AHOSST

Allied Healthcare for Oregon: Seeking Solutions through Technology

A statewide planning effort to identify and disseminate promising practices to support expansion of healthcare education opportunities in Oregon through distance education

A joint project of
Community College Healthcare Action Plan (CCHAP)
and Portland Community College

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INTRODUCTION TO AHOSST

(The Allied Healthcare for Oregon: Seeking Solutions through Technology)

Purpose

There is a broad consensus in Oregon that the need for health care workers cannot be met by the existing education programs. Although there are almost one hundred health care occupations programs offered in Oregon, most are only available in the Willamette Valley. Also, most of the programs are only offered by one or two colleges, requiring students from other communities to relocate. The need for trained workers is statewide, and distance learning is an important strategy for meeting them.

The impact of this problem can best be understood from the perspective of the students and the communities in which they live. A rural regional hospital in Eastern Oregon may need to hire three or four clinical technicians over a five-year period, yet the community college offering a Medical Lab Technology program is in Portland. Prospective students living in the community would have to move to Portland for their training, and once finished it is highly likely they will find a job in Portland. Recruiting students from the program in Portland or elsewhere is expensive, and even if successful, new employees moving into rural communities from urban areas are not likely to remain more than a few years. If the needed employees could be trained in their home community, it is much more likely they would remain in the community, filling the local employment need.

Community Colleges are already addressing this problem on an individual basis. Blue Mountain Community College, for example, has developed a partnership with Wenatchee Community College in Washington to import Wenatchee's Medical Lab Technology Program. Portland Community College has developed Medical Lab Technology, Health Information Management and Gerontology to be delivered by distance learning; Central Oregon Community College has delivered Nursing to rural Eastern Oregon; and the Department of Labor (DOLETA) grant in 2005 has funded a few others. However, each of these individual efforts has been faced with not only discovering, but also solving the problems associated with expanding access beyond traditional borders. The technology, administrative systems and student services available are all geared towards local students, and are not adequate for large-scale distance learning program delivery. With over one hundred health occupations programs in community colleges, it is clear that Oregon needs take an intentional and systemic approach to identifying the issues and developing the solutions.

The Allied Healthcare for Oregon: Seeking Solutions through Technology (AHOSST) project is a one-year, statewide planning project to identify barriers and emerging practices for expanding access to health occupations throughout Oregon with technology. The outcome of the project will be an implementation

plan that outlines how technology can be used to ensure access to quality healthcare education for Oregon's rural and underserved areas.

Methodology

The primary goal of AHOSST is to maximize the use of technology by Oregon's community colleges to address the healthcare workforce crisis in Oregon. The outcome of the project will be a recommended implementation plan for the colleges that outlines how technology can be used to ensure access to quality healthcare education for Oregon's rural and underserved areas. The project has three primary objectives:

Objective 1:

To complete a statewide assessment of allied health/nursing instructional models and the technologies used or available to support and deliver those models throughout Oregon's seventeen community colleges.

Objective 2:

To create agreements that will allow for the use of distance learning methodologies to deliver allied health/nursing education programs statewide by building upon existing partnerships between community colleges. Some of the administrative issues to be addressed include cost sharing, student FTE allocation, intellectual property ownership, enrollment in courses offered across college districts boundaries, and joint marketing for the colleges and healthcare industry.

Objective 3:

To identify and create a student support model that utilizes distance learning technology and resources. Newly created technology assisted student support services must allow students throughout the state to develop an educational plan and to succeed.

The methodology for this project has been to create and engage representative workgroups around each of these objectives. An important feature of these workgroups has been inclusion of a broad representation of the staff and faculty across all functional areas, and most importantly, including representatives of all seventeen Oregon Community Colleges and other health education providers and supporters. The project Steering Committee and the three workgroups have involved sixty individuals from fifteen community colleges, Oregon University System (OUS), Area Health Education Centers (AHEC), The Governors Telecommunications Coordinating Council, and others.

The project has been led by a team from CCHAP, a project director from Portland Community College, and an experienced group process facilitator to lead the discussions. A steering committee of staff representing key functional

areas in allied health and distance learning, and a variety of community colleges has guided the process.

The report was developed through an iterative process in which the project team reviewed existing data, conducted original research, and compiled a draft report for each objective. This report was circulated among the working group from around the state, and then thoroughly discussed in an all-day retreat held in Portland. The work group retreat focused on making sure all the information and analysis in the objective report was complete and accurate. Based on the information and opinions from this retreat a second draft was prepared by the project team, and a second round of review was held with the workgroup via telephone conference call.

The data for this report have been gathered from institutional surveys, interviews, and researching institutional Web sites. Directors and deans of Health Occupations, Student Services Deans, Distance Education Managers, and IT Directors from across Oregon have responded to surveys. Individual program directors both from Oregon and other states, students, and faculty have been interviewed. Oregon University System and other institutions outside of the community college world have been deeply involved.

Findings

The research confirms that there is widespread interest across the state in using distance learning to deliver health care occupations education, and a number of individual and collaborative efforts to make some programs more accessible. Thirteen community colleges are delivering some portion of thirty-eight programs through distance learning. Additionally there are some mechanisms either in place or planned to support these efforts. All colleges have some sort of distance education program and technologies to support local efforts. The Community College and Workforce Development office (CCWD) contracts with Chemeketa Community College to provide coordination and staff support for some activities. State-planned technologies to support inter-institutional data exchange promise new levels of support for distance learners.

Although the number and variety of these efforts illustrate the broad consciousness of the problems and community college ingenuity in addressing them, they also underline the fundamental difficulty in meeting the needs in healthcare education on a statewide basis. These efforts are largely local in focus, inconsistent in outcomes and approach, lacking in sustainability, and without mechanisms for drawing on experience of others or assessing and sharing experience in distance learning efforts. Technology and resources vary widely among the community colleges, and there are no statewide technology standards. Many colleges rely on one-time funding, while others don't actually create any new capacity, but rather shift resources from classrooms to distance modalities. In other words, the colleges are willing to address the needs, but the issues and problems associated with this task are greater and more complex than can be solved on a strictly local, college-by-college basis.

Similarly, the systems and services that the colleges provide to support students are geared to meet the needs of local learners. The few systems in place designed to support distance learners are not very sophisticated, and are not adequate to handle large numbers of students. For example, financial aid consortium agreements that allow students to receive federal aid while attending multiple colleges are generally done on a student-by-student-basis, requiring a great deal of staff work to support each one.

Recommendations

Each of the three chapters of the report ends with an analysis and specific recommendations for future consideration, addressing some of the specific issues identified in the research. Some of these items for future consideration can be addressed locally, and independent of this report. However, this report takes a broader view both of the problem and the solution. The following recommendations have been crafted to promote action that will capture the energy and intent prevalent in the community colleges, align the efforts already underway, and lead the development and implementation of the technology, administrative systems, and student support necessary for all Oregonians to have access to health care occupations education, no matter where they reside.

Addressing local concerns through statewide collaborative efforts is not new in Oregon. Rather, it is the Oregon way. This approach to resolving healthcare workforce concerns has political leverage from the highest level, as evidenced by the existence of the Governor's Healthcare Workforce Initiative, which resulted in the formation of the Oregon Health Workforce Institute. The Institute represents the interests and efforts of the healthcare industry, post-secondary education, and business and governmental partners. Its mission is to address health workforce issues through statewide collaborative, targeted actions in funding, policy development, and coordinated initiatives The Initiative also led to the creation of the Oregon Simulation Alliance, a project partially funded through the Department of Labor Business Relations Group. The Alliance, a statewide coalition of healthcare institutions and community college and Oregon University system educational programs that supports the effective use of high-fidelity medical simulation equipment for instruction and training, resulted in an increase in simulation centers from one to twenty-two in just eighteen months through joint grant applications and purchasing agreements; The Alliance continues to support additional expansion throughout the state as well as training, curriculum sharing and collaborative funding strategies.

The Federal Department of Labor granted 2.9 million dollars to Oregon community colleges for the Oregon Health Workforce Partnerships Project (OHWP/DOLETA), a network of local and statewide partnerships incorporating the workforce investment system, community colleges, and employers and industry groups. Almost all of the projects involve technology assistance and support to health occupations education. Each of the ten interrelated local projects funded through OHWP are locally driven and implemented through

collaborative efforts of local partner consortiums, with representation from all partner groups. The partnerships ensure both local project success and statewide impact.

Similarly, a collaborative statewide effort is underway to identify and strengthen career pathways, a project overseen by the Oregon Department of Community Colleges and Workforce Development (CCWD), the state educational agency that also provides oversight of the Community College Healthcare Action Plan (CCHAP). CCHAP is an initiative launched through a public/private partnership between CCWD and the Oregon Association of Hospitals and Health Services to address issues of access to, capacity in, and distribution of health occupations programs in Oregon's community colleges.

All of these projects, coupled with other regional or college-to-college partnerships have developed a synergy that provides a basis for a more comprehensive statewide approach to shared health occupations program development and delivery. Now, Oregon community colleges must develop that approach, using strategies that are student-centered, driven by instructional and curricular needs, and supported by technology.

Specific Recommendations

Oregon community colleges will endorse and participate in statewide coordination and delivery of healthcare occupations education by implementing the following goals:

1. Infrastructure

Rationale:

Oregon has seventeen independent community colleges, each governed by its own president and separate boards of education, and by its own internal policies, budget, salaries, operating procedures, curriculum and programs, in accordance with the policies and guidelines set forth by the Oregon Department of Community Colleges and Workforce Development. Each college also has unique, individually negotiated faculty contracts that affect development and delivery of distance delivery at both state and local levels.

Collaboration under this decentralized, independent, and sometimes very competitive structure is challenging. In addition, budget shortfalls over several years have seriously affected available resources for distance delivered healthcare education course development, distribution, support infrastructure, staffing and technology locally and statewide. The result has been loosely organized efforts among colleges lacking a centralized approach that could enable development of a vision for distance learning curriculum development, set program priorities, establish technology standards, develop funding streams and support faculty development. This is a barrier to statewide development and delivery of healthcare education programs.

Goal:

Create centralized leadership to provide statewide coordination of healthcare occupations education via distributed learning.

Specific Action:

Ask CCWD to evaluate the scope, budgets, and operations of current organizations and structures that provide oversight and support to distance learning and healthcare occupations education, and create new centralized leadership for coordination of statewide distance delivered healthcare education.

2. Technology

Rationale:

Though all of the community colleges have access to the Internet, the broad picture of technology available to deliver health occupations education statewide shows a patchwork system of sometimes incompatible, outdated, inadequate or inflexible technologies that do not encourage or allow their widespread, shared use. Inequities exist between the type and sophistication of technology available on individual community college campuses and in the communities in which they are located, and widely varying comfort and skill levels among healthcare education faculty in their use of technology-assisted curricular and instructional methods. The community colleges must address these issues in order to deliver healthcare education to dispersed cohorts statewide.

Goal:

Fund technology infrastructure development, develop and promote technology standards for access, connectivity and use, and provide faculty support to enable Oregonians to participate in distributed, technology-assisted healthcare occupations education no matter where they reside.

Specific Action:

Determine standard technology tools, processes, and approaches. For example, consider choosing a single Learning Management System and a strategy for the use of streaming media and web conferencing. The technologies used will be based on effectiveness, cost benefit, and how they improve access or capacity for a program.

Determine regional sites for new or expanded delivery based on their needs and the readiness of the colleges in those regions. At the regional community college sites, invest in improved network topology, higher bandwidth, better software tools, and systems management.

Develop a centralized suite of technical support services that includes planning and management of enhancement and deployment projects; technical support for designing and operating networks and networked services; and a 24 X 7 student helpdesk. These statewide services should be the responsibility of the Office of Community Colleges and Workforce Development, but could be provided by one or more of the Oregon colleges or universities or an outside company.

3. Model Agreements

Rationale:

Although some agreements already exist that provide a framework for colleges to share health occupations programs, they are limited in scope. Existing agreements typically involve only two institutions, serve campus-based students, and do not incorporate extensive use of technology. Oregon community colleges lack adequate models that address statewide distribution of shared programming between multiple institutions involving distributed cohorts of students. There is no central leadership that prioritizes program development and sharing, or that assists in and supports creation of agreements for shared delivery of health programs. This is a barrier to statewide distribution and delivery. Colleges must “reinvent the wheel” each time they enter into a new agreement with another college, and agreements may not address the entire range of student and instructional issues.

Goal:

Develop and adopt agreements outlining modes of delivery, curriculum, student services, cost sharing, and other institutional responsibilities that support and promote statewide distribution of health occupations education.

Specific Action:

Ask the community college Council of Instructional Administrators to refine, endorse, and adopt model agreements for the development and shared distribution of health occupations education programs, using the menu of models surfaced in this report. Seek CCWD approval and use of these models as appropriate.

4. Student Services

Rationale:

A broad range of student services is needed to address the unique needs of students participating in health occupations education delivered through distance learning. Program planning, financial aid requirements, library resources, instructor access, lab and clinical experience requirements all create special challenges. The very nature of healthcare itself, with the well-being of real

people impacted by student skills and behavior, adds additional stress. Students in geographically remote areas of the state who do not have easy access to a community college face further challenges. Current approaches do not address these issues from a statewide perspective. The student experience currently depends on the individual agreements between two colleges and does not reflect a statewide perspective regarding standard expectations related to student support.

Goal:

Develop and deliver student services that meet the unique needs of healthcare occupations students participating in distance delivered instructional models. Expand services statewide to provide resources for "utilities" to assist student services infrastructure development, such as the Online Advisor and the Oregon Financial Aid Exchange (OFAX).

Specific Action:

Engage community college student service providers in the development of statewide, or multi-institutional seamless, transparent, and more effective student services for distance learning students, focusing on those in healthcare occupations. Involve all appropriate constituent groups (e.g., Deans of Instruction, Financial Aid Directors, Student Services Deans, etc.).

5. Enhanced Funding

Rationale:

Oregon community colleges have experienced several years of significant reductions in both state funding and local property tax support, due to a faltering state economy and changes in property tax and budget levy elections laws. The severity of local budget reductions and the subsequent program and staffing cutbacks have varied from college to college, but no institution remains unchanged. Though recent improvements in the state's economy have also resulted in improvements in community college budgets, most colleges are struggling to return to previous levels of programming and services, and do not have adequate resources for program expansion. Health occupations programs are expensive to develop and sustain due to requirements set by their regulatory bodies and concerns for patient safety and confidentiality. Laboratory and technology costs are also significant. Population distribution in rural and frontier areas of the state may mean that local community colleges do not have the numbers of students to develop cost-effective local healthcare occupations programs. Development of adequate or expanded statewide technology infrastructure is beyond the capacity of any individual community college or even a regional consortium of colleges.

Goal:

Seek new designated funding focused on providing and sustaining additional access, capacity, and distribution of healthcare program delivery

Specific Action:

Create additional budgetary Healthcare Policy Option Packages (POPs) to be incorporated into the CCWD/OUS legislative budget requests for the next biennium. The POPs would request both one-time and sustained funding. Engage CCWD and Oregon Community College Associatioon (OCCA) in legislative efforts to seek and obtain this additional funding. Increase efforts to seek additional grant funding from the federal government and private foundations. Whenever possible, create collaborations and partnerships that leverage existing funding and purchasing power.

