

# DISTANCE LEARNING



## **Definition and description of distance learning**

For most of human history, education has meant one of two things: a teacher instructing a student face to face or a person acquiring knowledge on his or her own. Beginning in the 1830s with the development of regular mail service, a hybrid of the two appeared in correspondence courses, offering prepackaged study plans and, sometimes, a measure of accountability or certification. Yet the slowness of mail service and the difficulty of communication made correspondence courses a solitary learning enterprise, one generally considered vastly inferior to in-person education.

In the 1960s, the development of videotaping added a new dimension to correspondence courses. Now students could watch the lectures, see demonstrations, and “visit” distant locations. Still, opportunities for interaction remained limited.

Personal computers and the development of videoconferencing in the 1980s made it possible to transfer greater amounts of information more quickly and added the possibility of human interaction. Nonetheless, most of the equipment was either prohibitively expensive, difficult to use, or limited in format. This restricted use to well-funded institutions and to students with technological savvy.

By the late 1990s, the Internet had become user-friendly and commonplace, especially among young adults. Suddenly, the technology necessary to provide information in any format and to allow interaction for students and teachers was widely available. It became familiar and relatively inexpensive, making distance learning an integral part of education’s future.

The objective of this study is to examine how new developments in technology can enrich and expand traditional K-12 education opportunities. Strictly mail-based correspondence courses are omitted, as are purely independent study courses with no accountability. The focus is on technology-based courses providing for interaction between an instructor/supervisor and a student over a distance.

## The potential for distance learning

Does distance learning really have potential to change the face of education, or is it just a cool new toy? The answer to both is yes . . . in part. No amount of technology will fundamentally change the thinking process of students, the benefits of personal interaction, or the power of a great teacher. But distance learning can dramatically affect how education is produced and delivered. It increases the accessibility of course offerings to a broader segment of students and ultimately expands the definition of public education.

Traditional education delivery systems operate within geographical confines. A student enrolls in one school and takes the courses offered at that school. Nothing else. Distance learning provides students with the opportunity to choose from courses offered by multiple institutions around the country and around the globe. The individual student is empowered to seek a course of study uniquely geared

to his needs, abilities, and interests. As pointed out by one researcher, educators have finally realized that they can no longer just offer the courses and expect people to enroll in the classes. They have realized that education is a product and that they must sell the product to the student.<sup>1</sup>

Some may criticize the multiplication of course options as unnecessary. Educators and students trying to choose courses may be bewildered by the variety. How many options for studying *Algebra I* does a student really need?

Research provides irrefutable evidence that students have different learning styles, needs, and goals. With distance learning, students are no longer limited to the teaching methods and schedules provided by a single institution or person. Perhaps they will find that a single institution, in person or online, meets all their needs. Or maybe they need to supplement a traditional schedule with one or two courses from an online provider. Perhaps they will want to select from multiple providers. Whatever students prefer, they now have that option.

Distance learning can provide a powerful tool for teachers. It allows course offerings, supplemental material and access flexibility previously unavailable in the average classroom.

Distance learning helps move the locus of power in education from an institution to the student and his or her teachers—a powerful change indeed, but one that will not be without controversy and turf wars.

Impetus for a long overdue redefinition of how we measure education and its related legal and functional concerns may be provided by distance learning. Mandated seat time becomes mostly irrelevant. Entire classrooms of students no longer need to progress essentially at the same rate, doing the same thing. As one witness to the Web-Based Education Commission put it, “If we are to be required to assess educational quality and learning by virtue of how long a student sits in a seat, we have focused on the wrong end of the student.”<sup>2</sup>

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Online education is not necessarily cheap. Initial design and presentation of an online class will be as time consuming as any traditional class, often more so. Technology must be purchased and maintained. Teachers and students must be trained in its operation. Yet, in the long run, it allows for greater efficiency and competition, which in turn will lead to reduced costs. As expertise and equipment become more readily available, costs related to distance learning should decrease.

Groups from teacher unions to rural school boards to homeschoolers are excited about the potential of distance learning. The remainder of this study will examine how that potential is being turned into reality.

## Delivery methods

### *Non-internet based technologies*

The simplest kind of technology-enhanced distance learning is a prerecorded video or audiotape. These may be distributed individually, or through local access cable or public television. One step beyond this is a live presentation over the radio or through satellite and cable. These may be further enhanced by the use of conference calls so students can give feedback and ask questions live.

An example of a system offering live video through satellite is the STEP Star Network, a program based in Spokane, Washington, offering programs for subscribing school districts that range from foreign language courses for primary students to professional development for teachers.<sup>3</sup> Using conference calls, classes are able to give verbal feedback. For the receiving school, the only equipment needed is a television, cable line or satellite dish, and a telephone.

Two-way videoconferencing is the highest end option. This requires a major equipment investment on both ends. The Washington K-20 network is making videoconferencing technology available between school districts, universities and other key locations, allowing even small, rural school districts to have this opportunity.

As the internet becomes more ubiquitous, it is rare for any of these technologies to exist without some web component, even if it is only a simple website listing the course schedule. Similarly, Internet technology is increasing the ease of distributing video and audio content.

### *Internet courses using synchronous computer-based instruction*

*Synchronous* instruction occurs when the teacher and students are interacting live. This can take place at multiple levels. A chatroom allows live interaction, but only at a text-based level. This requires the students and teacher to be quick typists, and limits the types of instruction to those that can be communicated through text alone. Usually chat-type instruction occurs as a supplement to other communication methods, such as independent reading assignments or even videotaped lectures. Chat also provides a means for students and teachers to make connections outside of scheduled class times, greatly diminishing the isolation of distance learning. Software enabling basic text chat is widely available for free, making this a highly accessible enhancement to distance learning.

Chat is the bottom rung in synchronous computer-based instruction. Applications such as ClassPoint now allow live video and audio of the teacher and students, live chat, file sharing, and a shared whiteboard to be used simultaneously. Teachers can set up interactive quizzes to gauge how the class is progressing and students can “raise their hand” to ask questions. The class may include an instructor-guided tour through web pages. Such software creates a full classroom experience not bound by location.

### *Internet courses using asynchronous computer-based instruction*

High-end videoconferencing software may make the greatest demos, but *asynchronous* instruction, where students and teachers do not interact live, creates an education experience unique to the Internet. Asynchronous instruction is not bound by space or by time: students can log on, do coursework, and contribute to discussions whenever they have the most time or interest. Using asynchronous technology requires no special software or equipment at the receiving end—any computer with Internet access will work. This makes it efficient to use even if only one or two students at a given location are taking the class.

