

Common Vision and Plan for Enhancing Access to Quality Education in Oregon through Technology and Distance Education, K-20

√ K-12, Community Colleges, Universities √

Common Vision

We are in the midst of a rapidly changing social, economic, and global information-based competitive environment, increasingly reliant on technology to expedite communications and provide services. For the State of Oregon and its citizens to thrive in this environment, we need an education system that is not a collection of separate parts, but a continuum of opportunities stretching from early childhood through graduate education and lifelong learning. The state's public schools, community colleges, and universities are critical institutions in this information-based environment. Increasingly important is the need for the educational sectors to work together to expand access to educational programs and services – through joint planning, collaborative programming where feasible, and sharing technology infrastructure to deliver educational opportunities throughout the state to best leverage scarce resources. Two realities temper this vision: 1) opportunities for a quality K-20 education are difficult for many Oregonians to access, particularly in the rural parts of the state; and 2) rapid applications of technologies are changing the education marketplace (the way educational institutions provide access, enrich programs, and participate in partnerships).

Goal

Our common goal is to expand access to education through increased use of technology and partnerships in several areas: infrastructure; instruction; knowledge production; services; and governance, management, and financial models.

Implementing the Vision

Significant opportunities to expand educational services are expected to be available to K-20 institutions pending Data and Video Services (DVS) (formerly ED-NET) implementation of the statewide video conferencing network and other mechanisms scheduled to occur in the near future. With the increasing availability of technology infrastructure and as financial resources become available, K-20 institutions can significantly expand educational offerings in unserved and underserved areas of the state. Collaborative planning and joint activities will be needed to fully implement the vision.

Planning Builds on Initiatives

Numerous Oregon initiatives are expanding access, availability, and the quality of distance education throughout the state. Future developments can build on these current successful initiatives. Resources will be required to assist the sectors to achieve the common vision. Current initiatives and proposed next steps are outlined on the following charts.

INFRASTRUCTURE [communication networks, trained faculty, technical assistance/media, electronic classrooms, labs, shared facilities]

Goals	Current Initiatives	Proposed Next Steps
<p>Participate in large-scale networks to leverage resources and encourage collaboration.</p>	<p>OWEN/NERO is a consortium that provides Internet public connectivity for higher education, public K-12 schools and State of Oregon agencies. It serves an estimated 600,000 users (OPEN alone has 530,000 students). OWEN/NERO adjusts the size of its Internet transit capacity to satisfy peak inbound capacity requirements. OWEN monitors (and will adjust) its internal intrastate backbone circuits when/if required. OWEN/NERO's UUNet transit band-width profile (2/01) shows use peaks dramatically during the day, with greatest peaks early to mid-afternoon; use also exhibits periodicity associated with days of week. Generally, inbound use dominates outbound use. OWEN/NERO is believed to be saving customers significant dollars because of this partnership. E.g., if every computer connected by OWEN/NERO paid \$1/month for Internet connectivity, the number is estimated at \$7.2 million/year, well above the \$1.5-\$2 million/year OWEN/NERO spends. OWEN/NERO also provides an intrastate network, improving services and reducing costs by allowing in-state users to communicate without being routed through national Internet providers.</p>	<p>T Add partners (e.g., community colleges) to lower the costs for the consortium and reduce costs currently paid for Internet services by some state-supported institutions that do not yet participate in OWEN. It will aggregate demand, provide higher quality Internet services, improve intra-state networking, and reduce the cost for the consortium.</p>
	<p>Internet2 (I2) is the leading next-generation Internet for higher education and research. Over 170 U.S. research universities connect to I2 via high-speed circuits; I2 also interconnects with a growing number of counterpart international networks. Connection to I2 is via Abilene (runs on top of Qwest facilities, or the legacy vBNS (runs on top of MCI facilities). Sites can connect to Abilene or vBNS directly, or can share a circuit via an aggregation point known as a Gigapop. UO, OSU, EOU, OIT, SOU, and WOU all connect via the Oregon Gigapop run by UO, connecting to Abilene via an OC3 to Denver, CO, and an OC3 to Sacramento, CA. In summer 2000, PSU, OGI, and OHSU brought up the Portland Research and Educational Network (PREN), which has OC12 connectivity via the University of Washington's Gigapop in Seattle.</p>	<p>T Expand Internet 2 services to other partners (e.g., K-12, community colleges) to provide high bandwidth services such as streaming video, access to national data bases, and other education and research services. (Approval was recently received to carry K-12 traffic that meets the guidelines by Internet 2.)</p>
	<p>SB 622 has ensured that all Oregon high schools will be connected via IP video by 12/01. Funding ends in 2001 unless new legislation with resources is passed. Community colleges and OUS universities are actively planning to connect to this network to provide both regional and statewide delivery of video-based courses. Community access needs have also been identified.</p>	<p>T Continue funding of SB 622 to enable high schools to continue their IP video connections. T Connect community colleges and universities to IP video to expand joint programming among high schools, community colleges, and universities. T Explore creating community access points.</p>