OBJECTIVE 1

Objective 1 of the project is to complete a statewide assessment of allied health instructional models and the technologies available to support and deliver those models throughout Oregon's seventeen community colleges. Activities include the following:

1. Analysis and description of common instructional models used in allied health education
2. Determination of the appropriate technology infrastructure to deliver the allied health instructional models identified.
3. Analysis of existing reports and documents to identify available technology that matches the needs identified
4. Identification of access, education, scheduling systems, capacity, available support, modalities, hours of operation, and compatibility needs within the system
5. Conducting a survey to collect information not available in existing surveys and reports
6. Conducting a gap analysis of Oregon's distance learning capability, including high schools, health industry networks, community colleges and four-year institutions to identify what, if any, infrastructure exists to meet statewide needs for allied health education
7. Outlining "last-mile" (the end point at which distance education is delivered to a user's computer), education, and delivery needs into an infrastructure development plan
8. Determining the "readiness" of each regional community college to serve as a support site for expanded distance delivered health care occupations programs. Readiness includes support from the executives, the faculty and the community as well as having an infrastructure to leverage additional investments in upgrades and enhancements.

An underlying assumption of this project is that distance delivery of health occupation education is different from other courses and programs. Specifically, most health occupation programs feature lab sciences and clinical experiences. These learning activities traditionally feature hands-on experience with equipment, interaction with patients, and practice of procedures that can be dangerous. Traditionally, these learning activities take place in face-to-face settings, and with the oversight and guidance of health care professionals. Good models are in place for delivering the didactic portions of these programs; however, the models for delivering lab and clinical portions of these programs are still in development.

The data for this report were gathered from several sources. Surveys were distributed to all Oregon community college health occupation education program administrators, asking about programs offered, distributed education

activities, and perceived barriers to statewide distribution of their programs. Also, all distance education administrators at the community colleges were surveyed regarding distance learning technology available, as well as their perceptions of barriers to statewide health occupation education. In addition to these surveys the researchers also interviewed administrators of several notable distance delivered programs, and developed a series of case studies to highlight the promising practices developed in these projects. Throughout the process the researchers have been guided by a steering committee of stakeholders from across the state.

Technology Assessment

In December of 2005 all Oregon community college distance learning departments were surveyed to determine available technologies and perceived barriers for delivering health occupation education at a distance. Fifteen of the seventeen colleges responded to the survey. The colleges have developed an extensive infrastructure for delivering distance education within their region (Appendix A).

In May 2006 another survey was distributed to the community college information technology managers to determine if there are standard levels of connectivity, bandwidth, and support necessary for shared distance education efforts (Appendix B). Ten colleges responded, and their responses suggest that there are no standards, and that the infrastructure to support statewide efforts varies widely. Bandwidth to the Internet varies from 1.54 to 100 megabits per second and in most cases there are not redundant paths to support the high availability needs of synchronous and asynchronous distance learning.

Each community college is on its own to build the infrastructure to serve local needs, based on whatever Internet Service Providers are available, local budgetary constraints, and the college vision regarding the role of technology in the educational process. As new networked services are added to local environments, there is often not enough skilled staff or ongoing funding to properly manage and support them.

The primary technology in use for distance learning is learning management systems (LMS). Web CT, Blackboard and several other LMS provide reliable and effective methods for delivering didactic portions of courses. All but three colleges use these LMS to create and deliver a variety of courses online. In 2004-05 the online enrollment for the community colleges exceeded 80,000 (duplicated headcount), and almost all of the colleges are reporting substantial growth in demand for online courses. Additionally, the state supports a centralized distance learning operations center that allows colleges to share courses with other colleges. Enrollments in the shared online courses for 2004-05 were just slightly over 1,800.

About half the community colleges in Oregon provide more sophisticated support for online education. Faculty training and support, production of multi-

media, the ability to stream audio and video content, provision of online student services, and access to library resources online are added capabilities for those colleges with substantial distance learning enrollments. Other colleges are beginning to plan for and add these enhancements as the enrollments grow. Three of the colleges outsource lltheir distance learning Web hosting to the Oregon Department of Administrative services, and two of the colleges have contracted with private firms for their hosting. All of the rest rely on campus infrastructure and local Information Technology (IT) support to host and deliver their courses.

The centralized operations center for Oregon community colleges is located at Chemeketa Community College, and has 1.5 FTE assigned to support the host/provider course-sharing network, licensing of telecourses, maintaining web sites to facilitate student access and inter-college communications. This staff also publishes a statewide distance learning schedule and a list of the host/provider courses offered each term. Currently the scope of collaborative offerings using this service is relatively small, but it does provide a basis for expanded collaboration.

Another fairly widely distributed technology in Oregon is ITV, or interactive television. These systems use IP (Internet Protocol) to distribute live classes between geographically distant classrooms. Although most of the ITV distribution is within college service areas to share courses among campuses and extension centers, it has been used in some instances to distribute instruction to outlying parts of the state. Locally the colleges use dedicated networks to support the high bandwidth and quality demands of video on the Internet, and the state provides several high capacity networks to enable these connections. Although ITV classrooms are fairly widespread, local technical support is limited, and there is no central scheduling for the systems.

Traditional video delivery, either through access to cable television or microwave technology, connects some community colleges to students in their homes, and to government, business and industry sites. Seven colleges have cable access, used primarily for delivering packaged telecourses to students at home. Throughout the Willamette Valley the community colleges and the university system have access to a broadcast network that supports program sharing. Local colleges use this educational broadband to share programming for their cable systems, and to connect to outlying centers and institutional customers for one-way video delivery. The technology used can easily be deployed to other receive sites in the local area; however, it is not available beyond the urban areas of the Willamette Valley.

Although there is a variety of networks and delivery methods, not all colleges, much less students, have access to these networks. In Portland and other urban areas access to high speed Internet is widespread, but in some rural areas Internet access is limited to dial-up service, which lacks the capacity for more sophisticated communication required by streaming media, graphic-rich

content, or conferencing. The extent of this access gap is not clear. There are no reliable data about the network capacity of the individual community colleges. Since 2003 Oregon has been equipping patient simulation labs in hospitals, clinics and colleges (Appendix C). These facilities allow students to practice clinical skills and problem solving using computer based scenarios. All community colleges have some access to these labs.

Status of Health Education in Oregon's Community Colleges

In November 2005 a Community College Health Program Survey was sent to Oregon's community colleges. Responses were received from each of the seventeen colleges.

The survey requested information for each program or series of classes that provide job entry skills and competencies. Information was requested about the format utilized to offer the didactic, lab and clinical portion of the program/course(s) (traditional, online, ITV and other). Information related to the availability of online student services and the utilization of preceptors for clinical experiences was also collected. Contact persons indicated planned changes in format and barriers to offering program/course components through extended learning modalities.

Findings for Objective One will focus on the program/course(s) offered utilizing online and extended learning modalities, the utilization of preceptors for clinical experiences and the barriers to offering the program/course components through extended learning modalities.

The survey results indicate there is a broad array of distance delivered courses and programs offered (see Appendix D). Thirteen of the seventeen community colleges offer health occupation courses and/or programs that utilize online and/or ITV for delivery of the curriculum. As a response to the unreliability of ITV audio and video transmission, some colleges are investigating video-streaming of the curriculum.

The reported courses and programs range from short-term training to two-year Associate of Applied Science degrees, and from traditional health occupations job-entry offerings to continuing education courses. Some colleges are offering only one course online, and the majority of colleges are offering courses in a traditional format supplemented by online Web CT, Blackboard or MOODLE. Others courses are being delivered in a hybrid format comprised of an online course supplemented by on-campus instruction, yet other courses and programs are delivered totally online with students working with preceptors for the clinical/practicum portion of the program. There is no predominant form as the case studies in this report illustrate.

The campus lab component of health occupations programs, which requires hands-on skill development, is a major challenge for colleges to deliver in an extended delivery format. Most often the students are required to come to

the provider college campus for the lab component. For programs delivered via extended learning format to students residing some distance from the provider college, a common practice is extended weekend sessions one or more times per term for the lab component. Faculty report that the weekend sessions provide the opportunity for the students and faculty to interact face to face, a critical value of the students and faculty in a people-oriented occupation/profession. The faculties also report this is an opportunity for students to meet one another, which is a catalyst to the formation of a cohort and support group.

The four remaining colleges are not engaged in online instruction. One college requires sporadic assignments online in one program, and three colleges are not utilizing online delivery formats. Two colleges indicate they do not have the equipment necessary to send or receive extended learning courses or programs.

While the survey focus is on the delivery of health occupation courses, some colleges responded that all or most of the specific program courses are offered online, but the required science courses are not online, resulting in a requirement for students to attend on-campus courses for a portion of the certificate or degree requirements. Additionally, some health occupation faculties are reluctant to accept extended-learning science courses, questioning the competency level of students who successfully complete the courses.

Forty-seven of the reported courses/programs utilize preceptors for some portion or all of the clinical/practicum. Considering this large number, one can posit that preceptors will be used for programs delivered via an extended learning format throughout the state.

Case studies describing distance learning healthcare instructional programs within and outside of Oregon are found in Appendix E.

The program contacts at the community colleges perceive a number of barriers to expanding access to healthcare occupations education through distance learning. Some of these reported barriers reflect local college concerns, while others relate to broader statewide or systemic barriers.

Perceived Barriers to Healthcare Occupations Education by Distance Learning

Access

- Lack of mechanism to connect needs in community to programs
- Lack of ADA compliance to include students with disabilities
- Lack of technical skills among students
- Lack of course design to accommodate different learning needs/styles
- Lack of student access to technology necessary to take courses

Infrastructure

- No standards for IT infrastructure at community colleges, resulting in wide variation in capacity and availability
- Lack of reliable broadband Internet access in rural areas
- Lack of technical support for students after business hours
- Lack of clear understanding of program and technology needs, which inhibits acquiring the appropriate infrastructure
- Lack of knowledge about emerging technologies
- Lack of equipment to facilitate interactive instruction (production and reception)
- High cost of equipment and facilities at distance sites (campus lab, skills prep lab, Radiography Technology digital equipment, facilities, two-way microscopes, remote libraries)
- Unreliable ITV video and audio transmission. This technology is not standard across the state and it does not scale well on the commodity Internet.
- Lack of equipment at send site to accommodate the faculty member's teaching style
- Lack of office area for faculty to do course prep, delivery, etc.
- Lack of an integrated system for course delivery
- Lack of learning management system that can handle virtual classroom access
- Shortage of servers for storing and accessing large files and supporting emerging technology
- Difficulty in using simulation systems from a distance

Students

- Lack of readiness of students to learn: many do not have computer/technical experience/skills, some are older and have been out of school for decades, are challenged by technology, and prefer the traditional campus-based format, resulting in a need to create

opportunities for students to have some human contact with the instructor and fellow students.
- Need for case management approach to ensure student success as well as learn professional soft skills

Faculty

- Lack of faculty interest/incentive to convert courses to distance learning format
- Courses perceived as too hands-on to offer in a distance format
- Lack of time for faculty to communicate with students via email
- Reluctance from science faculty to put science courses online
- Lack of adequate compensation for faculty
- Lack of faculty to coordinate and teach in non-traditional mode
- Lack of qualified preceptors or extensive training and oversight needed at remote sites
- Burnout among already overwhelmed faculty
- Lack of faculty (full and part-time) attendance at required training academy
- Faculty given a stipend to attend training but no release-time to develop the course
- Shortage of qualified faculty who are enthusiastic about online instruction
- Inadequate numbers of faculty to teach face to face, making move to online out of the question
- Faculty finding it very time consuming to upload documents due to inadequate network performance
- Lack of coordination and partnership between the health occupation programs and distance learning departments
- Lack of an integrated system for credits earned at various institutions Intellectual property rights outlined in each college's collective bargaining agreement that inhibit course sharing

Curriculum Conversion/Implementation

- Science coursework not available through distance learning
- Some courses not lending themselves to online instruction (EMT Transport/Communication course, group process-oriented courses)
- Impossibility of site visits by program faculty in Central and Eastern Oregon during some of the fall and winter months
- Need for alternatives if students are unable to obtain the required clinical experiences
- Inadequate time for curriculum conversion prior to implementation
- Political problems within the clinical site and among sites
- Lack of common prerequisite and co-requisite outcomes
- Lack of faculty to do the conversion

- Lack of common course outlines
- Lack of career pathways to allow students to enter health professions
- Lack of a specific website that identifies the programs, enrollment, student services, etc.
- Lack of project management
- Necessity of being based on a documented need
- Each institution “doing its own thing”—need standardized method of delivery
- Lack of quality standards for courses, oversight, review and schedule for curriculum revision and updating
- Lack of agreement on competencies/outcomes and courses
- Lack of central leadership
- Lack of clinical sites
- Difficulty locating exam proctors at distance sites
-

Support Staff

- Lack of skilled technical staff to plan, upgrade, and manage complex networked services
- Lack of affordable and accessible technical support to respond to problems and questions at the send and receive sites 24 hours a day
- Lack of local advisors and other student support for out-of-district students
- Ability to provide one-on-one student advising for new students
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Funding/Cost

- Lack of ongoing budgeted funds
- Some preceptor sites requesting remuneration/backfill for staff working with students
- Inadequate funding to support technology, support staff, operations
- Inadequate funding for technology purchase and maintenance, upgrades
- Distance delivered courses costing more than single-site delivery
-

Contracts/Agreements

- Lack of cooperation/agreements among the community colleges and high schools
- Lack of a good cost/benefit sharing model
- Lack of agreement on technology/instructional standards
- Need to create agreements with labs, clinics, hospitals, etc.
- Collective bargaining agreements at the individual community colleges usually stipulating class size and workload factors for WEB-based classes, which results in a limited number of courses being offered because of fiscal constraints

Accreditation

- Lack of Accrediting agency approval of distance delivery of curriculum
- Perceived barrier by accrediting boards—faculty oversight and quality of experiences
- Applying for and receiving accreditation approval from accrediting agencies such as the Northwest Commission on Colleges and Universities for substantive change in program delivery

Administrative Support

- Need to obtain upper-level administration and Board of Education support (getting buy-in)
- Need to establish local support for clinical experiences
- Need a way to involve ALL community colleges in the process

Coordination

- Coordination with local Workforce Investment Act (WIA) groups, Employment Dept, etc

Analysis and Future Considerations

- While some individual colleges provide infrastructure and technical support that can serve sophisticated distance education applications, many do not provide adequate bandwidth, access and support. Central leadership is needed to work with the college IT directors to identify minimum standards for health occupation education via distance learning, and the state should take a system-wide approach to meeting those standards.
- While several health occupations programs are online, they are not being offered throughout the state. Action needs to be taken to secure funding for further curriculum and program development and subsequent dissemination to other college partners.
- With a goal of developing statewide health occupation program delivery models, incentives must be provided to programs that have not converted the curriculum to an extended learning delivery curriculum, which may include hybrid components. Based upon the Oregon Health Occupation Program Survey, such programs include dental assisting, respiratory care, alcohol and drug counselor, dietetics, emergency dispatch, emergency management, home health, mental health, paramedic, and pharmacy technology.
- A barrier to program delivery is the availability and acceptance of distributed learning format science courses, especially those requiring labs. While some of the courses are offered by Oregon community

colleges there is often a lack of willingness to accept some other college's course(s) in place of the home college's coursework. Ongoing efforts to create common course outcomes and transfer among Oregon's colleges should address these inconsistencies.