On the course creation end, asynchronous instruction can be as simple as class assignments posted online, with class work posted and discussions conducted via email. Or it can involve the use of course creation software, such as Blackboard, posting

schedules, delivering content, tracking homework and grades, and providing threaded discussion groups. Course content may be delivered by books, online text with links to websites for research, cd-rom, streaming video, animations, or interactive demonstrations. Course schedules may have frequent, strict deadlines or be learn-at-your-own-pace.

In short, asynchronous computer-based instruction is probably the most widely used category of distance learning and the most varied. It ranges from simple courses posted on rudimentary websites as a hobby, to slickly packaged, for-profit online schools offering a complete, accredited high school curriculum.

## Distance learning in K-12 education

Distance learning over the web got its initial push from higher education. Colleges competing for students found distance-learning options an attractive selling feature, especially for older students working on furthering their education while keeping up with their jobs and families. Yet the flexibility and options created by distance learning appealed to those reaching a younger audience as well, especially as Internet technologies became more widespread and familiar. *Virtual schools*, public and private, began appearing in the mid-90s; by 2001, a study by the Distance Learning Resource Network listed more than 100 resources for online courses.<sup>4</sup>

### Distance learning providers

A virtual school has been defined as “an educational organization that offers K-12 courses through Internet or Web-based methods.”<sup>5</sup> Although grade levels are expanding, the focus is still on providing courses for high school students, who are more likely to be capable of the technological navigation and independent study skills usually needed for an online course.

Discovering exactly how many students are enrolled in online courses is difficult, since students may be enrolled in multiple courses offered by multiple providers, but the estimated number for 2001-2002 was between 40,000 and 50,000.<sup>6</sup> Only 21.7 percent of providers offer a full high school diploma program; the rest offer individual courses.<sup>7</sup>

The cost of virtual education ranges: virtual schools organized as public schools may be free of charge to qualifying students, while some private

schools may charge as much as \$9,000 a year.<sup>8</sup> The average cost for a semester course is under \$300 per course.<sup>9</sup>

Virtual high schools are offered by a variety of providers. Several states have created virtual schools at the state level. These schools typically focus on providing supplemental or alternative courses for students enrolled in the public schools of that state. They are generally available at no charge to the schools. Perhaps the best-known of these is the Florida Virtual School (FVS),<sup>10</sup> a program dating back to 1997 and offering 66 courses to over 8,000 students. Although FVS is free of charge to Florida students, the courses are also offered for a fee to out-of-state students. Students graduate not from FVS, but from their local school district.

### Screen shots from distance learning courses



Several universities have long offered correspondence courses for high school students. With the rise of the Internet, many of these have switched to an online delivery system, sometimes nothing more than posting the assignments online and receiving papers by email. Others may have elaborate online interaction and course delivery. These programs often offer a complete diploma and most often appeal to homeschooled students. They may also provide AP classes for students in regular schools. An example of a high school degree program offered by a university is the University of Oklahoma's Independent Learning High School.<sup>11</sup>

Sometimes schools or districts band together to share courses online. These consortia usually are focused on providing supplemental classes or alternative schedules for students at the participating schools. Teachers can offer specialized classes for a small number of students—something that would be impossible in most local schools. A participating school will provide classes and allow students to take classes from teachers at the other schools. The Virtual High School (VHS),<sup>12</sup> a consortium of schools around the United States and world, offers over 100 different courses to students in participating schools.

Virtual schools based out of local education agencies (local school districts) tend to focus on serving the needs of students located geographically within the district, often requiring face-to-face interaction at some point. They offer the opportunity for students to make up credits, to work out scheduling difficulties, or to accelerate their studies. They may also try to offer opportunities for dropouts, expelled students, or homeschoolers. Often schools will offer only a few courses online, since their focus tends to be on supplementing rather than replacing a traditional course load. For example: SK Online<sup>13</sup> provides courses primarily for students within the Salem-Keizer school district in Oregon; the course listing is extensive but is not a complete diploma-granting program. Students already attending school in the district register through their local schools.

Local school districts or state agencies may also create chartered virtual schools. These schools generally do provide a full diploma-granting program, unless they focus solely on lower grade levels. Since they are public schools, they are usually free of charge to students living within the geographic area. Electronic Classroom of Tomorrow in Ohio even

provides the necessary computer equipment free to students.<sup>14</sup> These schools tend to be marketed toward homeschoolers. This has generated concern among many homeschooling groups, since students in these electronic classrooms are back in the same environment homeschooling parents fled.

Virtual schools are also created by private companies. Some have some form of accreditation, but many do not. Content varies widely, from traditional correspondence schools with a website, to content specially designed for online delivery. A few break the mold entirely: A private company called Willoway delivers courses through a 3-D virtual city that students help construct.<sup>15</sup>

Although many virtual schools construct their own courses using basic internet technology, others use the software and even course content provided by private companies. Course management software is common: it provides a way to organize class materials, assignments, messages and tests easily.<sup>16</sup> Often the course management software will host the content. Companies may also offer full courses: for example, Apex Learning provides online AP (Advanced Placement) courses.<sup>17</sup>

In traditional education, the difference between a teacher and a textbook is easy to spot. In distance learning, the line may become blurred. A provider may offer a distance-learning course that is roughly the equivalent of a textbook—the student may study materials independently, or another entity may provide a course teacher, whether online or in-person. Or providers may offer varying levels of support to students that at some point rise to the level provided by a classroom teacher. A student may have an online teacher who guides the entire online class, an in-person teacher who supervises his or her independent study, or both.

## Distance learning in practice

Distance learning typically brings to mind the image of an individual student working on his or her own. This is still a common model, but there are many variants, as well as many purposes for which students use distance learning.

Individual courses are usually offered for students whose academic needs do not fit into the normal school schedule. More than 72 percent of virtual schools offer remedial courses; over 60 percent offer advanced placement courses.<sup>18</sup> Online AP courses

allow students to pursue college credit even though their school may not be large enough to offer an AP course in the topic that interests them.

Virtual schools also offer core high school courses. Students may take these courses to resolve scheduling conflicts, make up credits, or advance their pace. Full core programs accommodate the needs of medically fragile students, students in juvenile correctional institutions, and student athletes and performers. Some virtual schools may offer college courses with dual enrollment so students can gain high school credit at the same time. Many offer specialty electives that allow students to take courses that would never draw enough interest to be available in a local school building.

