and technical services		
Travel		
Rentals		
Postage		
Telephone		
Other purchased services		
Supplies		
Materials		
Capitalized furniture		
Noncapitalized furniture		
Capitalized computer hardware		
Noncapitalized computer hardware		
Capitalized software		
Noncapitalized software		
Dues and fees		
Total Basic Instruction Costs		
Staff Development		
Total salaries and benefits		
Professional and technical services		
Travel		
Other purchased services		
Supplies		
Rentals		
Dues and fees		
Total Staff Development Costs		
Guidance Services		
Total salaries and benefits		
Professional and technical services		
Travel		
Dues and fees		
Total Guidance Services Costs		
Curriculum Development		
Total salaries and benefits		
Professional and technical services		
Travel		
Other purchased services		
Supplies		
Dues and fees		
Total Curriculum Development Costs		

* Provided by the Florida Virtual School

Appendix B (continued)

STATE VIRTUAL SCHOOL OPERATING BUDGET*		
Department	Staff	Budget
School Administration		
Total salaries and benefits		
Professional and technical services		
Legal fees		
Travel		
Postage		
Other purchased services		
Supplies		
Periodicals		
Capitalized furniture		
Noncapitalized furniture		
Noncapitalized hardware		
Noncapitalized software		
Dues and fees		
Total School Administration Costs		
Staff Services		
Total salaries and benefits		
Professional and technical fees		
Travel		
Other purchased services		
Supplies		
Capitalized software		
Dues and fees		
Total Staff Services Costs		
Data Processing Services		
Total salaries and benefits		
Travel		
Other purchased services		
Supplies		
Capitalized computer hardware		
Noncapitalized computer hardware		
Capitalized software		
Noncapitalized software		
Rentals		
Dues and fees		
Total Data Processing Services Costs		
Operation of Plant		
Rental		
Telephone		
Other purchased services		
Total Operation of Plant Costs		
GRAND TOTAL		

* Provided by the Florida Virtual School

Appendix C

ADDITIONAL RESOURCES

Boettcher, Judith V. *Online Course Development: What Does It Cost?* Campus Technology, July 2004 — <http://www.campus-technology.com/article.asp?id=9676&p=1>.

“Does it cost less to design and develop online teaching and learning today than it did a few years ago? Are the categories of cost different today from the past and from what the costs might be in the future? The costs of developing online programs are significant, yet there are few resources to help planners. Here, Judith Boettcher proposes a few guidelines for predicting the costs involved in the design and development of online instruction.” — Web site excerpt

Cavalluzzo, Linda et al. *A Study of the Effectiveness and Cost of AEL's Online Professional Development Program in Reading in Tennessee*. Appalachian Educational Laboratory (AEL), December 2005 — <http://www.edvantia.org/publications/pdf/05CostEffectiveness.pdf>.

This paper offers a cost analysis of development and delivery of an online program and compares it with the projected cost of delivery of the same materials through face-to-face workshops.

Marshall University et al. “Costing Networked Learning.” Advice Tools, 2002 — <http://www.toolcit.scotcit.ac.uk/advicef.htm>.

This information includes Web sites and tools about costing networked learning, provided jointly by Marshall University, the Corporation for Research and Educational Networking, and the University of Alberta. A traditional costing template is included.

Moran, John V. “ROI for E-Learning.” Learning Circuits, American Society for Training and Development, February 2002 — <http://www.learningcircuits.org/2002/feb2002/moran.htm>.

The author purports that a more accurate look at e-learning's ROI requires thinking about speed and efficiency.

Morgan, Brian M. “Determining the Costs of Online Courses.” Marshall University, 2000 — <http://webpages.marshall.edu/~morgan16/onlinecosts/>.

An interactive tool associated with this paper allows individual institutions to determine what their specific costs may be.

Morgan, Brian M. "Is Distance Learning Worth It? Helping to Determine the Costs of Online Courses." Marshall University, 2000 — <http://www.marshall.edu/distance/distancelearning.pdf>.

This paper assists institutions in realizing the costs involved with online education through discussion of what areas must be considered, what effects online courses may have on an institution, and what costs are involved in establishing and maintaining an online program.

Parks, Eric. "Calculating the Total Cost of E-Learning." ASK International, presentation in May 2004 — <http://askintl.contentbox.com/sites/852/docs/CostAnalysisPresentation.pdf>.

Eric Parks (<http://www.askintl.com/homepage.asp>) presents typical costs associated with e-learning.

"Technology Costing Methodology Project." WCET Web page, updated April 2005 — <http://www.wcet.info/services/tcm/>.

Technology Costing Methodology (TCM) is a set of procedures that enable institutional leaders to analyze technology costs in both on- and off-campus instruction. Tutorials, casebooks, white papers, handbooks and other materials are available on the WCET Web site.