- Anatomy and physiology is of special significance, as it is a required sequence of courses for Nursing, Radiography Technology, Emergency Medical Technician and other allied health programs, yet it is not widely available through distance learning in Oregon. Efforts to expand availability of core science courses including A&P should be funded through the host/provider network.
- Many campus-based, and currently all extended learning health occupation programs, require the student to be precepted for the required clinical/practicum portion of the program. Best practices in preceptor training should be gathered and shared among the health occupation disciplines and within the specific discipline for those practices that do not apply to other health occupations.
- With the use of ITV audio and video transmission and the investigation of video-streaming and web conferencing technology, delivery to rural and frontier area students must be taken into consideration or they will be denied access to health occupation programs. Strategically selected regional sites must have their network infrastructure and services enhanced to mitigate this problem.
- Information regarding key components of the technology infrastructure is missing. We cannot determine the state of connectivity in every household in Oregon. Even in the most remote areas, access to broadband may exist in schools, libraries, Internet cafes, or via satellite. We can and should determine the ability of the seventeen community colleges to send and receive distance learning, and their capacity to provide access to distance learning in their district through outreach centers and computer labs.
- There is a clear need for central coordination of course and program sharing, determining technology standards, and scheduling. In addition, serious consideration should be given to creating centralized support for network design, deployment, and troubleshooting; and to a centralized student helpdesk. These services could be provided by OCCWD, by one of the public universities or community colleges, or by another agency or company.
- Care should be taken to limit the learning tools and technologies to just those that are effective for the specific programs, can be scaled reliably across the state, and are affordable. For example, a standard LMS is needed and the use of web conferencing and streaming media & podcasts should be explored. The use of ITV should be limited because of its cost and reliability across the state. It should be used only where the need is compelling and it can clearly be effective.
- A plan should be developed for a phased roll-out of specific programs to selected regional sites based on regional needs and readiness, infrastructure and curricular support, and adequate fun

OBJECTIVE 2

Need for Consortial Agreements

Health occupation programs have some characteristics that suggest a consortial distance learning model. Requirements for lab science and clinical practice suggest a model that depends on local institutions for these instructional components. One of the primary challenges in sharing programs among Oregon's community colleges is establishing mechanisms for collaboration that fit within the established infrastructure, funding, and culture of the seventeen community colleges. College enrollment, service, and financial systems are designed to serve resident populations, and although there are some centralized operations for community college distance learning, these systems are currently limited. This report will identify the crucial administrative issues in cross-college program sharing, examine the systems in place to support sharing, and present some emerging practices currently underway.

Activities for this section of the report include examining the statewide distance learning operations and host provider system; exploring previous planning efforts to expand the statewide operations and host/provider system; identifying key elements of current projects involving sharing; creation of scenarios and models based on the above; and creation of checklists to guide future agreements.

Issues and Barriers Related to Shared Curriculum and Agreements

The complex structure of the state's community college system has had a significant impact on the development of consortium agreements to share distance learning curriculum. The state has seventeen independent community colleges, each governed by a separate board of education that is elected by voters in each college district. Each community college has its own president and sets its own internal governance policies, budget, salaries, operating procedures, curriculum and programs, in accordance with the policies and guidelines set forth by the office of Community Colleges and Workforce Development (CCWD). The colleges are organized for collective bargaining and have individually negotiated faculty and support staff contracts. These unique contracts spell out many of the details regarding workload, compensation, course development, technology use, intellectual property ownership and other instructional and support issues that affect distance learning at both local and state levels.

Funding of health occupations programs is based on expectations of a critical mass of local students, and approval of new programs can take over a year. Once up and running, programs operate at full capacity. These operational realities make programming to meet needs in communities where the need is less than the normal class size problematic.

Collaboration under this decentralized, independent, and sometimes very competitive structure is challenging. In addition, budget shortfalls over several

years have seriously affected available resources for course development, distribution, support infrastructure, staffing and technology, locally and statewide. Because of these organizational and financial challenges, Oregon's distance learning agreements must reflect the educational practices and philosophies of individual communities and local boards; organizational, financial and curricular differences among colleges; and unique staff contracts.

The original state plan for distance learning, developed in 1996, was created to provide a framework for developing a common vision, define strategic direction, and to identify implementation strategies for the coordinated delivery of distance learning throughout the network of Oregon community colleges. The plan consisted of four components: centralized clerical and administrative support, the host provider network, shared revenue costs and full-time equivalency (FTE) reimbursement, and shared leadership, vision, and planning. These four components continue to be important issues for effective statewide collaboration.

Many barriers and challenges have developed under current practices. For example, the state still provides for centralized operational support for shared curriculum. However, technology has lagged behind the necessary support functions, and the submission and retrieval of data to the operations arm is cumbersome and time consuming at the local college level.

Though the plan provides for shared costs and FTE and tuition reimbursement through the centralized support function, state FTE reimbursement significantly lags behind term and annual enrollments. Reimbursements generally go to the college's general fund, and the individual distance learning or academic departments never recover their costs for distance learning development, instruction and operations. The general dissatisfaction with the revenue-sharing agreement has led to a dramatic drop in participation in the host-provider process, although overall participation in distance learning statewide has risen markedly.

Enrollment growth is another problematic factor in shared curriculum agreements. Initially, the host-provider agreement provided opportunity for additional enrollment in class sections that the provider college might not be able to fill with their own students. Now, however, provider colleges are able to fill their classes with their own students, keeping all of the tuition and FTE generated, instead of having to share it with a partner host college. In most cases, there is no financial incentive for most providers to keep participating.

Additionally, the aspect of leadership in successful statewide distance curriculum agreements cannot be overemphasized. Budget cuts and shifting priorities at the CCWD level eliminated the position of state director of distance learning several years ago. The Oregon Community College Distance Learning Association (OCCDLA) still provides community colleges with a representative volunteer body for broad oversight of both operations and strategic planning. However, without a strong leader with high visibility and a clear charge for

strategic planning, distance learning is no longer as visible as it once was to the state legislature and other statewide administrative bodies. There is a lack of coordinated energy and personnel resources to set strategic priorities, seek legislative and grant funds, develop additional infrastructure, and implement shared vision and goals to move the state to a new level of collaboration around distance learning.

A final, significant, challenge to sharing programs among Oregon's community colleges is a lack of commonly agreed-upon mechanisms for collaboration that fit within the infrastructure and cultures of the seventeen schools. Current systems are designed to serve resident populations, and new systems must be developed to meet the expansion of shared curriculum.

The following series of guiding questions will lead to the development of common models that can be used by the community colleges to create new and more flexible partnership or consortial agreements with one another or other private, proprietary or four-year institutions to share distance learning curriculum.

Key Questions for Creating Consortia Agreements for Distance Learning

Administrative Issues

- Who are the partners in the agreement?
- Is there a written agreement regarding the responsibilities and rights of the participants?
- What is the duration of the agreement?
- What are the institutional processes that need to be clarified?
- Who needs to sign off institutionally, and how will the sign-off be reviewed?
- Who are the key contacts at each institution, and what are their responsibilities?
- How does the agreement satisfy risk management concerns?
- Are there residency requirements/how does the student meet them?
- How will FTE be addressed?
- What institutional costs are attached, and who funds these costs?
- What additional staff time is required at each institution?
- What are the costs for students?
- How will the costs be shared and/or recovered?
- Does this course/program articulate with other course/programs?
- Are there transfer issues?
- Accreditation issues? Who is responsible for program quality, monitoring, reporting?
- Are there association, industry or trade groups involved that need to be considered?

Marketing Issues

- Are joint marketing agreements needed?
- How will the course/program be marketed?
- Who is responsible for marketing?
- What costs are attached?
- Are there differences in institutional schedules that need to be taken into consideration?
- How will the program be presented in catalogs and Web sites?

Enrollment Management

- How do the partners manage admission/enrollments in shared programs?
- Is a co-enrollment agreement indicated?
- What processes are needed for importing and exporting student data?
- Is there a staffing impact on enrollment services?
- Are there adequate provisions for student data/record security?

Curriculum and Instructional Delivery

- What are the quality standards for instruction?
- What is the curriculum to be shared?
- Who awards the degree or certificate?
- Who is to provide the curriculum?
- How are prerequisites and general education requirements articulated?
- How will the course/ program be used?
- What title, course number, number of credits will be used?
- If there is an outside vendor (for a purchased/leased course), is there an agreement as to which vendor will be used?
- Who/how will the decision to purchase or license be made?
- Are there purchase or license restrictions?
- What provisions or arrangements are needed for lab instruction?
- How will the student access textbooks and related materials?

Technology Issues

- What technologies will be used to deliver instruction, and how will they be developed and supported?
- Are the partner institutional technology infrastructures compatible?
- How will technology be supported at remote sites?

Financial Issues

- What are the financial incentives for the participating colleges?
- How is cost effectiveness of various options determined?

- Does the funding flow ensure sustainability?
- Who creates and tracks instructor contracts and payroll?

Clinical Instruction Issues

- Who identifies and arranges clinical sites?
- Who is responsible for clinical agreements?
- Do the institutional agreements and the student/clinician agreements match?
- Who provides clinical instruction?
- Who schedules and monitors clinical rotations?
- What training is needed and who provides it?
- What are the expectations regarding training and practice for clinical staff?
- What are the expectations of clinical staff for college?

Student Services Issues

- What student services need to be provided?
- Who is specifically responsible for student services?
- Who is the primary point of contact for students?
- Who advises students? Career counseling?
- How will students access learning resources?
- Who evaluates transcripts?
- Are there course- or program-related student support issues outside of the normal student support services?

Financial Aid Issues

- How do institutions interpret federal regulations governing financial aid consortium agreements?
- How are consortium agreements for financial aid set up?
- How are students informed about financial aid?

Policy Issues

- How should need for legally sufficient contract be balanced with need for flexibility?
- How is student privacy ensured to meet federal regulations required by Family Education Rights and Privacy Act (FERPA) the Health Insurance Portability and Accountability Act (HIPAA)?
- Which student conduct/academic honesty policy is used?
- Which college calendar do students follow?
- How do students resolve grievances?
- Which institutional grading policy is used?

- Which admissions policies are used?
- Who ensures that ADA requirements are met?

Intellectual Property

Because intellectual property is of special concern in distance learning, additional guidelines are needed in this area. Although individual college contracts will govern many aspects of intellectual property development and sharing, some additional points should be addressed:

- What specific intellectual property is being addressed? (didactic content, lab or clinical materials, web-related sites or content ?)
- Who are the partners in the agreement? Consider institutional, individual or hybrid agreements.
- What local institutional contractual elements apply?
- How was course/lab/ clinical material developed?
- Are there grant funds involved? Are there restrictions within the grant funding?
- Who has vested interest? How is this determined?
- Are there related publisher or other licensee interests?
- If intellectual property is shared, what license, use, marketing, reproduction and distribution restrictions might there be?
- Who can revise or otherwise modify the property?
- What costs are attached to shared use?
- How is the revenue shared?
- Can the material be sub-licensed?
- Who needs to sign off at the institutional level? Are there copyrighted materials imbedded in the course, and who has the rights to use them?

Systems in Place to Support Shared Health Occupations Education

In 1996 Oregon Community Colleges began moving towards a centrally coordinated distance learning effort. The focus of this effort has been to expand access to community colleges by leveraging the distance learning efforts of the individual colleges, and filling in gaps where needs were not being met. In 1997 the President's Council established a position of Statewide Director of Distance Education, who led the development of the Strategic Plan for Oregon Community College Distance Learning (SPOCCDL). A key component of this plan was the host/provider system for sharing curriculum (Appendix F). In 1998 the Oregon legislature E-Board appropriated $950,000 to support SPOCCDL, and a distance learning operations center was established at Chemeketa Community College through an RFP process. The E-Board appropriation was boosted to $2m in 2000, and supports the operations center at Chemeketa and any new initiatives of CCWD.

Oregon community colleges support statewide efforts through a number of councils and associations that meet periodically to share information, discuss

issues with broad impact, and to provide guidance to state education leaders. These groups include academic and student service administrators, IT Directors, and others. The Distance Learning administrators (OCCDLA) have a long history of coordination and collaboration around development of distance education in Oregon. These groups meet several times annually, and have direct input to the Oregon Department of Community Colleges and Workforce Development; however, there is no such council of allied health deans and directors. Consequently, there is no statewide community college body to guide the development or implementation of health occupations education.

The Host-Provider system was initially set up to facilitate colleges sharing distance learning courses. The financial model for host provider originally divided the tuition and FTE reimbursement between the college providing the instruction (Provider), and the college enrolling students (Host). In 2002 the financial model was modified to distribute end-of-year funds available from the appropriation on a pro rata basis to all host colleges to compensate for tuition dollars they were paying providers. Although the host provider system and the operations staff that support it provide an important foundation for sharing, the incentives in the current model are not adequate for stimulating or supporting widespread program sharing (Appendix G).

In 2002 a Distance Learning Joint Working Group developed several alternative financial models for sharing courses through the operations center. These models recognized that there are different motivations for being either a host or provider, and attempted to develop a menu approach that would allow colleges to tailor their participation in sharing to their own circumstances (Appendix H). These proposals were never implemented, and when the Director of Distance Education position was abolished, the impetus for further development of statewide distance education vanished.

The concept of host provider and the models proposed by the joint working group focus on sharing individual courses among institutions. None of these models address all of the complex issues that go with sharing complete programs of study.

The operations center at Chemeketa Community College has 1.5 FTE to assist collaboration among the colleges. This support is focused on maintaining the Oregon Community Colleges On-line Web sites, coordinating host provider activities, and some statewide licensing of telecourses. Coordination of enrollments between hosts and providers is largely a labor-intensive effort, requiring manual entry of students in the courses. Discussions are currently ongoing among the state distance learning organization about streamlining the data exchange, and expanding the model for sharing.

Emerging Practices

Recent efforts at sharing have begun to create models focused more on sharing complete instructional programs rather than individual courses. One

model involves partnership agreements between two colleges that support a provider college offering all of the instruction in the major, with the host college offering all of the prerequisites and general education. This model can be described as a one-plus-one approach, with the students completing the first year at the local college through on-campus or distance courses, and the second year at the distant institution through online courses. In this model there is no exchange of funds, with each college bearing the costs of instruction and support, and using established articulation and consortium processes to transfer credits (Appendix I).

Another partnership between the Cascades East AHEC and Central Oregon Community College is providing Nursing education to students in rural central Oregon communities. This project has involved six hospitals in the region for local clinical experiences, a number of community colleges and Eastern Oregon University for prerequisites, and intensive weekends on the COCC campus for labs. Didactic instruction is provided online and through use of the Central Oregon Hospital Network Videoconferencing.

A survey of health education programs at Oregon community colleges also identified a number of initiatives at individual colleges to provide expanded health education opportunities (Appendix J). These efforts are beginning to identify critical elements of consortial agreements.

Two statewide initiatives for student data sharing will facilitate consortial program sharing. ATLAS, an online degree audit system, will allow students and their advisors to access educational records from all state institutions and put them into an educational plan. This utility is currently under construction by Oregon State, and will be available for community college implementation over the coming years. The EDI project will support electronic exchange of student transcripts, facilitating transfer and articulation.

Analysis and Future Considerations

1. Creation of an organizational structure featuring leadership, strategic planning, policy and operational oversight, as well as involvement of the health occupations deans and directors should be a priority for the state.

2. Clear, data driven priorities must be set for the statewide development and distribution of shared curricula/programs.

3. Fluctuations in workforce needs should be addressed by creation of a flexible capacity valve that expands and contracts based on changing needs.

4. There should be a menu of distance learning curriculum sharing, financial cost-sharing, and reimbursement options to meet a variety of consortial or partnership agreements.

5. Most planning for statewide distance learning has focused on meeting institutional need in sharing courses using online technology. Sharing entire programs in health occupations requires a different conceptual framework that reflects an emphasis on student need and a multitude of instructional strategies.

6. New financial scenarios should be considered in terms of how they provide greater access for students and help community colleges build capacity and better serve all Oregonians; expand course/program offerings and college participation; and further collaborative efforts by the community colleges to provide distance education opportunities.

7. Additional fiscal resources will be needed to build capacity statewide.

8. The existing operations system needs to be re-evaluated in terms of its ability to provide additional support to other types of consortia or partnership for sharing of distance learning.

9. Allied health and nursing programs will need additional technical assistance and related technology as well as unique student support to implement shared curricula/programs agreements.

10. There must be some type of incentives built into the system to encourage and reward development and distribution of sharable courses or programs.