Within a public school, students are often assigned a particular class period to work on a distance-learning course and usually have some sort of on-site supervision. They are usually able and expected to log on after school hours to continue working on their assignments.

Some distance-learning courses may be designed for full class participation. For example, the STEP Star Network has language classes designed for a whole elementary class to participate at once, guided by their regular teacher.

The technology of distance learning may even be used to supplement a live class. A teacher may post assignments online, offer quizzes, or host a discussion board. Although not technically distance learning, the crossover of this technology into the traditional classroom demonstrates some of the power of distance-learning methods.

Online resources may also be used within a traditional classroom setting. For example, museum websites may post portions of their collections online. Government websites may provide access to archives of photos, documents, and video; develop learning activities; or even set up live interaction for students, such as is done with the NASA Quest program.<sup>19</sup>

Programs that offer a high school diploma entirely online are usually targeted to students who would otherwise homeschool. This is true whether it is a program offered privately or one offered by a public education entity. Homeschooling secondary students often seek a way to get an accredited diploma, making distance learning particularly appealing to them. Public education providers sometimes also try to appeal to school dropouts.

## Regulatory challenges

### *Teacher certification issues*

Public schools can only hire teachers who are certified in that state. In operating a distance-learning program, a school cannot *hire* a teacher from out of state. One way public schools have dealt with this challenge is by forming consortia, where rather than “hiring” out-of-state teachers, schools collaborate, exchanging teacher time in one online course for student slots in courses taught by teachers in other states. Distance learning is also often characterized more as the purchasing of individual courses, rather than as the hiring of any teacher involved. Nevertheless, the state may need to reevaluate its certification requirements to ensure they provide sufficient flexibility for schools seeking distance-learning options for their students.

### *Standards*

The free-for-all nature of the Internet is reflected in the variety of quality in distance-learning content. Some distance-learning courses are merely lists of reading assignments in a textbook, or lists of links to websites on a particular topic. Others are carefully crafted curricula integrating text, appropriate illustrations, animations, extra research, quizzes, independent assignments, and frequent interaction with teachers and other students. This may provide a learning experience that equals or exceeds that which can be provided in a traditional classroom.

In this diversity, how can educators and parents ensure students are getting a high quality learning experience? Some consider the variety of options a problem in the making and are considering a call for national standards or regulation of content providers. But this approach is likely to undermine the great strength of distance learning, which is its broadening of the marketplace to give learners exponentially more choices than ever before. Ensuring high quality is imperative, but should be done through measures that strengthen rather than hamper the marketplace, and that enhance local control of education.

Differences in state standards do pose a difficulty for distance-learning providers, but textbook providers face the same challenges. Rarely do dramatic differences exist between state standards overall, although there may be slight differences in sequence or emphasis. States manage to select appropriate textbooks off the shelf without too much difficulty.

Private companies designing material for online presentation have even more ability to adapt than do textbook publishers, since they can set up programs allowing teachers to subtract, add, or rearrange content.

In choosing an online curriculum, selectors need adequate information about curriculum standards, instructional models, hardware requirements, technological support, teacher training, and cost per learner hour of use.<sup>20</sup> As curriculum selectors insist on having this information, curriculum providers will be forced to supply it. They may find it advisable to create a voluntary rating system to make it simpler for selectors to spot quickly the programs they want to use. Third-party reviews of programs will also be important, as they are currently with other computer applications.

In Washington state, evaluation of courses is generally done by individual school districts, as part of their curriculum selection process. Local educators are best equipped to determine which learning options fit the standards and needs of their students.

### ***Measuring attendance***

Education has often been measured in *seat time*—how many days for how many hours a day a student sits in class. It may be the easiest verification measure for student learning, but, as we already know, it is far from being the most accurate. With distance learning, seat time no longer is a relevant measure. Students can study anywhere they can log on to the Internet, and any time that fits into their schedule. Their pace may match that of a traditional classroom, or move much faster or slower.

Distance learning makes attendance as such difficult to measure. Although computer programs can track when a user logs on and logs off, and even measure how frequently the user interacts with the program, many programs do not measure use with this level of detail. Even those that do cannot verify the student has logged on himself, rather than handing off the password to another person. And there is no way to measure time spent doing independent projects that involve working away from the computer.

Implementing distance learning will require adjusting the definition of education from hours logged to knowledge gained. Washington law requires students to attend school a minimum of 180 days a year, and requires the district to make available an

average offering of 1000 instructional hours.<sup>21</sup> For granting high school credit, school boards are permitted to recognize alternative learning activities instead of a designated number of hours in a class.<sup>22</sup> School boards must also adopt policies indicating how they will accept credit from distance-learning courses.<sup>23</sup>

Making distance education a viable option for students, then, falls primarily on the school board to determine what offerings correspond to district standards. Legislators may also need to consider whether the 180 day/1000 hour requirements allow sufficient flexibility for students learning at their own pace.

### ***Copyright problems***

Copying and distribution of copyrighted materials in the classroom is allowed under three exemptions in federal copyright law. Teachers may display or perform any work in the classroom setting as long as they have a legal title to the work:<sup>24</sup> thus a teacher could show a full-length movie in the classroom, as long as the teacher had legitimately purchased a copy. Teachers in a government or nonprofit setting can distribute non-dramatic works (text, images) to students at distant locations if those locations are also classrooms or special circumstances prevent the recipients from attending classrooms.<sup>25</sup> The other exception is the general *fair use* exception allowing uses of copyrighted material that do not threaten the value to the copyright holder.<sup>26</sup>

In a distance-learning setting, the appropriate uses of copyrighted work may be different. No specific exemption allows the display or performance of a dramatic work in a distance-learning setting. A teacher who made a particular movie or video presentation an integral part of an in-person class might be unable to translate it online.

Even the section of the law that allows some distance-learning applications is fairly limited. It only applies to non-dramatic works. For-profit education providers cannot take advantage of it, and for-profit companies are a significant part of the distance-learning marketplace. Further, the exception seems

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limited to students who have some reason for being unable to attend a regular classroom, even though many students choose distance learning out of preference rather than necessity.

