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ABSTRACT

This document focuses on Web-based courses for high school students. First discussed is the use of technology as a potential solution to address two needs: the need to increase the number of Advanced Placement courses and core mathematics and sciences courses; and the need to improve instruction. Efforts by universities and private, for-profit companies to develop Web courses for high school students are then highlighted. Discussion then focuses on why there is not greater use of the Web in instruction, as well as issues related to policy, instruction, and management that must be resolved before states; schools and students can truly benefit from such courses. Issues relating to student access, staffing, quality, and costs are briefly discussed, with each issue listing several questions that should be asked. The document concludes with more questions that state policymakers and decisionmakers should answer before they begin Web technology to meet instructional needs. (AEF)

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Web Courses for High School Students: *Potential and Issues*

SREB states' interest in using the Web to provide courses for high school students has increased significantly in the last year. States are focusing on this use of technology as a potential solution to two pressing needs in education:

- the need to increase the number of Advanced Placement courses and core mathematics and sciences courses; and
- the need to improve instruction — especially in the core academic courses — for all students.

Much of this interest in Web-based courses stems from a desire to give all students equal access to needed courses. Others see the Web as a way to deliver more courses at a reduced price. Once a Web-based course has been developed, couldn't it be offered to students across the state, thus avoiding the considerable expenses of building or expanding schools and hiring additional staff? Because most Web-based courses are costly to develop and deliver, they are unlikely, in the near term, to reduce states' spending significantly.

Current picture

Web-based courses for high school students began several years ago. Most initial efforts came from universities, such as the University of Nebraska, that had been providing correspondence courses for high school students. These universities and the Concord Consortium, a project in the New England states, received significant federal funding to develop and offer Web-based courses for high school. In more than half of the SREB states, at least one high school uses Concord Consortium courses. These and other efforts continue to develop and offer courses.

The Florida Online High School, which has been operating for about three years, is the most highly developed effort of its kind in the 16 SREB states. With

state funding of more than \$9 million to date, it has developed about 50 courses, in which about 1,800 Florida students are enrolled. The Kentucky Virtual High School trains teachers to use Web courses in their classes by introducing them to selected courses offered by the University of Nebraska. While these efforts indicate growth in Web-based courses for high school students, only a few thousand students in the SREB region now take such courses.

Private, for-profit companies also are developing and offering Web courses. For example, Apex Learning developed Advanced Placement courses, which it initially offered in its home region of the Northwest and now offers across the country. The company plans to continue developing and offering Advanced Placement courses.

What is known ---

Is using the Web to provide these high school courses a good idea? Yes. Regardless of where they live, students can have equal access to quality courses through the Web. Students have flexibility in when and where they take needed courses, and schools can expand their course offerings.

With such strong incentives to use the Web in instruction, why isn't everyone using it? One answer is that the technology is new; few courses have been developed, few teachers have been trained to use Web courses, and not all students and teachers have access to computers. Postsecondary education has been using Web-based courses for less than five years, and this technology has been receiving attention in K-12 schools for only about two years.

Before states, schools and students truly can benefit from Web-based courses, issues related to policy, instruction and management must be resolved. Each state needs to ask:

- What are the academic needs of high school students in this state?
- Do Web courses fill a need?
- What changes are necessary to deliver Web courses?

Schools today are based on traditional methods of delivering instruction to students. Many questions on which policies and funding are based will need to be modified or eliminated to enable widespread use of Web-based instruction in high schools. Among the issues that need to be addressed are student attendance and credit requirements; state dispersal of funds to support student education; teacher workloads; and requirements for teacher certification. The use of Web-based courses requires states to view education differently; for example, they will need to shift away from funding schools based only on class sizes and class attendance.

Student access

How can Web courses help states and school districts provide all students with access to quality instruction? What type of courses are needed — high-level science and mathematics, Advanced Placement? Can Web courses fill a need for students for whom traditional school schedules are not working? Student access and equity are major policy issues. For what purposes will Web courses be delivered to high school students?

Questions to ask

- What academic courses are in greatest demand within the state?
- How will the state ensure that the Web-based course's content meets the state's academic standards?
- What preparation and support will be required to ensure that students easily can access and use Web-based courses?
- How is security provided for students and their work?
- Is there a procedure for monitoring students during testing?

Staffing

School administrators, teachers, guidance counselors and parents all will need considerable support and information in order to adjust to using this new technology for student learning. Instruction will need to be adapted to meet students' needs; some students will require far more interaction with peers and their instructor than others. So far there has been little research into how to offer Web-based courses to students. For example, little is known about why many students drop out of Web-based courses at both the high school and postsecondary levels. In order to reduce the dropout rates, more research is needed to develop new approaches to teaching students with Web-based courses. For these courses to be successful, teachers and students also will need ongoing technical support.

Questions to ask

- How many students should each teacher be assigned?
- Will teachers of Web-based courses be trained adequately?
- Will teachers from other states deliver instruction?
- How will teachers and students receive technical support?

Quality

Most states, colleges, schools or other organizations that have developed Web courses have focused on the technology — converting traditional instruction into an electronic version. They have learned some lessons — such as how to use the technology to increase communications between students and instructors — but have much more to learn. The use of technology will become more effective as the technology itself improves.

Questions to ask

- What are the characteristics of a high-quality Web-based course?
- Who should review and authorize Web courses? States? Districts? Schools?
- Will courses be reviewed before they are offered to students?
- Are relevant library resources available?
- Have schools, colleges and agencies been involved in discussions about developing and offering courses?
- Have leaders considered hiring experienced developers of Web-based courses to create courses that meet specific needs?

Costs

Because the technology changes rapidly and course development is too new, it is difficult to determine the costs of course development. Based on experiences so far, it appears that Web-based courses are more costly to develop than traditional courses because of the expensive technology needed and the high cost of hiring specialists to create and offer such courses. Estimates of the cost to develop a course vary widely — from a few thousand dollars to hundreds of thousands of dollars. Because the technology changes so rapidly and developers still are learning the best ways to develop courses, budgets should include the cost of updating technology and courses.

Questions to ask

- How much will it cost to develop a Web-based course?
- How much will it cost to train teachers to deliver these courses?
- How does the cost of a state's developing a course compare with the cost of using a course developed by others?

- What will be the ongoing costs of offering Web-based courses?
- How much will it cost to update courses?
- How much will it cost for a student to take a Web-based course, and who will pay this fee?

Summary

Web-based courses show promise in meeting the academic needs of many high school students in the SREB region. These needs often are similar from state to state. How can states work together to provide students with Web-based courses? Before they begin using this new technology to meet instructional needs, state policy-makers and decision-makers need to answer several key questions:

- Will Web-based courses actually meet many students' academic needs?
- What is the role of the state? School districts? Schools?
- Should the state develop Web courses itself or collaborate with other states?
- What planning and oversight are needed to ensure that all students have access to quality Web-based courses?
- Is there a plan to address the numerous issues related to policy, quality and management that are associated with developing and delivering Web courses?
- What will it cost to develop and deliver Web courses?

The key issues are access, quality, staffing and cost. States need to focus on planning for course delivery and overseeing course quality to ensure that Web-based courses will meet the states' academic standards.

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