11. Student support services must be essential components of shared curriculum agreements.

12. Policy discussions and planning need to include distance learning.

13. Industry needs to be an equal partner in planning and delivering health occupations education.

OBJECTIVE 3

Need for Student Support Services for Health Occupation Students

As highlighted in section one, adults living in rural and frontier communities are often marginalized when it comes to accessing health occupations programs. It should not be a surprise that delivering student services such as tutors, academic advisors, counselors, schedulers, and technical assistance to these and other distance learning students can be a challenge for community colleges.

Washington State University planners note that "student services are a significant part of the budgeted costs of the distance program. Technology costs and considerations can be a source of budgeting problems; however, student support for distance learners should take precedence" (Galusha, 1997, p. 144).

Traditionally tension is high among health occupation students. Health occupation programs have rigorous entrance requirements comprised of a variety of pre-requisite courses. Community college health occupation programs accept a limited number of students each year, receiving ten to fifteen times more applications than available program spaces. Because qualified students often must wait more than one year to be admitted, and the program courses are often offered only one time per year, the stakes are very high for students, resulting in an emotional intensity not usually seen in students enrolled in traditional transfer courses. Add to this the requirement for students to apply their knowledge and skills in healthcare settings where errors can result in serious injury or death for a patient, and the students' intensity continues throughout the program. Therefore, these students require/demand a significantly increased level of communication and contact with college faculty and staff as compared to students in general. The college counseling department often works closely with the health occupation department faculty and with the students in providing support services. (See Appendix N for definitions of distance students, health occupations, and student support services as used in this study.)

The isolation of distance learning further complicates the learning process for adult students (Galusha,1997 p.145). Because distance students cannot meet with faculty before or after class or by appointment as local students can, they must rely on other mechanisms such as emails, voice mail messages, or online resources to have their questions answered (Benjamin-Coleman, Smith, Alexy, & Palmer, 2001, p. 10). Consequently, when the intensity of health occupation students is coupled with the distance delivered coursework, the need for student support services is paramount.

Further, such support is mandated by the Northwest Commission on Colleges and Universities in Standard 2, Policy 2.6 (www.nwccu.org, 2006), in which it specifically addresses distance delivery of courses, stating the following stipulations:

- Programs provide for timely and appropriate interaction between students and faculty, and among students.
- The institution ensures that students have access to and can effectively use appropriate library resource
- The institution provides adequate access to the range of student services appropriate to support the programs, including admissions, financial aid, academic advising, delivery of course materials, and placement and counseling.
- The institution ensures that students admitted possess the knowledge and equipment necessary to use the technology employed in the program, and provides aid to students who are experiencing difficulty using the required technology.
- The institution evaluates the educational effectiveness of its distance education programs (including assessments of student learning outcomes, student retention, and student satisfaction) to ensure comparability to campus-based programs.

The need for student support services must be viewed from four perspectives:

1. That of the provider college, which provides the health occupation courses
2. That of the receiver/partner college, which has district students enrolled or wishing to be enrolled in the host college courses
3. That of the individual college offering prerequisite courses and elective courses to students who come to campus
4. That of the college that offers prerequisite coursework and elective courses via distance delivery.

Research Regarding Online Student Support Services and Models of Other Existing Programs

Floyd and Casey-Powell (2004), in an in-depth discussion of student support services online at community colleges, offer an outline for providing inclusive student services to distance learning students, which they divide into four phases. In Phase One, students are assisted to set goals, become oriented to the college, and get help with financial aid. In Phase Two, they learn success

strategies, get faculty advising, and access technology support. In Phase Three, they learn networking strategies to develop a sense of belonging; learn to use the bookstore and library and access disability services. In Phase Four, colleges develop process models for evaluating the success of the online support as gauged by student retention, graduation and persistence rates, and online course evaluations (Appendix K).

Capella University, a private, for-profit distance learning accredited institution, offers a variety of online student support services that meet the recommendations delineated by Floyd and Casey-Powell (2004) and which could serve as a model for community colleges developing distance learning support services (Appendix L).

Also, Western Governors University, the first competency-based online university in the United States, offers basic student support services for students enrolling for a bachelor's or master's degree. These services include admission, counseling; financial aid, including services for students in the military, veterans, and information about corporate reimbursement; and library and bookstore services (Washington Governors University, 2006).

Status of Support Services for Distance Learners in Oregon's Community Colleges

A matrix of student support services available on the college web site along with a questionnaire were sent to the Dean of Student Development or Student Services in the seventeen community colleges. Nine colleges reviewed the web page matrix (see Appendix M), and seven colleges returned the completed questionnaire.

The seventeen community colleges offer admission applications online or fill in the application via telephone; also available online or via telephone are library services, financial aid information and FAFSA applications and information about disability services. All colleges offer bookstore information, and twelve of the seventeen offer bookstore services online or via telephone. Two colleges offer booklists on the college web site. The least offered student support services are online college orientation, which is not required by the majority of colleges, and online tutoring services. In discussions with college representatives, it is evident that required placement testing is a barrier for most distance learning students.

The majority of colleges will accept placement test scores from other colleges or use transfer coursework to satisfy prerequisite skills requirements to register for a course (e.g. math, writing). One college reports that placement testing is offered online.

Unique Student Support Services For Health Occupations Students

Of the seven colleges that responded to the questionnaire, two colleges report that they employ Health Career Advisors specifically dedicated to serving students interested in health careers. Both state that a large amount of advising occurs through the website published information and through email and phone contact. The rest of the colleges use the college advisors available to all students, and many utilize the health program department staff to assist with the advising of interested students. Some colleges offer on-campus admission information sessions for the health programs, and most mail information packets to interested students. Students report they also received program admission information from the science department faculty. Health occupation students must apply knowledge in a clinical/practicum/internship as part of the educational program. This can be stressful for students, so the faculty and/or preceptors provide unique coaching/mentoring support services while students are in the clinical area and in the skills laboratory.

Through an incumbent worker pilot nursing program, Cascades East Area Health Education Center, in collaboration with Central Oregon Community College, employs a half-time case manager to work with students as they complete prerequisites. Additionally, the case manager mentors admitted students throughout the six-term nursing program. Chemeketa Community College's N2K program also employs a full-time case manager to work with the cohort of incumbent bilingual/bicultural students.

Linn-Benton Community College offers a one-credit course titled "Career Planning for Pre-Nursing." And Rogue Community College assigns students a nursing advisor and otherwise encourages students to utilize the online student services

Crucial Elements of Delivery Technologies for Student Support: Institutional Perspective

Respondents to the student services survey identified a number of characteristics of health occupations focused student services that were most important to consider when selecting delivery technologies.

- A way for individuals in health occupations to be assimilated into the culture of the health occupation, which typically occurs through visual contact with an instructor and/or other health care staff

- A way for instructors to meet with small groups of students, perhaps through some form of chat and video link when teaching via videoconferencing

- The following sites: an FAQ (frequently asked questions) site; a career planning site (pathways for health occupations; and online employment services

- Test anxiety courses/counseling available via distance
- Technology that will:

    1. Be user-friendly, personalized, and meaningful
    2. Be accessible in a variety of modalities for students with disabilities
    3. Be usable by the end users in rural or frontier areas of Oregon lacking hardware capable of accepting large enough files or at a high enough speed to make the delivery of health occupation programs feasible
    4. Be interactive and fast, providing as close to real-time responses as possible
    5. Not require a lot of helpdesk troubleshooting
    6. Be automated so main campus staff do not have to re-enter the information into appropriate systems and/or create specialized manual processes to accommodate the distance delivery

<u>Crucial Elements of Technological and Personal Student Support: Student Perspective</u>

Four students who are either graduates of or are currently enrolled in an associate degree health occupation program were interviewed and asked what were the strengths of distance delivery, and what services were missing that they wished had been in place. No student had accessed the online tutoring services.

What works for students:

- User-friendly program and college web sites that make it easy for them to gather the information needed.
- A contact number or email address that enables them to get questions answered in a friendly way
- The college technology support staff, a lifeline in accessing software
- Registration, financial aid, and advising
- Faculty members who design courses to be interactive, available, and with timely feedback, preventing feelings of isolation
- The opportunity to meet the faculty member and other classmates at least once at the beginning of the term, which creates a bond

- The bulletin board where students post problems, and everyone "jumps in to assist"

What students still wish they had:

- Technology support 24 hours a day
- Opportunity for an occasional visual form of interaction, such as a videoconference
- An occasional telephone call
- Tuition on a par with other courses, not more costly
- Opportunity for visual learners to see some portions of the lab work in motion
- Library services that are less cumbersome
- Access to book buy-back
- More face-to-face assistance for new students right out of high school
- Along with preceptorship for the clinical/practicum/internship, more contact with the faculty member
- Faster response from the college bookstore, so the student doesn't have to buy books on the internet and risk getting the wrong edition

<u>Student Advising and Counseling for Health Occupations</u>

Many colleges are finding it increasingly difficult to serve the large number of students interested in a health occupations career, and many students indicate they receive conflicting information from different sources. A focus group suggests that funding for an 800 number coupled with additional trained staff will increase the accessibility of advising and counseling for all remote students.

They also suggest the development of a centralized information center (web site):

- Providing links to sites that tell the student about the various careers and the personal characteristics a person needs to have to enter into them; career requirements, what it means to work in health care, exploration of touch and non-touch careers in healthcare, etc. (Oregon Pacific AHEC and other AHECs have information brochures which can be used as a model.)

- Providing how-to links which tell the student how to become a healthcare student (how to access, prepare for and get through all health occupations)

- Encouraging students who have not been accepted into a health occupation program to see a counselor so they may be directed to other health career pathways

Financial Aid

For most students, financial aid is imperative and ongoing throughout their education process, which results in ongoing dialog between the student and the college financial aid personnel. When the students enroll in more than one institution to meet degree or certificate requirements they may be charged late fees; dropped from a class because their financial aid has not been released from the home school to pay for the course during the required institutional timeframe; and denied financial aid from term-to-term because the students' grades from all of the institutions are not received in the timeframe required by the home school.

These situations occur because of multiple challenges each of the institutions face: the Federal Government allows financial aid from only one school, so when a student is enrolled in multiple institutions, a consortial agreement must be constructed for each student designating the home school; when this occurs student information must be shared between the home school and other institutions to determine the degree eligibility and number of credits in which the student is enrolled; student academic progress and student withdrawals or non-attendance. While the Federal Government requires the home school to take full responsibility for the student's financial aid and reporting responsibilities, it is imperative for data transmission to be coordinated among the institutions in order for the home school to meet its responsibilities. The volume of individual consortial agreements can easily overwhelm a financial aid office because the information must be entered into the system by hand.

Exemplars of promising practices/models in the exchange of data that streamlines the process for colleges and universities in serving financial aid students are the Clackamas/Chemeketa/Mt. Hood CC/Portland CC and PSU consortium; the OCNE (Oregon Consortium for Nursing Education) consortia agreement and the Linn Benton CC and OSU consortium agreement. The

implementation of these agreements must be monitored to learn whether and to what degree the multi-institutional agreements will in fact streamline processes, bringing efficiencies to what is currently a labor-intensive individual student consortial agreement process.

The use of OFAX, an Oregon Financial Aid exchange, to confirm where the student is enrolled, course and credit enrollment and costs, and EDI, a data interchange system for exchanging transcript information, are critical systems for the sharing of confidential student information, but not all public post-secondary institutions currently have access to these systems. The Oregon University System Excellence in Delivery and Productivity Workgroup is working with the Oregon Department of Community Colleges and Workforce Development to request funding of a statewide financial aid data exchange system (OFAX). The college's instructional technology priorities and availability of staff to implement the system vary from institution to institution and may impact the implementation of the system.

Disability Services for Distance Students

Accessibility of services is a huge challenge for remote students with no local services. A focus group identified issues that must be addressed by MOU's/consortia agreements:

- Who is responsible for providing the services?
- How does the college gain up-front knowledge about the student's disability?
- How would small schools currently meet the needs of these students?
- What mechanism will be utilized for student evaluation of the services?

Student Support Services During Clinical/Practicum/Internship

Health occupation programs have traditionally utilized preceptors or clinical faculty to supervise and coach/mentor students in the clinical sites. Program faculty communicates directly with the preceptor and is the instructor of record.

Programs that do not require direct patient care continue to utilize the preceptor model effectively when the student and clinical sites are located somewhere other than the campus and program faculty. It is different, however, for programs that require direct patient care. The availability of qualified individuals who will provide oversight and work with the students to provide safe patient care has been a challenge, and some feedback indicates the needs of the student, preceptor, program, and/or facility have not been met.

Steps are being taken to address this issue. Southwestern Oregon Community College Nursing Program has placed preceptor training online. A member of the Nursing faculty at Chemeketa Community College developed a

Clinical Teaching in Oregon CD and DVD that has been distributed to Oregon Community Colleges. Central Oregon Community College is utilizing a one-year US Department of Labor planning grant to evaluate and redesign the preceptor program for the distance delivered nursing program. OCNE has applied for a Ford Family Foundation grant to develop curriculum and train 600 preceptors statewide. While these projects are nursing-focused, much can be learned from other health occupations programs that have successfully utilized the preceptor model for many years.

Student Diversity Issues

Traditionally the majority of health occupation students are Caucasian females. With an increased emphasis on the recruitment and retention of a more diverse student population, the student support needs for this population must be addressed. Colleges must ensure that images on web sites reflect diversity and that the readability of the content is appropriate for a population whose first language is not English. A focus group identified that students who may not have access to computers or be computer literate, or who may find distance delivered student services ineffective, would respond well to student-to-student and/or face-to-face mentoring at a local site, and would find a cohort structure to be supportive.

Additional Program/Student Support Needs for the Receiver/Partner/Host Colleges

- Receiver colleges are often small, so additional personnel are needed to be responsible for program coordination; student interaction, recruitment, and advising; and interaction with host college/health facilities, and community members.

- Financial and personnel resources and equipment are needed to develop and deliver online student support services for those unable to access the college campus.

- To ensure oversight and consistent quality of course delivery and functioning of the technology, each site needs a site director, an assistant site director and staff (Benjamin-Coleman et al, 2001).

Additional Program/Student Support Needs for Provider Colleges

- Engage enthusiastic faculty to deliver the curriculum and provide the interactivity with an increased number of students who do not have the opportunity to interact face to face with faculty on a consistent basis.

- Offer successful training materials for clinical faculty and/or preceptors that can be delivered via distance.

- Offer an introductory online computer course for students with low level computer literacy skills and/or confidence (Wright & Thompson, 2002).

- Ensure that each online course has a direct link to the instructor's email and to the course's chat room. The chat room is used in a combination of asynchronous and synchronous modalities (Wright & Thompson, 2002).

- Ensure that mechanisms are in place to encourage course and non-course interactivity between students and between the instructor and students, essential in promoting community and connection resulting in the development of support systems and the facilitation of learning. This may be in the form of teleconferencing, internet/Web-based and/or videoconferencing (Townsend et al 2002).

- Ensure that the main campus has an advisor and distance education coordinator dedicated to the distance education health occupation programs. The program coordinator makes periodic site visits, which seems to increase the high-touch perception necessary to compensate for the technology (Benjamin-Coleman et al, 2001).

- Provide computer help desk 7 days a week, 24 hours a day—before calling, the student must perform a computer check developed by computer services and must present the compatibility information when help is requested (Benjamin-Coleman et al, 2001).

- Provide virtual library and bookstore services since traditional college services are not readily accessible to distance students.