The primary options for distance-learning providers in using copyrighted materials, then, are *fair use* and purchasing licenses. *Fair use* likely will allow for short excerpts from printed works, links to the copyright holder's website, and perhaps even short video and audio clips. It probably would not encompass distributing an entire movie online, because of the danger of piracy; and it might limit how much a teacher could display copyrighted images. Obtaining licenses may sometimes be a viable option, but often the cost demanded for web use would be prohibitively expensive, or the copyright holder cannot be found.

The copyright office is considering changes in the law to reflect technological advances, while limiting uses to those parallel to a traditional classroom: only to designated students, limited time for access, etc.<sup>27</sup> Technological changes may also influence future changes in the law. As technologies develop allowing teachers to display files without giving students the option of pirating them, more flexibility may be available. And the market may also develop licensing options that will make it easier and more affordable for teachers to use the good work of others.

In the meantime, distance-learning providers still have the *fair-use* provision, which will allow for many uses similar to a traditional classroom. But both educators and students must be aware of the need to respect the copyrights of others, something easy to ignore with the ease of accessing and copying information over the Internet.

## Logistic challenges

### *Prerequisites for student success*

Most of the skills required by distance learning are important to student success in any setting: strong reading and writing skills, independent motivation and discipline, abstract reasoning. But in the distance-learning environment, there may be less flexibility for students who are lacking in one of these areas. Without the physical presence of a teacher, students need to be internally motivated and disciplined.

In most distance-learning settings, reading and writing are the primary means of learning. Students

who do not communicate well through these means are unlikely to have alternative ways to learn or demonstrate their knowledge. The emphasis on reading, writing, and navigational skills, and on the abstract over the concrete, also tends to limit the ages of students able to handle online learning. Few programs are available at the elementary level, and those that are generally require heavy involvement by a parent or teacher.

Yet as technology improves, distance learning begins to approximate the traditional classroom. It now has increasing options for different learning styles. Graphics, videos, and animations can make the online classroom visually richer than the traditional classroom. Streaming audio and online meetings are becoming more common. Assignments may allow students to create slideshows or websites to demonstrate their knowledge.

The prospect of working on the computer or at his or her own pace may also provide motivation for students who might be unmotivated in a traditional classroom setting. And a supervisor on the spot, whether a parent or teacher, may provide accountability and help with study skills.

### *Funding for distance learning*

Distance learning may be able to dispense with the overhead of a bricks-and-mortar school, but it has its own overhead. Courses must be designed and programmed, a process likely to take significantly longer than designing a traditional course.<sup>28</sup> Course management software cuts down on the time needed to set up a class, but is its own expense. If the class is designed to provide teacher interaction with students, it will likely require as much or more teacher time than a traditional class.

The technology required to conduct the class is also expensive. Hardware and software costs are not a one-time expense: they need continual upgrading and maintenance. High-bandwidth internet access must

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be provided. Teachers need to be trained to teach or supervise distance learners, or to integrate other internet resources into the traditional classroom. Whether distance learning proves more or less costly overall than traditional education will depend on the form it takes.

Costs to students tend to vary in the same way traditional education does. Public school courses are often free or very low cost to students within the school's jurisdiction. Courses offered by private, non-accredited organizations, especially those with little teacher/student interaction, are also fairly low-cost. Accredited private schools and those with high amounts of teacher involvement tend to be fairly high cost.

Funding distance education in public schools is a challenge. Traditional funding mechanisms, tied to salaries, mandated student/teacher ratios, and buildings, do not leave much money free for purchasing technology or funding distance-learning courses. Some states, such as Florida and Kentucky, fund state-level virtual high schools through special appropriations in the state budget. In Florida, the courses are available free of charge to in-state students; in Kentucky, the district must pay \$300 tuition per student.<sup>29</sup>

Pennsylvania has several online charter schools. If a student elects to attend one, the student's local school district is required to pay the student's tuition. This funding mechanism has created friction between school districts and charter schools, with some districts suing the charter schools or simply refusing to pay.<sup>30</sup>

Implementing distance education will require adjusting budgets to allow the investment needed in technology and training. It will require arranging cash flow so local schools will have incentives to support distance education when appropriate. Distance learning is not likely to result in an immediate cost savings; rather, its immediate result will be more opportunities for students and teachers. Most importantly, it may provide the impetus for education funding to be tied, not to programs or structures, but to a result: an educated student.

### ***Teacher involvement***

Today's students may be relatively comfortable using technology for learning, but their teachers are not. In 1999, almost two-thirds of teachers reported

feeling not at all prepared or only somewhat prepared to use technology in their teaching.<sup>31</sup> To present a course online, help students choose online courses, or supervise students taking an online courses, teachers will need to be comfortable with the technology and savvy about the value of different options.

Along with creating a need for teacher training in technology, distance learning also creates a possibility for fulfilling the need. Teachers who have a rudimentary understanding of technology can use distance-learning courses to enhance their skills, with relatively low cost and schedule disruption. Continuing education courses in using technology are usually the first topic to be offered to teachers on a distance-learning basis.

### ***Technological requirements***

Providing distance learning requires answering several questions about technology. Who is going to provide the equipment? Who is responsible for keeping things running? What happens when things break down?

Under some models of distance learning, particularly public charter schools, the school itself provides the equipment and support for full-time enrolled students, including the computer in the home. Since students are enrolled off-site, providing computers in a way replaces school infrastructure and may be a necessary part of a fully-funded public education—although keeping tabs on the computers can be a challenge.

When students at traditional public schools take individual courses online, lab time and general support are usually provided by their local school, although they may often be expected to log on from home as well. Homeschooled students enrolled in distance learning generally have to provide their own equipment and only get support from the course provider for the provider's own software.

### ***Security***

An ongoing problem of distance education is verifying that the registered student is in fact completing the work, and on an appropriate timetable. Online courses can often verify how often students log on and provide easy methods of tracking assignments. They cannot verify whether the person using the student's user name and password is in fact the registered student.

Some virtual schools that only make themselves

available to students in a limited geographical region may require students to come take tests in person. Others require students to have final exams proctored. Where students are taking courses through their local school, the school can provide verification. Mostly, distance-learning courses rely on students and parents being honest, sometimes supplementing with informal checkups by phone or email.

## Distance learning in Washington

Washington state laws and policy make distance learning primarily a local concern. School boards are required to adopt policies on how they will accept credit for distance-learning courses.<sup>32</sup> Local districts are free to grant full high school credit for distance-learning courses, and they may still count students as full-time students for appropriations as long as the school district is still planning and supervising the learning experience.