	<p>Oregon Wireless Instructional Network (Oregon WIN) is a consortium of educational and related organizations that operates a multi-channel ITFS network in the Willamette Valley capable of serving about 65% of Oregon's population. WIN operates three ITFS trans-mission sites in Eugene, Salem, and Portland. Sites are linked with multiple, two-way microwave paths, allowing educational providers to serve all 3 ITFS networks from a single location. Inexpensive ITFS receive antennas are easily installed directly to schools, government offices, businesses, and homes. The flexible system allows delivery of a diverse range of programs (live interactive courses, telecourses, information boards, cultural events). Participants: Lane CC, Linn-Benton CC, Portland CC, Chemeketa CC, Linn-Benton-Lincoln ESD, OSU, PSU, UO, WOU, OUS, Oregon Public Broadcasting.</p>	<p>T Add last mile, broadband wireless service to other communities across the state, where feasible, by filing for new ITFS licenses and forming additional partnerships. (ITFS networks do not provide last mile broadband service to rural residences located more than 40 miles from communities served by an ITFS network.)</p>
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INSTRUCTION [courses, degree programs, noncredit courses and training programs, related services]

Goals	Current Initiatives	Proposed Next Steps
<p>Expand offerings using technology for more accessible instructional courses and programs</p>	<p>Community colleges have host/provider agreements that allow for course sharing among institutions.</p>	<p>T Evaluate and promote procedures used by community colleges to encourage course-sharing among postsecondary institutions and K-12.</p>
	<p>Community colleges have a common online student advisor that 17 community colleges are using: <oregoncomcolleges.org>. Universities and K-12 do not yet offer similar online advising services for distance education students.</p>	<p>T Evaluate and promote procedures used by community colleges to conduct online advising to facilitate adaptation of this approach by other sectors if feasible.</p>
	<p>All sectors are working on integrating technology into traditional on-campus and school programs to ensure requisite technological knowledge and skills are provided to Oregonians at all educational levels. All sectors are also working on expanding distance education offerings to students to expand access in unserved or underserved areas and populations of the state. For example:</p> <ul style="list-style-type: none"> < Online high school courses are being delivered via CyberSchool, SK Online, Net School, and Southern Oregon Online School. Most online schools are restricted to students only in their district (the exception is CyberSchool). None currently offer a high school diploma. Some schools also offer video-based courses(e.g., CAM, foreign language); some are offered collaboratively with other schools. < Community college distance education enrollments are about 27,500/year, most in web courses and telecourses. Community colleges have been redesigning over 100 courses for Internet delivery for the past two years, with funding assistance from the E-Board. < OUS university enrollments in distance education courses are about 12,200/year. Until recently, courses were almost evenly divided between live video, Internet, and correspondence. More than 175 upper-division and graduate-level courses in 18 degree programs at 8 public universities are being redesigned for primarily online delivery under a Learning Anytime Anywhere Partnership (LAAP) grant. OSU is also redesigning over 100 courses for Internet delivery through a federal grant. 	<p>T Continue to infuse technology components into the education sectors for both traditional and distance education needs (e.g., online syllabus, lecture notes, seminars, Internet searches for class projects, email projects with schools worldwide, collaboratories for computer-simulated labs, online course registration, online grades/transcripts).</p> <p>T Expand number of courses/programs redesigned for distance education at the high schools, community colleges, and universities to meet student needs.</p> <p>T Develop capacity to share upper-division/graduate-level courses among universities.</p> <p>T Coordinate courses among online high schools to enable students to take courses from various providers. Enable high school students to receive a high school diploma from online high school if there is not one available in their service area and accreditation of programs for consistency.</p> <p>T Expand collaboration between online high schools and postsecondary institutions to permit concurrent enrollment alternatives.</p>