Additional Student Support Needs For Colleges Offering Prerequisite and Elective Coursework on Campus or Via Distance Delivery

- Advisors/counselors who have electronic access to the college catalog for each Oregon health occupations program so they can assist students in selection of pre-requisite and elective courses that will transfer to the host college

- Online access to provider college advisors/counselors

- Online tutoring services

Approved Statewide Health Occupations Programs

The first program approved by the Oregon Board of Education is EMT, and most recently, the Oregon Consortium for Nursing Education (OCNE) competency-based program received approval. Both of these programs serve as models for future program development with these benefits:

- Increased accessibility, transferability, and mobility for students resulting in increased enrollments in rural and frontier areas of Oregon

- Decreased impact of the shortage of qualified faculty through the use of shared faculty among programs
- Increased program efficiency
- Increased availability of health care providers in Oregon, which increases healthcare to Oregonians and has a positive impact on the state's economy
- Consortia agreements serving as models for other programs
- Increased resource development because of the program scope, number of multi-sector partners, and statewide impact
- Consistency of graduate preparation based upon adoption of statewide learner outcomes

Perceived Barriers To Offering Online Student Support Services

- Cost of software
- Time needed to implement the new service
- Difficulty locating software that meets specific needs and is fully functional
- Lack of health science courses currently offered
- Funding/fiscal resources
- Number of staff to program and implement
- Extra time required for one-on-one interaction as opposed to speaking with a room full of students
- Faculty resistance to offering online tutoring
- Inadequate hardware and software
- Lack of administrative and/or Board buy-in
- Federal rules related to financial aid and the sharing of data among institutions
- Federal guidelines related to financial aid that create a burdensome workload for the institution so that rules are often interpreted very conservatively

- The ability on the part of each institution to interpret how the number of credits affects the federal financial aid so a student may qualify at one institution while not at another

- Some college administrative support systems not recognizing contract education students, causing stress for the students. They are consistently billed for tuition and fees that had been prepaid, and some receive the standard letter threatening to drop them because their accounts were not current.

Health Occupations Program Student Support Services Case Studies

The case studies (Appendix M were selected because they each present a different context in which to examine student support services for health occupations program students. Case One is from the first incumbent worker Associate of Applied Science distance education nursing program delivered to rural and frontier Oregon communities that utilized a case manager to provide student services. Case Two is from an Associate of Applied Science degree distance delivered Health Information Management program that has been in existence for three years. Case Three is from an Associate of Applied Science degree hybrid distance and traditionally delivered Medical Laboratory Technology degree which has other community college partners; the student completes program pre-and co-requisite courses through the local community college, and the MLT coursework is delivered via distance education.

Analysis and Future Considerations

- Including systematic standards and assessment in the development of intentional and systematic student support services for distance learning health occupations students is imperative, and would be enriched by student input/review prior to implementation.

- Providing distance learning students the same student-centered student support services available for on-campus students is necessary to honor the institution's commitment to student success (Gellman-Danley & Fetzner, 1998; Floyd & Casey-Powell, 2004).

- Developing statewide consortia agreements among Oregon public post-secondary institutions will eliminate many of the barriers financial aid students enrolled in multiple institutions encounter.

- Developing and implementing a financial aid web site outlining detailed information for students will provide consistent information about consortia agreements and/or Memorandums of Understanding.

- Communicating with the US Department of Education regarding financial aid issues related to students enrolled at multiple schools and short-term and non-credit health career courses who are not financial aid eligible will promote discussion toward issue resolution.

- Developing and implementing an online Financial Aid 101, which assists the student to determine the types of aid, eligibility, how to complete the FAFSA, etc. will provide an increased level of service to students.

- Accessing online library services is essential for distance students, and ongoing evaluation of library services by distance students is needed to ensure that students have access to services necessary for their program of study (NWCCU website, 2006, www.nwccu.org).

- Increasing collaborative sharing among libraries is important to ensure access to full text availability for all students.

- Automating transcript review will lessen the workload of the advisors and health occupation faculty; supporting the implementation of ATLAS, a degree audit system, in Oregon will assist in this goal.

- Identifying and broadly disseminating best practices in student support services, including preceptorships, for distance health occupations students will assist all colleges in providing quality services for all students.

- Providing a virtual computer literacy course with a parallel peer support system will assist students who lack computer literacy skills or computer confidence be prepared for the distance delivered course work.

- Training faculty to include course design strategies that provide for timely and appropriate interaction between students and faculty and among students is important to ensure social and intellectual interactivity to decrease the feeling of isolation and dislocation distance students may experience (Townsend, et all 2002; NWCCU website, 2006, www.nwccu.org).

- Including aspects of "high-touch" (face-to-face encounter) in the design of student services and course delivery for distance health occupations students is necessary to meet the students' value of people-contact.

- Designing health occupation program dissemination must include recognition of the needs of provider and host/partner schools, and necessary funding must be provided in order to make the student learning experience successful.

- Visiting distance learning students at the clinical/practicum/internship and skills lab site is critical to student success so budgetary and faculty workload issues must be taken into consideration during the program-planning phase.

- Providing distance learner evaluation of student support services and courses is essential for the successful continuous improvement of services, the curriculum, and the delivery method (Gellman-Danley & Fetzner, 1998).

- Determining in advance which department, campus, or institution will handle student grievances, disability services, student questions (that can originate twenty-four hours each day) for learners who have difficulties with such issues as computer-related connection problems, registration glitches, undelivered textbooks, advisement options, and test-proctoring

will assist in streamlining consortial agreement development among Institutions or consortia members (Gellman-Danley & Fetzner, 1998).

- Planning the design of student support services for remote students must include consideration of the cultural values and needs of a diverse student population.

- Standardizing Course Management Software (LMS) statewide will ensure compatibility for the sharing of courses and instructors.

- Providing professional development for student support services staff will increase awareness of distance learning students' needs as well as showing how best to meet those needs, and will result in increasing the quality of services delivered to this population.

- Developing administrative systems and funding to support consortial agreements is essential to the ongoing success of the agreements.

- Developing a centralized electronic "repository" of sharable learning materials for health occupations courses will decrease the faculty workload related to course design and will provide quality materials for students statewide.

- Acquiring and implementing online student placement software is critical to the success of distance learning programs and student retention.

- Utilizing peer advisors and peer tutors will assist students to connect the formal and informal network within the institution and health occupation program.

- Designing intentional follow-up advising for students who have not been accepted into their first choice health occupations program to re-direct them into other health career pathways will assist students in moving toward their goal of becoming a healthcare provider.

- Designing and implementing a systematic way to bring emerging technologies into institutions will enhance student support services.

- Including an online orientation for students and families will enhance student success.

- Having increased sustainable funding for student support services is imperative if the needs of distance students are going to be met.

- Exploring, creating and maximizing the development of consortial agreements that allow students from around the state to effectively participate in programs/classes from multiple colleges while utilizing the full menu of student support services is required in order to expand the

distributed delivery of nursing and allied health programs throughout Oregon.

- Working with a statewide coordinator, develop and fund regional health occupations centers which provide advising, career planning, counseling, placement testing, tutors, proctors and case managers via video-conferencing, teleconferencing and other forms of technology required to meet student needs will streamline the access of health occupations programs throughout Oregon.

Conclusion

Providing health occupations education via distance learning has been identified as a priority strategy by all of the interested parties in Oregon. The nature and scope of the problem is clearly understood, and many of the elements are in place to address the challenge. Distance learning is well established in the state, the community colleges are willing to view the problem as broader than a local concern, and several promising efforts are underway. However, it is also clear that in order to address this problem in a significant way it will take more than local willingness and good will. There are problems with instructional delivery, technology and infrastructure, and student support that can only be addressed through a more centralized, coordinated, and funded effort.

The principle recommendation of this report is that the community colleges and the structures that support them need to make a commitment to a statewide approach to this problem. This means that in addition to planning to meet local needs, there needs to be attention and resources to a broader statewide community.

Recommendations

Recommendation: Establish, fund, implement, and promote standards for connectivity and access to enable Oregonians to participate in distributed technology-assisted healthcare occupations education.

There are large disparities across the state in the access to high speed Internet. Many rural areas simply have no adequate access for consumers, and providing that access is beyond the scope of this project. Community colleges in these communities can provide access through on-campus labs, extension centers and in partnership with others in the community. In order to do this all of the colleges must have a minimum level of infrastructure to support more sophisticated instructional and student services applications. Without consistent and adequate infrastructure each attempt at sharing curriculum will have to revert to the lowest common denominator technology.

Recommendation: Create and adopt agreements outlining modes of delivery, curriculum, student services, cost sharing and other institutional responsibilities.

Although there needs to be room for institutional and curriculum driven individuality, development of standard agreements create economies of scale, speed up the process, and provide predictability and simplicity for students.

The instructional model emerging from ongoing projects that seems most promising involves a combination of didactic delivery via Web based courses, combined with some face-to-face interaction via videoconferencing or occasional in-person meetings, and scheduled preceptor-led clinical instruction at local sites.

This model requires a partnership agreement between the community college where the program is located (provider college), the community college where the student is located (host college).and the clinical provider in the host college community. These agreements spell out expectations and obligations for all parties, and formalize the partnership. Refining these agreements and adopting them for easy replication is essential

Recommendation: Develop and deliver student services that meet the unique needs of healthcare occupations students studying at a distance.

While most distance learning students in Oregon have a college nearby and have chosen to be distance learners, many of the students served by this initiative will be far removed from the college providing the curriculum, and may have learning styles not well suited for distance learning. Also, many healthcare occupations have special learning and support requirements. This initiative must focus on meeting these needs.

The agreements between the parties must spell out in detail how and where students are going to receive their services, be focused on student success, and be accessible online.

Recommendation: Seek designated funding focused on providing and sustaining new capacity in healthcare occupations programs through distributed learning.

Many of the existing healthcare occupations programs in Oregon are operating at full capacity serving the local community, and while creating online versions of the courses may provide enrolled students with easier access, they do nothing to increase capacity. Most of the current efforts underway to expand these programs are grant funded, without clear sustainability plans. A funding and sustainability plan to account for development, instructional, and administrative costs is essential.

Recommendation: Create a structure to provide statewide coordination of healthcare occupations education through distributed learning.

All of the previous recommendations hinge on having an office dedicated to advocacy, planning, operations, and leadership around this initiative. A broad, strategic, statewide approach cannot be implemented on a one-by-one, voluntary basis. The colleges are willing, but determining the need, convening the participants, guiding the planning, finding and allocating the resources, and sustaining the effort all need consistent and committed staffing. The state distance learning operations and CCHAP are two examples of the existing structure that might be built upon to provide that staffing.

Appendices

Appendix A: Technologies and Barriers

	Chem	Clack	MHCC	PCC	LBCC	LCC	RCC	UCC	KCC	Clat	OCCC	TBCC	SOCC	CGCC	BMCC	TVCC	COCC
Technologies																	
Web CT	x		x	x		x	x				x	x	x	x			
Blackboard		x			x					x							
Moodle						x		x					x				
Angel								x									
Other LMS						x		x									
IP Video	x-2			x-6		x-3	x-11	x-2			x-2		x-2				
Streaming Media		x	x	x			x										
Cable Access	x	x		x	x	x	x	x		x							
ITFS	x			x	x	x											
Learning Object Repository					x												
On Line learning resources				x	x		x	x			x						
On-line advising	x				x	x					x			x			
Video Production	x			x	x	x	x	x						x			
Faculty training	x	x	x	x	x	x	x	x		x			x	x			
Multimedia production	x		x	x	x	x	x	x						x			
Host provider courses	x	x				x	x			x	x	x	x	x			
Technology Barriers																	
Inadequate bandwidth	x	x	x	x	x	x			x	x	x		x	x			
Lack of Internet access in homes	x	x						x	x	x			x				
Lack of production capabilities			x			x		x	x	x	x	x	x	x			
Lack of training capacity			x			x		x	x	x	x						
Lack of IP video			x		x	x			x	x	x	x		x			
Lack of IP video reliability	x		x	x		x	x	x	x	x	x						
Lack of distance lab science courses	x		x	x	x	x		x	x	x	x	x	x	x			
Lack of technology to support clinical experiences	x	x	x	x		x	x	x	x	x	x						

Appendix B: IT SURVEY

College	ISP	Bandwidth	Expansion Plans	IP Video Dedicated Bandwidth	Fiber Lit/Dark	Bandwidth to Desktop	Expansion Plans	Dedicated IP Nets
PCC 11	ELI/Cogent	50MB/100 MB	None	Allocate on net	Lit/no need	100MB-1GB	2-4 years	Yes
Lane 1	Lane ESD	1MB	2006	No-shared	Both, yes	100MB	None	No
Southwest 2	ORCA Comm	10MB	None	Yes	Both, yes $	100MB-1GB	All GB over time	None
Linn Benton 3	QWEST Comcast	2 T1+ 1 modem	2006	No IP	Lit/No	100MB	None	No
Umpqua 4	Douglass Fastnet QWEST	15MB	2006	Yes	Both/ No installing own	10-100 MB	None	Yes
Central Oregon 5	NERO	5MB	None	None	Both/yes	100MB	None	Yes
Treasure Valley 6	Ispeed Wireless	1.4MB	2006	Yes	Lit/No	100MB	None	V-Lans
Clackamas 7	Clackamas ESD	100MB-1GB	None	No IP	Lit/Yes	10-100MB	2006-07	No IP
Tillamook 8	Action	10 MB	None	No	Lit/yes	100MB	5 years	No IP
Oregon Coast 9	Action Net	6MB	3-4 years	No	Lit/yes	2-6MB	3-4 years	No
Columbia Gorge 10	R9 ESD	20MB shared	Yes	No	Lit/Yes	100MB	None	No
Blue Mountain	Eastern Oregon Telecomm	6MB	None	No	Dark/No	100MB	None	No
Chemeketa	QWEST	45MB	None	To DAS	Lit/yes	10-100 MB	100-1GB now	Yes
Klamath								
Rogue								
Mt. Hood								

Appendix C: SIM Lab Sites

Provided through seed funding*

BMCC	Doleta Funding will provide equipment
TVCC	Sim Governing Council funding
Clatsop CC	DOLETA
COCC	Sim Governing Council funding
MHCC	Sim Governing Council funding (they have an extensive lab@ their Bruning Center)
Clackamas	Sim Governing Council funding
PCC	Sim Governing Council funding
Chemeketa-	Sim Governing Council funding
Oregon Coast	Sim Governing Council funding
TBCC	Sim Governing Council funding
SOCC	Sim Governing Council funding
Rogue	Sim Governing Council funding
Umpqua	Ford Foundation Grant—extensive lab shared with the hospital
Lane	purchased their own +Sim Governing
KCC	Sim Governing Council funding with OIT
CGCC	own grant funds—extensive lab established this past year
LBCC	Sim Governing Council Funding

*SIM governing council seed funding was to local coalitions-may not be located at local college

Appendix D: Distance Delivered Allied Health Programs in Oregon Community Colleges

Self-reported On-line Health Occupation Programs/courses & Programs utilizing Preceptors 2/06							
Offering	**College**	**Method**	**Preceptors**	**Comments**	**Contact**		
Adult Foster Care	PCC-IHP	Web CT and Trad.		Will cancel Web CT	Irene Giustini		
32 hours		Campus format		if enrollment doesn't	igiustin@pcc.edu		
				improve			
Alcohol and Drug	PCC-Cas	one course WebCT		looking at developing	Larry Clausen		
Counselor AAS				more courses	lclausen@pcc.edu		
Coding and Ins.	PCC-IHP	Web-CT and trad.		Web CT first offering	Irene Giustini		
Billing-1 term		campus format		Spring '06	iguistin@pcc.edu		
Dental Assisting	LBCC	supplement w/	X		Jim Bell		
1 yr-=cert		on-line			bellj@linnbenton.edu		
	Lane		X & coop		Carol Whitaker		
					whitakerc@lanecc.edu		
	COCC	BlackBoard supple-			Celeste Brody		
		ments didactic			cbrody@cocc.edu		
	Umpqua		externships		Tamara Loosli		
					tamara.looslie@umpqua.edu		
Dental Hygiene							
AAS	Lane	Didactic/on-line-	X		Carol Whitaker		
		suppl. Campus			whitakerc@lanecc.edu		
	PCC			Intent to develop 3	John Saito		
				courses	john.saito15@pcc.edu		
EMT-Basic							
2 term	Clackamas	on line & traditional		EMT 105-would	Maureen Mitchell		
				adapt to dist.format	maureenm@clackamas.edu		