In addition to school districts approving individual courses for distance learning, they may offer students an *alternative learning experience*.<sup>33</sup> This operational option, often used for alternative schools for at-risk students, can also be used to

allow the school district to provide online courses and supplemental activities for families who would otherwise homeschool full-time. Under these regulations, teachers must periodically review the student's progress, and the student must either attend school at least five hours a week or have one-on-one meetings with a teacher once a week. The districts can then count those students for the purpose of obtaining funding.

Washington schools have a high rate of Internet availability. According to a March 2001 building technology inventory by OSPI, 95 percent of the instructional classes in the state have Internet access in the classroom.<sup>34</sup> Use of that access for distance learning is still fairly limited, however. The survey found 3,432 K-12 students—out of more than a million—enrolled in online courses. An online survey conducted by OSPI during October and November of 2001 found 25 percent of secondary schools to have students enrolled in online courses during the 2001-02 school year.<sup>35</sup>

State technology initiatives have tended to focus on providing the equipment needed. For example, the K-20 Network in Washington provides a high-speed telecommunications backbone between public school districts, colleges, and now extending to libraries. It allows Internet access and two-way videoconferencing between sites. Rural schools, especially, have made use of the network: 57 percent of the videoconferencing use is by rural schools.<sup>36</sup> One way districts have used the K-20 Network is the Washington Virtual Classroom, a project of several rural districts to offer cooperative classes through video conferencing.<sup>37</sup>

Washington state has no state-level virtual school or similar program. It does have some online purchasing agreements with content providers, including WebEd, which provides online professional development, and NovaNet, which provides secondary-level curriculum. The Digital Education Task Force, a group appointed by Governor Gary Locke in February 2002, has drafted a report recommending the creation of a Washington Digital Learning Commons. This would provide a web portal with digital curriculum resources, tools for students and teachers, and online classes.<sup>38</sup>

For the most part, however, the development and use of distance learning will probably remain a local matter. Following are some examples of how distance learning is being implemented in Washington state.

### ***Wellpinit School District***

Wellpinit School District serves 440 students on the Spokane Indian Reservation in eastern Washington. For the past three years, Wellpinit has offered students the opportunity to take courses online. In the 2001-02 school year, 160 students in grades 5-12 took 63 different courses. Wellpinit purchases these courses from various providers, including Laurel Springs School, Brigham Young University, North Dakota Division of Independent Studies, the University of Missouri, and NovaNet.

Wellpinit pays for online courses out of the general fund and through grants aimed at funding technology. Teachers are paid to supervise the course out of ordinary salary allocations. Costs for courses vary, with NovaNet costing \$100 a month for every workstation used, while university courses cost around \$90 per credit.<sup>39</sup>

Students are referred to distance-learning courses by advisors or teachers; as students have become more aware of the program, they often come to request

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online courses.

Elementary students taking an online course, generally for advancement or enrichment, work at it in their regular classroom during the school day. Secondary students have an assigned class period to work on online courses in a supervised setting. They may be taking classes to make up credit, take an elective not offered by the school, or for honors classes. Course offerings include AP and college credit courses.

The “global classroom” for taking Internet courses provides 15 workstations in carpeted cubicles. Supervising teachers can monitor student activity from their own workstations. Stations used during the day for the students at the regular school are often used after hours by students in the alternative program.

According to Joni Scott, the curriculum coordinator, students are expected to take responsibility for scheduling their time and completing courses. She considers the online option to have helped Wellpinit achieve its 0 percent dropout rate—with the flexibility to make up courses, students are given hope that they can finish school.<sup>40</sup> In addition to the use of online courses at the district’s alternative high school, students can opt for a supervised home-study program, in which they take all courses online through a computer provided by the district.

Wellpinit also participates in the Washington Virtual Classroom, a network of small rural districts using the K-20 Network to collaborate on classes. Wellpinit students are taking Washington State History through the Virtual Classroom, and several are participating in an ASL class taught by a teacher in Vancouver, at the Washington School for the Deaf. Through two-way videoconferencing, students are able to take onsite a course the district would not otherwise have the resources to offer.

Superintendent Reid Riedlinger sees the strength of the online courses as providing a way to meet the needs of all students, whether dropouts or not. “It’s what the world’s going to—individualized learning,” he says.

### ***NEVAC Online Courses***

The Northeast Vocational Area Cooperative (NEVAC) is a consortium of school districts in the upper Puget Sound region offering students the opportunity to enroll in an array of vocational courses that may not be offered at their local school.<sup>41</sup> Among those courses are several programming courses offered

online to students within the NEVAC districts. Students sign up through their high school counselor and can take the classes free of charge.

The online courses are created by local staff, with four to five people working on a course. An online teacher supervises and grades student work. Depending on the local school situation, students may take classes on their own time or have school time allocated for it.

### ***Internet Academy, Federal Way Public Schools***

The Federal Way Internet Academy, operated by Federal Way Public Schools, provides online courses to both homeschool and public school students. It operates under nearly the same policies and procedures as other schools in the Federal Way School District, reporting student enrollment and teacher work based on the online courses.<sup>42</sup>

The Internet Academy teachers develop many of their own courses. They also lease some courses from Academic Systems and Compass Learning Odyssey. In turn, some of their courses are leased by other schools. Classes are available for grades K-12, but a full time program is available only in grades 3-12.

A total of 410 students are enrolled in the Internet Academy, with 170 enrolled K-8 and 240 enrolled 9-12. Students may be taking anywhere from one to five courses; 42 percent are enrolled full time, taking five courses. Forty percent of students have identified themselves as homeschooling.

The Internet Academy has a physical site, with a computer lab students may come in and use. Teachers have office hours on site during which they are available to students by phone or face-to-face; they can also do some of their work from home. One teacher underwent treatments for breast cancer during her first year of teaching at the Internet Academy, and appreciated the flexibility afforded by teaching online.<sup>43</sup>

Out-of-district students who wish to take an Internet Academy course must request a transfer from

***The Federal Way Internet Academy, operated by Federal Way Public Schools, provides online courses to both homeschool and public school students.***

their home district. The Internet Academy reports Washington students for state funding based on the number of classes in which they are enrolled; students from outside the state must pay \$250-\$295 per course. Since Internet Academy does not award diplomas, students who wish to earn a diploma must make arrangements with their local school to accept the credits.