	Short-term training programs, consulting, informational materials, summer programs for youth, and regional services for small businesses are provided by all the educational sectors, increasingly using technology components.	T Expand education and training noncredit programs (e.g., agriculture, forestry, fisheries, tourism) through statewide extension services, workforce development, and other resources.
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SERVICES *[information services, library, student services]*

Goals	Current Initiatives	Proposed Next Steps
Partner to expand electronically provided services to support educational programs including collaborating on one-stop services/informational web-sites as appropriate	OPEN (Oregon Public Education Network) provides information and professional development for K-12 teachers, parents, and administrators: < www.open.k12.or.us/ >	T Identify methods of increasing collaboration among sectors for common information needs, specifically through the regional education service districts' infrastructure.
	A general education website (Education in Oregon) for the Oregon Network for Education (ONE) connects to K-20 educational opportunities and sectors throughout Oregon: < www.ous.edu/one/ > OregonONE.org, a searchable one-stop website for students interested in distance education, lists more than 2,000 courses and 75 degree programs offered by 22 Oregon community colleges, universities, and independent colleges/universities.	T Sectors jointly evaluate the effectiveness of the Education in Oregon site, make improvements. T Expand the number of institutions participating at ONE. T Develop one-stop faculty/staff service center at ONE (e.g., clearinghouse of faculty development modules for distance learning including web/video, links to instruction-related websites, showcase of innovations, dissemination of latest research, shared training).
	Two important databases that support on- and off-site distance learners in Oregon are ORBIS (union library catalog that combines the card catalogs of many academic libraries into a single unified system with borrowing privileges), and PORTALS (Portland Area Library System) which provides extensive reference databases. Other extensive virtual libraries include: INFOMINE: Scholarly Internet Resource Collections, the Internet Public Library Reference Center, and the Library of Congress.	T Expand connections among schools, colleges, universities, state libraries, electronically for enhanced access for students.
	Schools and campuses provide some services electronically to both on-site and off-site students, but many more services are needed and many could be better consolidated if resources were available.	T Provide essential services electronically to students both on and off campus, especially to facilitate movement among the sectors.

KNOWLEDGE PRODUCTION *[research and scholarship for the development/discovery of new knowledge]*

Goals	Current Initiatives	Proposed Next Steps
Enhance capacity of the sectors to conduct knowledge production.	High-speed computing is used for analysis of large databases, database services, collaboration with researchers within universities, industry, government, colleges, and schools.	T Conduct research (applied and experimental) and scholarship for the creation of new knowledge.

GOVERNANCE, MANAGEMENT, FINANCIAL MODELS *[administrative communications, policies, recordkeeping, reporting]*

Goals	Current Initiatives	Proposed Next Steps
<p>Increase effective management through collaborative governance and technological strategies.</p>	<p>Several groups provide assistance in the formulation of technology policy, planning, and implementation among the educational sectors. The Joint Boards of Education has requested a common vision statement and plan be developed to serve as a roadmap to further facilitate joint actions by the sectors, much as occurs in the areas of teacher education and articulation and transfer.</p>	<p>T Further develop appropriate K-20 coordinating groups to inform/guide statewide implementation initiatives in cross-sector technology developments (OWEN/NERO, Oregon Access Network, K-20 Distance Education Working Group addressing scheduling/receive site standards).</p>
	<p>A variety of network services within the sectors facilitate email and daily workplace communications, teleconference meetings (to reduce time on road), listservs for rapid dissemination of meeting agendas and minutes, budget processes and payroll, personnel and other electronic recordkeeping, operation of facilities and other infrastructure.</p>	<p>T Provide efficient, effective management and communications services for administrative communications, recordkeeping, and reporting required of educational institutions in support of missions, and to meet state and federal reporting requirements.</p>
	<p>Current funding models for the sectors do not embed adequate formulas for technology infusion and replacement, seriously jeopardizing achieving our common goals for services.</p>	<p>T Seek stable funding models for infrastructure needed to ensure investment in distance learning program development. T Seek funding models that address logistical and user needs (scheduling, training, receive site support, equipment replacement).</p>
	<p>As the new shared IP video system goes into place in Oregon, common procedures and guidelines are needed by all the sectors.</p>	<p>T Create common scheduling platforms and procedures among the sectors. T Create guidelines for site access fees, scheduling, classroom configuration, and technical staffing.</p>