Offering	College	Method	Preceptors	Comments	Contact		
	SOCC	2 courses on-line			Karen Helland		
			X		khellend@socc.edu		
EMT-Basic	Clatsop		X		Audrey Knippa		
2 term cont.					aknippa@clatsopcc.edu		
	Lane		X		Carol Whitaker		
					whitakerc@lanecc.edu		
	LBCC	on-line didactic	X		Jim Bell		
		and lab			bellj@linnbenton.edu		
	BMCC	ITV didactic	X		John Wooten		
					jwooten@bluecc.edu		
EMT Int.	Clackamas	on line & traditional			Maureen Mitchell		
1 term					maureenm@clackamas.edu		
	LBCC	on-line didactic			Jim Bell		
		& lab			bellj@linnbenton.edu		
	BMCC	ITV didactic		new curr being	John Wooten		
				implemented	jwooten@bluecc.edu		
				Fall 2006			
First Responder	BMCC	ITV didactic	X		John Wooten		
1 term					jwooten@bluecc.edu		
Gerontology	PCC-Sylv	on-line/classroom	X	working on incorp.	Jan Abushakrah		
AAS/EST		blended/hybrid ITV-		Video/audio stream.	jabushak@pcc.edu		
(in progress)		didactic. & clinical		and interactive			
		Web CT		enhancements			
Healthcare	PCC-IHP	ITV-Medford,	X	Going to offer via	Maria Michalczyk		
Interpreter		Eugene, Bend,		video streaming	cmichalc@pcc.edu		
CEU-107 hr recognition		Madras, Burns					
award.		Lakeview,					

Offering	College	Method	Preceptors	Comments	Contact		
Health Info Mgmt	PCC-Cas	on-line didactic &			Larry Clausen		
AAS		lab-Web CT			lclausen@pcc.edu		
Health Info Tech	Chemeketa	HM 114-CPT - on-line	X		Kay Carnegie		
1 year certificate		HM 120, 121, 122			cark@chemeketa.edu		
		telecourse					
	COCC			Received incentive	Celeste Brody		
				grant to revise prog.	cbrody@cocc.edu		
				/take much on-line			
Health Records	Lane	Didactic/on-line and	Coop		Carol Whitaker		
1 year cert		ITV			whitakerc@lanecc.edu		
Medication Aide	Chemeketa		X		Kay Carnegie		
1 term					cark@chemeketa.edu		
Medical Asst.	MHCC	On-line didactic,	X		Sue Boulden		
AAS		lab & clinical			bouldens@mhcc.edu		
Med Asst. (1 year)	Clatsop		X		Audrey Knippa		
					aknippa@clatsopcc.edu		
	Lane	Didactic/on-line			Carol Whitaker		
		and ITV			whitakerc@lanecc.edu		
	COCC	Integrating BlackBd			Celeste Brody		
		to augment didac.			cbrody@cocc.edu		
		instruction					
	CGCC		X		Linda Quackenbush		
					lquackenbush@cgcc.cc.or.us		
Med Assist.	SOCC	most of course on-	X		Karen Helland		
2 year		line-but not program			khelland@socc.edu		

Offering	College	Method	Preceptors	Comments	Contact		
Med. Clerical	SOCC	most courses on-line			Karen Helland		
(1 year)					khelland@socc.edu		
Med Lab Tech-AAS	PCC-Cas	on-line didactic Web	X		Larry Clausen		
		CT-limited ITV-			lclausen@pcc.edu		
Medical Office	MHCC	hybrid					
AAS		on-line didactic, lab	X		Carole Wickham		
		and clinical			wickhamc@mhcc.edu		
Med. Transcription	SOCC	most courses on-line			Karen Helland		
1 year					khelland@socc.edu		
	Chemeketa CC	HM 114-CPT - on-line			Kay Carnegie cark@chemeketa.edu		
		HM 141, 142, 143--					
		Transcription on-line					
		HM 120, 121, 122-					
		telecourse					
Mental Health and	MHCC	On-line seminar	X	only 1 fac. member	Leslie Allen		
Human Services		linked to clinical		interested in prov.	allenl@mhcc.edu		
AAS				on-line instruc.			
Nurse Re-entry	PCC-IHP	Didactic via internet	X	would like to offer	Christine Hill		
(RN and LPN)		/1 wk skills lab		skills lab in other	chill@pcc.edu		
3-12 months-typically		on-campus/clinical		OR communities--			
(OSBN allows 2 years)		in nurse's community		looking for partners			
Nursing Assist	Clackamas	supplement with			Maureen Mitchell		
		Blackboard			maureenm@clackamas.edu		
	SOCC		X		Karen Helland		
					khelland@socc.edu		

Offering	College	Method	Preceptors	Comments	Contact		
Nursing-AAS	Clackamas	Blackbd supplement	X	May offer Pharm. &	Maureen Mitchell		
		for didactic		Pathophys.on-line	maureenm@clackamas.edu		
		and lab					
Nursing AAS	SOCC	2 courses on-line	X	Grant being written-	Karen Helland		
Cont.				put degree on-line	khelland@socc.edu		
				(OCNE)			
	Rogue	sporadic assignment			Cheryl Markwell		
		on line			cmarkwell@roguecc.edu		
	LBCC	on-line didactic	X		Jim Bell		
		and lab			bellj@linnbenton.edu		
	Lane		X		Carol Whitaker		
					whitakerc@lanecc.edu		
	COCC	on-line Blackboard	X	intensive weekend	Celeste Brody		
	(pilot project)	and ITV		on-campus 2-3 X	cbrody@cocc.edu		
				per term			
	CGCC	skin barrier module	X-spring		Linda Quackenbush		
		Web CT			lquackenbush@cgcc.cc.or.us		
	PCC-Syl	Nur 104 (2 cr)			John Saito		
		combined with on-			john.saito15@pcc.edu		
		campus class-Nur					
		106-skin barrier mod.					
		Web CT					
	MHCC	Web-enhanced Phar.	X	Pathophysiology	Janie Griffin		
		Web-enhanced Lab		will soon be on-line	griffinl@mhcc.edu		

Offering	College	Method	Preceptors	Comments	Contact		
	Umpqua	in-class lecture w/	X		Sandy Hendy		
		on-line support/virt.			sandy.hendy@umpqua.edu		
		hospital w/textbooks					
		(MOODLE)					
	Clatsop	See info in PN section			Audrey Knippa		
					aknippa@clatsopcc.edu		
Nursing-AAS Cont	OCCC	Med. Terminology	X	program begins	Dona Lethbridge		
		on-line Web CT	6th term	Fall '06	dlethbridge@occc.cc.or.us		
Nursing-Pract.(PN)	Rogue	heavily used within	X		Cheryl Markwell		
1 year-stand alone		classes			cmarkwell@roguecc.edu		
	Mt. Hood	web-enhanced	X	new program Sp '07	Paula Gubrud-Howe		
		courses w/some cour.			gubrudp@mhcc.edu		
		completely on-line (					
Nursing-Pract.(PN)	Clatsop	every-other year	X		Audrey Knippa		
1-year career ladder		didactic trad. & alt			aknippa@clatsopcc.edu		
		yr offer trad.& on					
		line (blackbd)-Till.					
		year--					
	CGCC	Didactic on-line			Linda Quackenbush		
					lquackenbush@cgcc.cc.or.us		
	COCC	on-line Blackboard	X	intensive weekend	Celeste Brody		
	(pilot project)	and ITV		on-campus 2-3 X	cbrody@cocc.edu		
				per term			
	OCCC	Medical Terminology			Dona Lethbridge		
		on-line-Web CT			dlethbridge@occc.cc.or.us		

Offering	College	Method	Preceptors	Comments	Contact		
Paramedic	Lane		X		Carol Whitaker		
					whitakerc@lanecc.edu		
Offering	**College**	**Method**	**Preceptors**	**Comments**	**Contact**		
	Umpqua	MOODLE referenced	X		Joel King		
					joel.king@umpqua.edu		
Pharm. Tech	Umpqua	MOODLE referenced	X		Sandy Hendy		
					sandy.hendy@umpuq.edu		
Phelebotomy	CGCC			Didactic could be	Linda Quackenbush		
				offered on-line	lquackenbush@cgcc.cc.or.us		
	Umpqua		X		Sandy Hendy		
					sandy.hendy@umpqua.edu		
Radiological	PCC-Syl	Radiology 107-1 cr.			John Saito		
Technology		CEU on-line theory			john.saito15@pcc.edu		
		and quiz-Web CT					
	LBCC	webcast/Blackbd	X	Partnership w/rural	Marcene Olson		
		mods/CD's		CC's-begin Sept. '06	marcene.olson@linnbenton.edu		
Respiratory Care	Lane		X		Carol Whitaker		
AAS					whitakerc@lanecc.edu		
	MHCC		X		George Hicks		
					hicksg@mhcc.edu		
Rural Health Aide	SOCC	most of course	X		Karen Helland		
1 year cert		on-line			khelland@socc.edu		
Surgical Tech	SOCC	4 courses on-line	X		Karen Helland		
58 credits					khelland@socc.edu		
Surgical Tech	MHCC		X		Tracy Woodsworth		
AAS					woodswort@mhcc.edu		

Appendix E: Instructional Program Case Studies

Case Study 1

Nursing-Linn Benton Community College

Participating College(s): Linn-Benton CC and Oregon Coast CC

Date begun: One-time project with no expectations of future cohorts

Degree, certificate and/or transcript (non-certificated coursework) issued by: Linn-Benton CC—students were listed as regular LBCC students

Students (# of students, cohort vs. open enrollment; must meet admission requirements?): Closed program-must meet admission requirements, 27 students with a spring quarter start—LBCC worked with OCCC to select 7 students from their district who met the entrance requirements.

Impact on capacity (adds to capacity of program or shifts the capacity—spreads out with no net increase): Added to capacity

Program Delivery:

Didactic**:** All students attended LBCC on-campus didactic classes

Lab: All students attended LBCC on-campus lab

Clinical: Students residing in COCCC's district completed clinical experiences at coastal and Willamette Valley sites—the geographical distance was a major factor for students and faculty.

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund): One-time funding by Samaritan Health Services (for additional faculty and staff)

Driver of program need and how it is reflected in the program delivery:
The hospital approached the colleges about the need and the educational institutions fulfilled the need.

After this project, LBCC converted the didactic and lab to an on-line format.

Case Study 2

Nursing-Clatsop Community College

Participating College(s): Tillamook Bay CC (TBCC) and Clatsop CC

Date begun: 1999

Degree, certificate and/or transcript (non-certificated coursework) issued by: Clatsop CC

Students (# of students, cohort vs. open enrollment; must meet admission requirements?): Every-other year, up to 9 TBCC district students who meet Clatsop CC's nursing program admission standards are admitted to Clatsop CC's program. Students pay Clatsop CC tuition and are considered Clatsop CC students.

Impact on capacity: (adds to capacity of program or shifts the capacity—spreads out with no net increase) This program increased the capacity and is assisting to meet the needs in Tillamook County.

Program Delivery: -Tillamook County students may complete program pre-requisites at TBCC.

Didactic: The first term and the last term of the program all students meet face-to-face at the Seaside-Clatsop CC site. From the second term through the next to the last term the didactic is offered in a traditional and on-line format—students select which option works for them.

Lab: Traditional

Clinical: Tillamook County students complete clinical experiences in the County.

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund:) Every two years the partners negotiate a contract which delineates an agreed-upon amount of funding TBCC will pay Clatsop CC.

Driver of program need and how it is reflected in the program delivery:
With community partners, TBCC identified the need in their community, so they partnered with Clatsop CC. The delivery of the program reflects this need.

Case Study 3

Nursing (LPN and ADN/RN)-Central Oregon Community College

Participating College(s): Central Oregon CC in partnership with Cascades East AHEC and six central and eastern Oregon hospitals (Incumbent worker project). The following colleges provided pre-requisite and support courses for the students: Treasure Valley Community College in conjunction with TVCC Centers in Lakeview and Burns, Lane Community College, Eastern Oregon University, Clackamas Community College, Chemeketa Community College, Central Oregon Community College and Portland Community College.

Date begun: Pre-requisites/advising and case management services began in spring 2003-Students completed PN portion of the program in Winter of 05 and sat for the NCLEX-PN in the spring of 05 and then continued for AAS/RN—12/05 graduation.

Degree, certificate and/or transcript (non-certificated coursework) issued by: Certificate in Practical Nursing (LPN eligible) and AAS in Nursing, eligibility for RN licensure

Students (# of students, cohort vs. open enrollment; must meet admission requirements?): Closed enrollment-must meet admission standards for COCC nursing program. Employer (hospital) selection process, of those meeting COCC'S admission standards, 18 students, who were incumbent workers, were selected from participating hospitals.

Impact on capacity (adds to capacity of program or shifts the capacity—spreads out with no increase): This added to the capacity of COCC's nursing program (50% increase) and distributed nurses to the rural and frontier areas of Oregon.

Program Delivery:

Didactic: Internet protocol video conferencing via CONet (Central Oregon Hospital Network) system and Blackboard. Face-to-face lectures were also delivered during the weekends on campus.

Lab: Required two or three weekends/quarter on-campus (Bend)—to bond with faculty and with one-another, to become a true cohort and support group. They also completed skill labs and other course requirements.

Clinical: At the student's local community hospital with the supplement of additional clinicals at other sites as needed. Students are preceptored with COCC nursing clinical faculty oversight.

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund): Project was funded by the employers and grants written and administered by Cascades East AHEC. COCC recently received US Department of Labor ETA funding for one year of planning to refine the model and distance delivery based on evaluation findings and project learning's.

Driver of program need and how it is reflected in the program delivery:
The community/employer need was the total driver for this project and was reflected in how the program was delivered.

Case Study 4

Healthcare Interpreter –Portland Community College

Participating College(s): PCC—delivered to Portland, Eugene (Lane), Medford (Rogue), Bend, Lakeview, Madras, and Burns

Date begun**:** 2001

Degree, certificate and/or transcript (non-certificated coursework) issued by: PCC-107 CEU hours (1 term + 30 practicum hours) leads to recognition document and transcripted courses

Students (# of students, cohort vs. open enrollment; must meet admission requirements?): 40 students/term (spring and fall) admitted via an application process

Impact on capacity (adds to capacity of program or shifts the capacity—spreads out with no increase): The program had not been offered prior to 2001, so it has increased the capacity and serves communities throughout Oregon.

Program Delivery:

Didactic: TV-modularized courses

Lab: Online (videos supported with written documents available)

Clinical: Mentors are required (graduates are selected as mentors who Complete training and then mentor students at the community site.

For these CEU students to be successful the local college must provide adequate support; many of the students have not been in school for some time so they need more support than the typical college student.

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund) The Institute for Health Professionals , a self-support department of PCC, funded the development and on-going curriculum services of its Healthcare Interpreter Program. The students register through their local cc then the college pays PCC's Institute for Health Professionals the amount of $ (course costs) for all of the courses except the skills lab and practicum...Communities contact PCC's Institute for Health Professionals if they wish to offer the program in their district.

Driver of program need and how it is reflected in the program delivery:
The program began as a result of student demand. Then, the 2001 Oregon legislature passed legislation for voluntary certification and qualifications for healthcare interpreters. To be considered for employment, many

agencies/institutions are now requiring the coursework. Communities contact PCC if they wish to offer the program in their district

Case Study 5

Radiological Technology-Linn Benton Community College

Participating College(s): Linn-Benton CC partnering with Tillamook Bay CC, Columbia Gorge CC, Blue Mt. CC, Lane CC at Florence, Oregon Coast CC, Clatsop CC, Southwestern Oregon CC and Central Oregon CC.