### ***Sky Valley Education Center, Monroe Public Schools***

The Sky Valley Education Center is a part of the Monroe School District, serving over 380 students in 1st-12th grades. Under Washington State regulations, it is classified as an alternative learning experience.<sup>44</sup>

The alternative learning experience rules require a written learning plan for each student, which must be periodically reviewed by school staff. Students are also required to attend school at least five hours a week. Sky Valley sets a maximum of fifteen hours per week of in-person classes.

Students in 1st-8th grades tend to spend less time on site, and most of their time is spent working with their parents to fulfill their individual learning plan. In addition to on-site classes and instruction at home, students in 9th-12th grade have the option of taking distance-learning courses from Class.com, a spin-off from the University of Nebraska. Students may earn a high school diploma. Onsite courses include a wide variety, from language arts and math, to Irish dance, drama, and hands-on science.

Bill Hainer, principal of Sky Valley, estimates that the education center operates at about two-thirds the cost of a traditional program. Although he sees this as a tremendous opportunity for cost savings, he says others perceive it as an increased cost, because alternative learning programs draw students who might otherwise not be in the public school system at all. As a result, he says, “There is a clear tolerance for these programs from the State Superintendent’s office, but virtually no support.”<sup>45</sup>

Hainer indicates that state regulations have unintentionally created difficulties for them. For example, the alternative learning experience regulations explicitly prohibit participation by home-based students. Usually, home-based students can enroll part time at a public school for an individual class, like band or Spanish. But because of the regulations, such students cannot take an individual class at Sky Valley unless they are willing to enroll full time.

Another difficulty is the state’s method of measuring class size. Sky Valley has only a handful of teachers relative to the student enrollment. But because students only participate in a few classes a week, actual class sizes are quite low—about ten or eleven per class. The state measures class size based on the staff/student ratio, not how many children are actually in a classroom. A small district with a large alternative learning program could have its reporting ratios skewed to the point that it would reduce its state funding. Sky Valley addresses this problem by starting two weeks late so that its students are not counted in the Monroe School District’s class size report for the year; it then reports the students at a different time to receive state funding.

Hainer, who has helped other districts start alternative learning experiences, identifies the two keys to a successful alternative learning program to be school district support and parent support. He sees the alternative learning experience option as a way to bring people back into the system. “We’re expanding the definition of public education,” he says.

## **Recommendations**

### ***Streamline regulations to provide the maximum opportunity for distance learning.***

The legislature and the regulatory institutions for education—the State Board of Education and Office of the Superintendent of Public Instruction—may someday decide to modify regulations to address web-based learning more directly. Current regulations in Washington primarily leave it up to local school boards to establish distance-learning policies, ensure alignment with state standards, verify attendance, and determine when credit should be granted. The primary challenge is to remove unintentional barriers to distance learning.

One area of regulation that can create problems is the student/teacher ratio. In an effort to reduce class size, the legislature mandates certain student/teacher ratios and reduces funding for districts that do not maintain those ratios. In alternative learning programs, students may come in for only a few classes a week or a day, thus skewing student/teacher ratio formulas. State restrictions on class size should consider the realities of online teaching and learning, allowing districts the flexibility to allocate resources efficiently.

Other regulations that may need to be reexamined

in the light of distance learning include: 1) restricting alternative learning centers from accepting part-time students, 2) requiring Washington certification of teachers, 3) restricting reasons for interdistrict transfers, and 4) hour attendance requirements. When necessary, school districts could be allowed to seek waivers from some of these requirements to implement a distance-learning program.

***Modify public education cash flow so money can be spent where a student needs it.***

Public education funding too often gets sidetracked in myriad administrative or specialty programs, each with its own forms to fill out and records to keep. The allocation of education dollars should be revised so the vast majority of the money flows to a student's school and classroom. This would not only provide more flexibility for purchasing online courses when needed, it would improve the focus of education in general.

Students in Washington have the possibility of transferring from their resident district to a nonresident

district, in which case the new district obtains the student funding. Transfers may be restricted, however, if a student's resident district is not supportive.<sup>46</sup> These rules may need to be modified to provide greater flexibility for students to pick the program that best

***"We're expanding the definition of public education."***

—Bill Hainer, Principal, Sky Valley Education Center

matches their needs. If a large number of students seek transfers, some districts may feel they are "losing students." But students should not be treated as geographical prizes; they should be allowed to pursue the educational options that best meet their needs.

***Create a supportive atmosphere for districts pursuing distance-learning options.***

Distance learning in Washington state is currently a matter of local discretion. School districts choose which courses to approve, whether to authorize distance learning for one or two courses or allow a full online education, and how to operate them. Districts can evaluate whether current courses should be given credit, or they may decide to design their own courses. Teachers may supervise students taking distance-learning courses, or they may use the courses as a supplement to in-class instruction.

Promoting distance learning at the local level provides the schools with the maximum options to serve the needs of their students. The state role in distance learning should be supportive—promoting flexibility in policies and providing information rather than restricting choices.

***Avoid enacting regulations and restrictions that would limit the development of a free market in distance learning.***

The primary regulatory barriers to distance learning currently come from regulations that predate Internet technology. Distance learning is too new to have acquired many of its own regulations. Given the natural tendency of things, it is likely to attract more regulation in the near future.

To date, teacher unions appear to be cautiously approving of distance learning, as long as programs continue to employ certified teacher members at the same rate as traditional education services. In the near future, distance learning is likely to be a topic of collective bargaining agreements. At the college level, NEA notes: "When distance-learning policy is included in the collective bargaining agreement, the institution is significantly more likely to offer distance-learning training courses on a regular basis than when it is not included in the agreement."<sup>47</sup> Although adequate training for teachers is an important part of a successful distance-learning program, subjecting distance learning to a collective bargaining agreement may destroy much of the flexibility that is its primary advantage.

Some educators called for greater standardization and regulation in the content, format, or teacher qualifications of distance-course offerings. While outside analysis is helpful, it is the local district and school that has on-the-ground experience with distance-learning programs. Restricting who can offer courses, what they can offer, or how it can be offered would stifle innovation in a field that is only beginning to develop.

***Districts should examine technology budgets to ensure adequate teacher training and maintenance are funded.***

Funding technology means a lot more than buying computers. Using technology effectively requires ongoing repair, upgrades, and training for those using it. Teachers report feeling relatively ill-prepared to use technology in the classroom.