Date begun: Will begin Sept. '06—program is currently in the planning phase. Degree, certificate and/or transcript (non-certificated coursework) issued by: 2-year certificate issued by Linn-Benton CC

Students (# of students, cohort vs. open enrollment; must meet admission requirements?): Anticipate 24 students in closed program (students must meet admission requirements). How students register has not yet been determined; participating colleges are discussion this, and will decide.

Impact on capacity: (adds to capacity of program or shifts the capacity—spreads out with no increase) Adds to traditional program and meets rural community demand for radiological techs.

Program Delivery:

Didactic: Web cast/Blackboard

Lab: Web cast/Blackboard

Clinical: Preceptorships

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund: Development funded by Department of Labor ETA (DOLETA) funds through Chemeketa CC (fiscal agent,) otherwise program is self-supporting and the cost/student is projected at $9500.

Driver of program need and how it is reflected in the program delivery:
Rural communities have requested the delivery of this program for some time. LBCC broadcast their intent to develop a distance delivered program project for the DOL (Department of Labor) funding proposal and colleges self-selected based upon community demand.

Case Study 6

Medical Lab Technology-Wenatchee Valley College

Participating College(s): Wenatchee Valley College, Big Bend Community College, Spokane Community College, Columbia Basin Community College, Walla Walla Community College, Blue Mountain Community College

Date begun: 2003-04

Degree, certificate and/or transcript (non-certificated coursework) issued by: Wenatchee Valley College Associate in Technical Studies. Qualify for national exam for certification as Medical Lab Technician

Students (# of students, cohort vs. open enrollment; must meet admission requirements?): Must be admitted to program, and expectation is that students will continue as a cohort; however, some students may take longer than the 8 quarters to complete. The number of students allowed in from each of the sites depends on the number of clinical positions and employment needs at the local medical lab.

Impact on capacity (adds to capacity of program or shifts the capacity—spreads out with no net increase): Creates new capacity, as it mirrors existing on-ground program in Wenatchee

Program Delivery:

Didactic: Primary delivery uses ITV (live, interactive broadcasts) in two 3 and ½ hour blocks each week. Some course materials are posted on the Web, and the program director (and principal instructor) makes periodic trips to each participating campus to visit clinics, host colleges, and students.

Lab**:** Lab instruction uses simulated labs on CD, coupled with hands on experience in local medical labs. Tests are taken at the local lab, mailed to the instructor, graded and returned to the student. Lab personnel proctor the lab tests.

Clinical: Clinical rotations are provided in a local medical lab. The impetus for the distributed program was requests from these local, labs for WVC to provide the program, so the labs are committed to providing clinical instruction from the outset.

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund): Wenatchee has borne the expense of initiating and teaching this program. The tuition and FTE reimbursement for the program are the only revenue sources for the program

Driver of program need and how it is reflected in the program delivery:
Local demand from medical labs, and desire of local host colleges to be responsive to local needs. Local number of slots determined by employment needs of local lab

Case Study 7

Medical Lab Technology-Portland Community College

Participating College(s): Portland Community College, Lane Community College, Rogue Community College

Date begun: 2005 pilot: Fall 2006 program

Degree, certificate and/or transcript (non-certificated coursework) issued by: Associates Degree in Applied Science awarded by PCC

Students(# of students, cohort vs. open enrollment; must meet admission requirements?): Students are admitted to the program each fall. Number of students at each site is determined by the capacity for clinical instruction at each site, and by employment projections. Students are expected to complete the program in two years as a cohort; however, the colleges are currently exploring ways to allow students to take longer.

Impact on capacity (adds to capacity of program or shifts the capacity—spreads out with no net increase): The intent of the program is to gradually increase capacity in the program, eventually doubling the capacity with a new distant cohort and a complete local, on-ground cohort. Some efficiencies are expected, with local and distant students all taking some portions on-line.

Program Delivery

Didactic: The primary delivery of the didactic portion of the program is on-line, using Web CT. ITV and on-site visits are planned to supplement the didactic portion when necessary.

Lab**:** Labs are held either at the local college, in local medical labs, or in Portland labs. Students may be expected to travel to Portland periodically, and PCC instructors travel periodically to host sites.

Clinical: Clinical rotations are provided by local medical labs. The program is designed to meet local needs for employees, and local labs are prepared to provide the clinical experiences.

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund) PCC is paying all development costs and instructional costs. Partial funding for course development, preceptor training, and student support through DOLETA and Northwest Health Foundation grants.

Driver of program need and how it is reflected in the program delivery:
The principal driver of this program is the medical lab industry. There is a recognized need for employees in communities that cannot be met by local colleges or PCC's on-ground program.

Case Study 8

Medical Lab Technology-Austin Community College

Participating College(s): Austin Community College, Del Mar Community College, St Phillips Community College, Tyler Junior College collaborate on course development. Program available to all community colleges in Texas.

Date begun: Development begun in 2004. Program launch Fall 2006

Degree, certificate and/or transcript (non-certificated coursework) issued by: Austin Community College, Del Mar Community College, St Phillips Community College, Tyler Junior College. Associates in Applied Science

Students (# of students, cohort vs. open enrollment; must meet admission requirements?):Students may enroll in any of the four programs offered by the participating providers

Impact on capacity: (adds to capacity of program or shifts the capacity—spreads out with no net increase): The program adds capacity. Courses are offered through the Virtual College of Texas, providing the provider colleges a mechanism for controlling enrollment based on their capacity, and host colleges a mechanism for offering the courses to their students- creating an enrollment management valve. Austin Community College intends to offer the courses in parallel with the on-campus program

Program Delivery

Didactic: Instruction is delivered online, using Blackboard course management system. The courses feature audio lectures coupled with PowerPoint presentations.

Lab: Labs are supported with some online instruction, featuring virtual microscope images, with a check list of skills that students must acquire at the local medical lab. Lab manuals are provided on-line

Clinical: Students must set up their own clinical experience with a local lab. Lab preceptors are provided with skills check sheets, which they complete and send to the provider college.

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund): Course development was funded through the Virtual College of Texas. Each of the four colleges is developing modules that can be used by all. Individual colleges fund instruction

Driver of program need and how it is reflected in the program delivery:
Virtual College of Texas funds development of needed curriculum, and provides operational support for sharing the programs across the state. Common course numbering is in place to facilitate this sharing.

Case Study 9

Nursing Refresher- Austin Community College

Participating College(s): Austin Community College and 18 Texas community colleges

Date begun: 2005

Degree, certificate and/or transcript (non-certificated coursework) issued by: Austin of participating community college- Non-credit continuing education

Students (# of students, cohort vs. open enrollment; must meet admission requirements?:) No limits-open enrollment

Impact on capacity (adds to capacity of program or shifts the capacity—spreads out with no net increase): Adds capacity

Program Delivery:

Didactic: Self-paced continuing education program to prepare RNs and LVNs seeking to renew their nursing license, or coming from another state, to apply for Texas license. Online courses, with streaming media (also available on CD for 56kb students), textbooks

Lab: Skills Checklist, overseen by local preceptor Lab materials on-line

Clinical**:** Local preceptors apply online

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund) Original funding provided by Carl Perkins grant, with support from Texas Hospital Association, Virtual College of Texas, and 5 community colleges. There are two models for providing and paying for instruction:

The Host College Model

This model allows a community college to access the Distance Learning Re-Entry Nursing course via the Virtual College of Texas (VCT). Within this model, Austin Community College provides (teaches) the course and the local community college works with their VCT coordinator to host the course. A community college would make a "reservation" through the Continuing Education side of the VCT (www.vct.org) for their student(s). Students enroll and register through their local community college and complete the didactic portion of the course online through VCT. The required 72-hour clinical preceptorship is coordinated by the local community college and completed in the students' community.

The Provider College Model

Community colleges can request copies of the components of the Distance Learning Re-Entry Nursing course for the purpose of setting up and offering the course through their distance learning departments; eliminating the VCT process. The community college would then provide both the online didactic portion of the course and the 72-hour clinical preceptorship for their local students. Austin Community College will be available to assist colleges who choose this model of course delivery.

Driver of program need and how it is reflected in the program delivery:
Program is designed to be delivered anywhere in Texas, by any community college. It creates easy access through local college, or through VCT. It is always “on”

Case Study 10

Health Information Management –Portland Community College

Participating College(s): Portland Community College, Lane Community College (partnership planned for summer 2006) as a one-plus-one configuration; students take first year Medical Assisting and second year HIM.

Date begun: 2003

Degree, certificate and/or transcript (non-certificated coursework) issued by: AAS by PCC

Students (# of students, cohort vs. open enrollment; must meet admission requirements?): Must meet pre-requisites. Cohort enters in Fall
Lane will provide additional cohort of 2nd year students

Impact on capacity: (adds to capacity of program or shifts the capacity—spreads out with no net increase) 35 students in each cohort- net increase 11. Twenty percent from out of district. Will add up to 10 students/year at Lane in 1+1 configuration with Medical Assisting

Program Delivery

Didactic:	Online. All courses offered online
Lab:	Labs online. Anatomy and Physiology offered online by Rio Salado Community College in Phoenix. Medical records online
Clinical:	Forty hours of directed practice in hospitals. Pass/fail. Preceptor signs off on skills check sheet.

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund) Development funding from general fund. Instruction from general fund

Driver of program need and how it is reflected in the program delivery:
Increase enrollment and graduation from program. This is the only program of its kind in the state. Students may enroll from anywhere. Provides flexibility for working students. Expanded access reflected in 20%.

Case Study 11

Gerontology-Portland Community College

Participating College(s): PCC in partnership with Columbia Gorge CC, Lane CC, Chemeketa CC and Blue Mountain CC

Date begun: The PCC program began offering courses in 2000. In 2005 the courses were converted to online delivery format, and PCC is currently in the process of writing up agreements to fit the curriculum and offerings for each partner college. The intent is to recruit and admit students this spring for fall 2006.

Degree, certificate and/or transcript (non-certificated coursework) issued by: A PCC certificate and degree offered –most students will earn dual degrees, such as with Human Services, Allied Health Programs, Fitness Technology, Business, etc. Partner college students take general education and electives at their home college. The partner colleges will also supervise their respective students during their internship (coop).

Students (# of students, cohort vs. open enrollment; must meet admission requirements?): After meeting a math and writing requirement, students apply for the program. PCC has doubled enrollment since fall 2005 to 70 students and it is anticipated each of the partner colleges will have certificate and degree seekers. The goal is an additional 25 students in 2006-2007. It is anticipated, if there were no funding limitations, the numbers would continue to grow.

Impact on capacity: (adds to capacity of program or shifts the capacity—spreads out with no net increase) This will add to the capacity of PCC's gerontology program and prepare individuals in urban, rural and frontier areas of Oregon. It assists in workforce development in rural and outlying areas of the state.

Program Delivery

Didactic:	The core gerontology courses are "blended" offerings-Instructor offers 2 sections of the same course; one hybrid classroom/web and the other online-Web CT.
Clinical/Internship**:**	Cooperative education within their local community

Funding (who pays for development? Who pays for instruction? Type of funding—1X funding; self-support; general fund) Project was funded by PCC; a grant from Northwest Health Foundation has provided the opportunity to expand the program to partner colleges. Each college pays the instructional costs for the courses offered in their respective institutions. The tuition follows the student.

Appendix F: Strategic Plan for Oregon Distance Learning

Distance Learning Host/Provider College Framework

Purpose

The purpose of the Distance Learning Host/Provider Framework is to establish a general consortium partnership for the development and delivery of distance learning courses to community college students throughout Oregon. It outlines a funding/operational model for college participation as a ***host*** college, a ***provider*** college, or both. It provides an equitable mechanism to fund distance learning services supplied by ***host*** colleges as well as distance learning course development and operations supplied by ***provider*** colleges.

Host/Provider Framework Definitions

Host colleges and ***provider*** colleges will operate under the provisions of the Distance Learning Resources, Services, Roles, and Responsibilities section that follows this section. A qualifying course under this agreement is defined as a distance learning course from a ***provider*** college offered for ***host*** college enrollment. A ***host college*** is defined as a college that enters into an operational agreement to offer provider-developed courseware as part of, or in support of, the ***host*** college's curriculum. A ***provider college*** is defined as a college that funds development and delivery of distance learning courseware made available to ***host*** colleges.

Host colleges may, at their discretion, select all courses or any subset of courses offered by a ***provider*** college. ***Host*** colleges may, at their discretion, select courses from one or more ***provider*** colleges. ***Provider*** colleges and ***host*** colleges will both receive equitable reimbursement commensurate with the Distance Learning Resources, Services, Roles, and Responsibilities identified in this plan.

Benefits to Students

- Greater diversity of learning options
- Broader access to a wider range of courses/programs
- Better instructional support through host colleges
- Potential reduction in time to completion of degrees/programs
- Better tracking for residency/financial aid/degree & program completion

Benefits to Host Colleges

- Better services to students
- Costs recovered for services rendered
- Minimal "upfront" costs

- Enriched/expanded curriculum opportunities
- Course/program development cost savings
- Entry point for OCC distance education courses
- Scaleable and selective participation
- Marketability/public relations potential
- Retain links to local students enrolling in remote classes

Benefits to Provider Colleges

- Financial incentive for development of distance education courses
- Recovery of distance education infrastructure/operational expenses
- Supports faculty in transforming teaching and learning
- Establishes a competitive advantage vis-à-vis private or out-of-state organizations

Benefits to the State

- Minimal investment required
- Rewards results
- Requires no additional administrative structure
- Leverages existing resources and expertise

(From Strategic Plan for Oregon Community Colleges1997)

Appendix G: Host Provider Data

Years	# Provider Colleges	Provider College Names
01-02	8	Central Oregon, Chemeketa, Clackamas, Linn-Benton, Mt. Hood, Oregon Coast, Rogue,Southwestern Oregon
02-03	9	Blue Mountain, Chemeketa, Clackamas, Lane, Linn-Benton, Mt. Hood, Oregon Coast, Rogue, SOCC
03-04	7	Blue Mountain, Chemeketa, Clackamas, Linn-Benton, Mt. Hood, Oregon Coast, Rogue
04-05	6	Chemeketa, Clackamas, Columbia Gorge, Oregon Coast, Rogue, Southwestern Oregon

Years	Maximum # Host Colleges	Host College Names
01-02	11	Blue Mountain, Chemeketa, Clackamas, Clatsop, Columbia Gorge, Lane, Mt. Hood, Oregon Coast, Rogue, Southwestern Oregon, Umpqua
02-03	10	Blue Mountain, Chemeketa, Clackamas, Clatsop, Lane, LBCC, Oregon Coast, Rogue, Southwestern Oregon, Umpqua
03-04	11	Blue Mountain, Chemeketa, Clackamas, Clatsop, Columbia Gorge, Lane,Oregon Coast, Rogue, Southwestern Oregon, Tillamook Bay, Umpqua
04-05	10	Blue Mountain, Chemeketa, Clackamas, Clatsop, Columbia Gorge, Lane,Oregon Coast, Rogue, Southwestern Oregon, Umpqua

Years	Enrollment	FTE	FTE Reimbursements (CCWD)
01-02	2,169	142.5465	
02-03	1,878	132.76	$100,000.00
03-04	1,958	131.83	$ 58,000.94
04-05	1,861	140.80	$ 60,566.04
TOTAL	**7,866**	**547.94**	

State Distance Learning Totals (including Host/Provider for all delivery modes)

Years	Enrollment	FTE
01-02	50,946	3640.49
02-03	62,910	4388.66
03-04	66,285	4751.08
04-05	80,801	5,716.53
TOTAL	**260,942**	**18,496.76**

revised
1/10/06

Telecourse Enrollment and Licensing Statistics

Years	Enrollment	FTE
01-02	16,801	1108.72
02-03	15,542	883.59
03-04	13,071	954.29
04-05	11,895	881.46
TOTAL	**57,309**	**3828.06**

Names of Colleges Licensing Telecourses 2004-2005

# Colleges Licensing Telecourses 2004-05	
12	Blue Mountain, Chemeketa, Clackamas, Clatsop, Columbia Gorge, Lane, Linn-Benton, Oregon Coast, Portand, Rogue, Treasure Valley, Umpqua

Appendix H: Proposed Models for Sharing- Joint Working Group Financial Models

Background

At the summer meeting on July 9, 1999 at Linn-Benton Community College, the CIA asked a sub-committee to further discuss and develop potential draft proposals for new distance learning financial scenarios for Oregon community colleges. Subsequent to that meeting, the sub-committee has received comments and prepared the current attachment for your review. To complete this task, the sub-committee needs your help.