Generally, they are receiving only limited and basic instruction on technology.<sup>48</sup>

To fund ongoing costs, such as maintenance and depreciation, or in leasing equipment (which may be more cost-effective than buying), Washington law restricts schools from using capital bonds, which may only be used for one-time costs. The Washington State Educational Technology plan recommends changing restrictions so that districts can use bond and levy money to fund the necessary ongoing costs of technology.<sup>49</sup>

### ***Maintain a clear distinction between alternative education options and home-based instruction***

Homeschool groups have expressed concern over the growth of public school alternative learning options programs because they do not allow parents the same degree of flexibility and control over curriculum. Many of these programs are marketed primarily or exclusively to homeschoolers to help public schools retain per-student allocations. “Homeschool” students participating in a public school alternative program are, in reality, public school students, with the same restrictions on religious content, and requirements for testing and complying with state curriculum objectives, as any public school.

It should be made clear to parents that public school alternative programs provide a way for parents to be more involved in the education of their children, but one distinct from homeschooling. School officials should also make it clear that parents still have the option of conducting home-based instruction. Legislators and state agencies must remain committed to maintaining the home-based instruction option separate from the public school.

This is not meant to argue against alternative education programs. These programs provide a great alternative for a certain group of parents—those who would like more involvement in their children’s education, but also want a high level of guidance, support, and interaction with others. But they should not be allowed to supplant existing home education options.

## **Appendix—Providers**

This is not intended to be an exhaustive list of distance-learning resources, but is a fairly broad sample of the different options available. Schools

based in Washington are marked by an asterisk.

### ***State-operated virtual schools***

**Alabama Online High School:** (Alabama only)

<<http://aohs.state.al.us/>>

**Idaho Virtual High School:**

<<http://www.idvhs.org/>>

**Florida Virtual School:**

(Courses available on a fee basis for students and schools outside Florida) <<http://www.flvs.net/>>

**E-school:** (Hawaii)

<<http://www.eschool.k12.hi.us/>>

**Illinois Virtual High School:**

<<http://ivhs.org/>>

**Kentucky Virtual High School:**

<<http://www.kvhs.org/>>

**Louisiana Virtual School:**

<<http://www.lcet.doe.state.la.us/distance/>>

**Michigan Virtual High School:**

<<http://www.mivhs.org/>>

**North Dakota Division of Independent Study:** <<http://www.ndisonline.org/>>

**The Electronic High School:** (Utah)

<<http://www.ehs.uen.org/>>

**West Virginia Virtual School:**

<<http://virtualschool.k12.wv.us/vschool/>>

### ***University extensions***

**Brigham Young University Independent Study:** <<http://ce.byu.edu/is/site/index.dhtm>>

**Indiana University High School:**

<http://scs.indiana.edu/hs/hs.html>.

**K-12 Distance Learning Academy, Oklahoma State University Extension:**

<http://extension.okstate.edu/k12.htm>.

**SMSU Missouri Virtual School:**

<http://www.cnas.smsu.edu/e-highschool/>.

**University of California UC College Prep Initiative:** (Offering AP courses for California schools that could not otherwise offer them.) <<http://uccp.ucsc.edu>>

**University of Missouri-Columbia High School:**

<<http://cdis.missouri.edu/MUHighSchool/HShome.htm>>

**University of Nebraska-Lincoln Independent Study High School:**

<<http://cdis.missouri.edu/MUHighSchool/HShome.htm>>

**University of Oklahoma Independent Learning High School:**

<<http://ouilhs.ou.edu/>>

### ***Local Education Agencies***

Most local education agency programs are designed to serve students within the local area; they often include an in-person component and are designed especially to appeal to local homeschoolers.

**Babbage Net School:** (New York)

<<http://www.babbagenetschool.com/>>

**CAL Online:** (California)  
<<http://www.cusd.com/calonline/Default.htm>>

**CCS Web Academy:** (North Carolina)  
<<http://www.ccswebacademy.net/>>

**Clintondale Virtual High School:** (Michigan)  
<<http://www.clintondalevhs.org/>>

**COOLschool:** (Oregon)  
<<http://www.cyberschool.k12.or.us/>>

**Duncanville ISD Virtual School:** (Texas)  
<<http://www.duncanvillevschool.org/>>

**eHigh School:** (Georgia)  
<<http://www.cobb.k12.ga.us/~elearning/ehighclass.htm>>

**Plano ISD eSchool:** (Texas)  
<<http://planoisdeshool.net/home.html>>

**E-School:** (Kansas)  
<<http://www.usd259.com/eschool/>>

**\*Evergreen Internet Academy:** (Evergreen School District, Washington)  
<<http://eia.egreen.wednet.edu/>>

**Gwinnett County Online Campus:** (Georgia)  
<<http://gwinnettk12online.net/>>

**HISD Virtual School:** (Texas)  
<<http://hs.houstonisd.org/virtualschool/>>

**\*Internet Academy:** (Federal Way Public Schools, Washington):  
<<http://www.iacademy.org/index.html>>

**JeffcoNet Academy:** (Colorado)  
<<http://jeffcoweb.jeffco.k12.co.us/access/academy/>>

**Juneau Cyber School:** (Alaska)  
<<http://jcs.jsd.k12.ak.us/>>

**Mindquest:** (Minnesota)  
<<http://www.mindquest.org/>>

**Monte Vista's Online Academy:** (Colorado)  
<<http://monte.k12.co.us/ola/index.htm>>

**Oakland Virtual Connection:** (Michigan)  
<<http://www.oakland.k12.mi.us/ovconnect/>>

**Rock Hill School District Three Virtual High School:** (South Carolina)  
<<http://www.rock-hill.k12.sc.us/departments/vhs/>>

**SeeUonline:** (Alaska)  
<<http://www.seeuonline.org/>>

**SK Online:** (Oregon)  
<<http://www.skonline.org/>>

**\*Sky Valley Education Center** (Monroe Public Schools, Washington):  
<[http://www.monroe.wednet.edu/SCHOOLS/SKY\\_VALLEY/default.html](http://www.monroe.wednet.edu/SCHOOLS/SKY_VALLEY/default.html)>

**Southern Oregon Online School:** (Oregon)  
<<http://www.jacksonsd.k12.or.us/it/soos/>>

**VILAS:** (Colorado)  
<<http://www.vilas.k12.co.us/vilas/vilas.htm>>

**Virtual High School @ PWCS:** (Virginia)  
<<http://www.pwcs.edu/pwcvirtualhs/>>

## **Charter Schools**

**21st Century Cyber Charter School:** (Pennsylvania) <<http://www.21stcenturycyber.org/>>

**Basehor-Linwood Virtual Charter School:** (Kansas)  
<<http://vcs.usd458.k12.ks.us/>>

**Choice 2000:** (California)  
<<http://www.choice2000.org/>>

**Clark County Cyber Schoolhouse:** (Nevada)  
<<http://www.ccsd.net/its/cccs/>>

**Delta Cyber School:** (Alaska)  
<<http://www.dcs.k12.ak.us/>>

**Electronic Classroom of Tomorrow:** (Ohio)  
<<http://www.ecotohio.org/>>

**Electronic Charter School:** (Kansas)  
<<http://www.onlineECS.org/>>

**Midwestern Regional Virtual Charter School:**  
<<http://www.miu4.k12.pa.us/virtualweb/chartersch.html>>

**Odyssey Charter School:** (Nevada)  
<<http://www.odysseycs.org/>>

**Pennsylvania Learners Online:**  
<<http://www.palearnersonline.net/>>

**Pennsylvania Virtual Charter School:**  
<<http://www.pavcs.org/>>

**Treca Digital Academy:** (Ohio)  
<<http://tda.treca.org/>>

**SusQ Cyber Charter School:** (Pennsylvania)  
<<http://www.susqcyber.org/>>

**Western Pennsylvania Cyber Charter School:**  
<<http://www.wpccs.com/>>

## **Other Public Entities and Cooperatives**

**Virtual High School:** (Consortia of high schools around the country)  
<<http://www.govhs.org/website.nsf>>

**AP Nexus:** (Southern Regional Education Board program offering online AP courses)  
<<http://www.apnexus.sreb.org/>>

**Colorado Online School Consortium:** (Supplemental courses for Colorado students)  
<<http://www.cosc.k12.co.us>>

**ECO 2000 Cyberschool:** (Special interest courses in Aroostook County, Maine)  
<<http://www.eco2000.org/consortium/>>

**Lancaster-Lebanon Intermediate Unit 13:** (offers Apex Learning courses in Pennsylvania)  
<<http://www.iu13.k12.pa.us/tech/Apex.html>>

**Minnesota Distance Learning Academy:** (Class.com provided courses)  
<<http://www.swsc.org/mdla/>>

**Texas Virtual School:** (High school, AP, and professional development through multiple education service districts)  
<<http://www.texasvirtualschool.org/>>

**Virtual Greenbush:** (elementary, middle and high school courses, and professional development through Kansas

regional center)

<<http://www.virtualgreenbush.org/>>

**\*Washington Virtual Classroom:** (Cooperative of several rural districts)

<<http://www.wavcc.org/wvc/>>

### ***Private, State or Regionally Accredited***

**\*Christa McAuliffe Academy:**

<<http://www.cmacademy.org/>>

**Compuhigh Online High School:**

<<http://www.compuhigh.com/>>

**Intelligent Education, Inc.:**

<<http://www.intelligented.com/>>

**Internet Home School:**

<<http://www.internethomeschool.com/>>

**Keystone Virtual High School:**

<<http://www.keystonehighschool.com/>>

**Laurel Springs School:**

<<http://www.laurelsprings.com/>>

**Phoenix Special Programs:**

<<http://www.phoenixacademies.org/>>

**WISE Internet High School, Richard Milburn High School:**

<<http://www.rmhs.org/>>

### ***Private, Other***

**Alpha Omega Academy:** (all grades, Christian) <<http://www.welcometoclass.com>>

**Dennison On-Line Internet School:**

<<http://www.dennisononline.com/>>

**Eldorado Academy:**

<<http://www.eldoradoacademy.org/>>

**Futures International High School:**

<<http://www.internationalhigh.org/>>

**Garden Schools:** (Christian, ages 5-15)

<<http://www.gardenschools.com/>>

**Oak Meadow Online:** (Grades 6-8)

<<http://www.oakmeadow.com/curriculum/online.htm>>

**The Potter's School:** (Christian)

<<http://www.pottersschool.com/>>

**Regina Coeli Academy:** (Catholic, classical)

<<http://www.reginacoeli.org/>>

**Scholars' Online Academy:** (Christian, classical, affiliated with Regina Coeli)

<<http://www.islas.org/sola.html>>

**Schola Classical Tutorials:** (Christian, classical)

<<http://www.schola-tutorials.com/>>

**Sycamore Tree Online:** (3-12, using Alpha Omega's curriculum)

<<http://www.sycamoretree.com/>>

**The Trent Schools:**

<[http://www.theschools.com/trent\\_online.htm](http://www.theschools.com/trent_online.htm)>

**USA International On-line School:** (Affiliated with VILAS)

<<http://www.usainternationalonlineschool.com/>>

**Willoway School:**

<<http://www.willoway.com/>>

### ***Content and infrastructure providers***

**Academic Systems:** (writing and math courses)

<<http://www.academicssystems.com/>>

**Apex Learning:** (AP courses)

<<http://www.apexlearning.com/>>

**Blackboard:** (course infrastructure)

<<http://www.blackboard.com/>>

**Compass Learning Odyssey:** (elementary courses) <<http://www.childu.com/>>

**Class.com:** (high school courses)

<<http://www.class.com/>>

**eClassroom:** (course infrastructure)

<<http://www.eclassroom.com/>>

**Jones Knowledge:** (courses and infrastructure) <<http://www.jonesknowledge.com/>>

**K-12:** (courses for K-5 so far)

<<http://www.k12.com/>>

**Lotus:** (course infrastructure and conferencing)

<<http://www.lotus.com/>>

**NCS Pearson:** (courses, student management, and testing—includes NovaNet)

<<http://www.ncspearson.com/k12/index.htm>>

**Virtuallaboratory.net:** (science course materials) <<http://www.virtuallaboratory.net/>>

**WebCT:** (course infrastructure, course content)

<<http://www.webct.com/>>

### ***Other Resources***

**AskEric distance education information:**

<[http://www.askeric.org/cgi-bin/res.cgi/Educational\\_Technology/Distance\\_Education](http://www.askeric.org/cgi-bin/res.cgi/Educational_Technology/Distance_Education)>

**Distance-Educator.com:**

<<http://www.distance-educator.com/>>

**Distance Learning Resource Network:**

<<http://www.dlrn.org/>>

**United States Distance Learning Association:**

<<http://www.usdla.org/>>

**Web-Based Education Commission:**

<<http://www.hpcnet.org/webcommission>>

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