Members of the sub-committee include Berta Dargen (UCC), Cheryl Falk (Chemeketa), Liz Goulard (Clackamas), Terri Johanson (Oregon Distance Education), Ellen Long (PCC), Steve Rose (OCCC), and Ann Smart (LBCC).

Action Requested

We are seeking your recommendation on which of these options you wish to move forward to the DLC and ultimately the Presidents for approval. We recommend that the 'fairly straightforward' scenarios (item #1) be adopted. We seek CIA's consensus on whether to improve the current model (item #2) or shift future direction (item #3).

Background

Please keep in mind the following as you comment and consider the potential scenarios:

1. One scenario will not meet all needs. Consequently, a "menu" of approaches will be presented.

2. Proposed scenarios may require further refinement, and are not finished products.

3. Proposed scenarios are not implementation strategies or procedures, rather they are descriptions of potential scenarios for consideration.

4. The existing host/provider arrangements will remain in place until agreements on other arrangements are approved.

5. Proposed financial scenarios should be considered in terms of how they may

a) provide greater access for students and help community colleges to build capacity and better serve all Oregonians.
b) expand course/program offerings and college participation.
c) further collaborative efforts by Oregon community colleges to provide distance education opportunities

Fairly straightforward scenarios for consideration:

A. Consortia Scenario by DLC

Under this option, participating institutions would jointly purchase or license courses developed by a third party. Institutions that paid a share of the licensing or purchasing cost could access these courses at any time and would be free to charge their students whatever level of tuition and fees they deemed reasonable. In some cases, state distance learning money might be used to purchase courseware for the entire state's use.

Benefits:

- Provides broader availability of courses statewide.
- Creates purchasing power.
- Creates cost savings in curriculum development.
- Eliminates redundancy of review (not all colleges would need to review).

Impact :

- Selection and participation criteria would need to be developed.

B. Licensing Agreement Scenario approved by DLC

Under this option, provider institutions would license the use of their courses to other institutions. Colleges buying licenses would then hire faculty at the local institution and offer the course. Licensing costs would be absorbed by the purchasing college, or passed along in the form of fees to the student. This model would employ a flat course fee paid to the originating college and may include a per student "head" fee based on enrollment.

Benefits:

- Incentive for institutions and faculty to share curriculum.
- Leverage development costs by allowing access across the state.
- Builds capacity by allowing multiple sections to be offered by multiple institutions using their own faculty.

Impact:

- Ownership, copyright, and compensation issues must be resolved at each local institution prior to the decision to offer curricula for license.
- Need continued discussion on statewide pricing arrangements.

Ways to improve current host/provider arrangement:

A. Incentive Scenario approved by DLC

This option continues a host/provider relationship. Host and providers split tuition. Host College reports and receives FTE from all their participants for courses hosted. Provider receives state distance education incentive funding equivalent to host FTE funding for all enrolled students. The statewide distance learning budget would be the source of funding.

Benefits:

- Removes negative cash flow issues for host institutions.
- Provides incentive and potential for cost recovery for provider institution.
- Expands both host and provider roles.

Impact:

- Criteria would need to be determined
- All providers receive incentive funding for a specified timeframe?
- Certain content areas will be targeted and only these will receive incentive?
- Limited existing statewide funding would require re-prioritization. Funding this option may reduce funding for new course/program development.
- Funding cost would need to be determined based on previous historical data and increased projected growth rates.

B. Noncredit / Continuing Education Cost Recovery Scenario approved by DLC

Under this option, provider institutions would set a per-head fee for providing a course to other institutions. This "fee" presumably would be sufficient to subsidize all costs associated with offering the course. Hosting colleges would pay the provider the predetermined fee for each student and would be free to increase the tuition beyond the set fee in their own district. Host institution keeps the FTE for all students registered locally.

Benefits:

- Supports development of noncredit/continuing education curriculum for statewide distribution among participating colleges.
- Provides cost recovery for Provider College.
- Provides expanded noncredit/continuing education opportunities at little or no cost for host institutions.
- Courses are printed in local college schedules.

Impact:

This model does not easily translate to credit courses for those schools that are limited in their ability to add fees.

Options for shifting future direction:

A. Free Market Scenario - not approved **by DLC**

Any community college may offer any distance delivered course throughout the state. This statewide list would be published through the Statewide Distance Learning schedule and/or other web sites. All students will be enrolled in the course of their choice as offered by any institution. Full tuition and FTE funding is received by the college offering the course.

Benefits:

- Acknowledges that distance education courses are really delivered without district boundaries now.
- Enables a consortial approach to statewide marketing of all distance education delivered by every community college.
- Generates additional funding for the originating college, which encourages new development.
- Stimulates strategic and collaborative development of curriculum and programs across the state.
- Acknowledges all statewide distance learning courses in a central course listing and web site, creating a much larger total number of courses offered.
- Eliminates the logistical problems of registration for the local colleges.
- Minimally supports some local services that students may request at their district college.

- No issue of faculty approval for hosted classes.

Impact:

- A decision would have to be made as to whether all distance learning courses at each institution would be required to be listed, and treated in this manner.

- Consideration of “enrollment filters” in order to give priority to district students first.

- A study of the financial impact on the smaller schools who participate heavily as the hosts in the current host/provider model would need to be done.

- Colleges offering courses may need to make arrangements for additional resources such as American Disabilities Act (ADA) support for a specific student, testing services, or provision of resources at the local library.

- It is possible that this modified free market model would replace the current host/provider system.

- Elimination of host/provider model definitely requires financial aid expert review.

- Without the development of new and integrated statewide registration/student services process, the model forces students to register, pay, and meet the requirements of individual institutions.

- The “district residency fee” would need to be agreed upon.

Appendix I: Sample Agreement

Agreement

Portland Community College,
Rogue Community College,
Asante Health System

For period covering January 1, 2006 to December 31, 2008

This Agreement outlines the commitment of Portland Community College ("PCC"), Rogue Community College (RCC), and Asante Health System (AHS) to advance the Portland Community College's Medical Laboratory Technology (MLT) Statewide Partnership Project ("Project").

This Project creates a distance learning MLT program for distribution in Jackson and Josephine counties. The Project melds core curriculum offerings at RCC, specialized and accredited coursework from PCC, and applied practicum experience at Three Rivers Community Hospital and Rogue Valley Medical Center, members of AHS, into a two-year associate degree curriculum. Upon graduation, students earn an Associate of Applied Science (AAS) Degree and are eligible to take nationally recognized certification examinations. Entry-level Laboratory Assistant/Phlebotomy courses in a distance learning format will be offered to provide a career ladder into the MLT program.

In support of our joint vision to make the Portland Community College Medical Laboratory Technology Statewide Partnership Project a reality, Portland Community College and the aforementioned partners agree to the following roles and responsibilities:

Portland Community College will:

- Provide project management, including setting timelines, project milestones, and budgets, and providing timely communications and reports to participants.

- Deliver all professional content for the MLT curriculum and award the Associate of Applied Science Degree to students who have successfully completed the program of study.

- Develop all components of the MLT accredited program, including curriculum development, infrastructure for distance delivery of the program, and establishment of additional clinical sites as required.

- Create and maintain Web resources to support students, Rogue Community College Administrators, faculty Student Service Personnel, and AHS staff in this partnership.

- Assist in the evaluation of the project through tracking recruitment and referral of all candidates for their specific program(s) and their subsequent retention, completion, job placement, earnings, retention in employment, and credentials earned.

- Provide student services, including those designed to assist low-income, first-generation students, students with disabilities, and minority students.
- Train adjunct clinical instructors, as appropriate.
- Establish cross-sector advisory committees representing occupations in the career lattice.

Rogue Community College will:

- As appropriate and if resources permit, identify and assign faculty or staff to participate in this partnership.

- Provide recruitment, advising, and marketing within service district for the targeted program.

- Explore opportunities for creating a financial aid consortium agreement to facilitate student access to financial resources.

- Deliver general education and basic science courses requisite for the Associate of Applied Science degree in Medical Laboratory Technology awarded by Portland Community College.

- Explore the feasibility of assisting in the delivery of PCC's distance learning courses.

- Provide occasional testing services and access to computer laboratories for MLT students.

- Facilitate instruction by PCC faculty by providing access to science laboratories and classrooms.

- Assist in the evaluation of the project through report of existing student retention efforts, and course completion.

- Designate an inter-college program coordinator to assist in program planning and implementation.

Asante Health System will:

- Provide on-site instruction for students enrolled in PCC's Medical Laboratory Technology program at Three Rivers Community Hospital and Rogue Valley Medical Center. The number and dates of student assignments will be reviewed annually with PCC.
- Assist to define program strategy and goals for the statewide Project.
- Contribute to designing training approaches and clinical curricula for MLT students.
- Participate in Project planning activities with other members of the Project alliance.
- Refer incumbent workers for candidacy.
- Provide mentors for project participants.
- Hire graduates, as appropriate.

We agree to the above roles and responsibilities for our respective organizations and intend to abide by this agreement and work collaboratively to ensure full implementation of this project.

Dr. Preston Pulliams, District President
Portland Community College

Asante Health System

Dr. Galyn Carlile, Chief Academic Officer
Rogue Community College

Appendix J: STUDENT SUPPORT SERVICES

FOR DISTANCE LEARNING STUDENTS**

College	Admission	Advising	Orientation	Registration	Bookstore	Library	Financial Aid	Tutoring
Blue Mt	X	Fall '06	Fall '06	X	X	X	X	Fall '06
Central Oregon	X	X		X	X	X	X	
Chemeketa	X	X	X	X	X	X	X	Writing, Math
Clackamas	Being developed	X		X	X	X	X	Business, English, science
Clatsop	X					X	X	
Columbia Gorge	X			X	booklist	X	X	
Klamath	X	X		phone	booklist		X	
Lane	X	Phone/ e-mail	X	X		X	X	
Linn-Benton	X	Phone/ e-mail	X	X	X	X	X	
Mount Hood	X	Phone	X	X	X	X	X	
Oregon Coast	X			Phone		X	X	
Portland	X	X	X	X	X	X	X	writing
Rogue	X	Phone/ e-mail		X	X	X	X	writing
Southwestern	X			X	X	X	X	
Tillamook Bay	Phone	Phone/ e-mail		Phone	Phone	X	X	
Treasure Valley	X			X		X	X	
Umpqua	X				X			

****Information obtained from college web sites and then information was reviewed by college respondents**

PCC offers an online "first year experience" which encourages student interaction

Chemeketa offers an online "family orientation" program.

APPENDIX K: Recommended Student Support Services for Distance Learners

Floyd and Casey-Powell (2004) offer an outline for providing inclusive student services to distance learning students. The following four phases are an overview of recommended services excerpted from Floyd and Casey-Powell's (2004) work.

Learner Intake Phase

- Goal setting (academic planning)
- Admissions and Registration that explains the admission and registration processes, schedule and policies, how to add or drop a course, check grades, verify tuition owed and check course schedules.
- Orientation to the college and, if applicable, to a specific program
- Intake assessment and advising (online testing procedures, phone numbers, career planning opportunities, assessment tools, and online representatives)

  "Colorado Community Colleges Online (http://www.ccconline.org) has a virtual admissions representative who is available to answer questions, accept applications, and complete orientation. Pitt Community College's (North Carolina) Web site (http://www.pitt.cc.nc.us) offers distance learners a tutorial and a quiz to help explain how online instruction works at the college. Houston Community College (Texas; http://www.hccs.edu) places the student handbook online so students can read the code of conduct, find resources to campus, and learn about other student support services" (Floyd & Casey-Powell, 2004, p. 58).

- Financial aid—link to Free Application for Financial Aid (FAFSA), scholarships and federal financial aid resources

Learner Intervention Phase

The goal is to assist students in self-development and independent learning with support strategies including the following:

- Instruction on student success strategies
- Faculty advising
- Student help desk support
- Student technology training
- Student success program

"Rio Salado College in Arizona offers ample resources in support of traditional and online academic services. They offer a technology help desk and "Successful Start Workshops", and its Web site (http://www.rio.maricopa.edu) provides links to problem-solving resources. Brevard Community College's site (Florida); http://web2010.brevard.cc.fl.us) provides links to tools for faculty and students and to a help desk that can assist the online user" (Floyd & Casey-Powell, 2004, p. 60).

Learner Support Phase

The goal is for students to learn self-development strategies so that they can accept responsibility for developing their own skills.

- Student networking opportunities to assist in fostering a sense of belonging
- Bookstore services
- Counseling and academic advising
- Instructional support and tutoring
- Library Services (Offers library services as a direct link from the college's homepage—which offers online library orientations, e-mail access to librarians and online tutorials on how to conduct Web research. It also links to full-text databases, electronic books, journals, and the college's online library catalogue).
- Disability Services

"Rio Salado College's advising program for distance learners is exceptional. Its Web site offers students the opportunity to e-mail questions, seek tutoring, transfer courses, determine prerequisites, and join a chat room. Similarly Bunker Hill Community College (Massachusetts; http://www.bhcc.edu) links students to an external tutoring service and facilitates e-mail communication with advisors. Colorado Community Colleges Online (http://www.ccconline.org) has developed clear policies for online students with disabilities that are consistent with other college disability service protocols and provides an inclusive environment for distance learning students with disabilities" ((Floyd & Casey-Powell, 2004, p. 60). Austin Community College offers an online Nursing Refresher that includes a student support module to help students overcome "re-entry panic syndrome."

Evaluation Phase

This phase focuses on evaluating the effectiveness of a college's online programs and delivery systems.

- Development and implementation of a process model for student support services that measures the effectiveness of programs and services
- Student retention
- Graduation and persistence rates
- Online course evaluations

Appendix L: Web Site Model-Capella University

Capella Education Company is the privately owned, for-profit parent company of Capella University, an accredited online academic institution. The University offers undergraduate and graduate degree programs in business, technology, education, human services and psychology, and currently serves more than 14,500 enrolled adult learners from all 50 states and more than 63 countries. Headquartered in Minneapolis, Capella employs more than 735 administrative staff personnel and more than 825 faculty members. Capella is a national leader in online (distance delivered) education. (www.capella.edu - Capella University website, 5/17/06, 7:10 pm). This web-site offers the inclusive student services recommended by Floyd and Casey-Powell (2204).

List of Linked Student Support Services on the Website

- Academic Advisors—provide ongoing support and assistance throughout the student's program, online application
- Career Counselors—assist with career planning and development needs from enrollment through graduation
- Disability Services—provide access, accommodations and advocacy—includes link to policies and telephone contact information
- Enrollment Counselors—provide step-by-step assistance through the admissions and enrollment processes—includes link to "call hours" and toll-free calling
- Tuition and Financial Aid—assistance in exploring options for educational financing—link to a special section and telephone contact information
- Transfer credit estimates
- Tech support—provides phone and e-mail access
- Library—through an agreement with Johns Hopkins University students have access to a full range of online academic services. Students also have the ability to order books and materials which are sent directly to their home.
- Writing Center—online writing tutors and writing courses
- iGuide—personal portal—once enrolled access to registration, financial aid application, library, academic calendar, transcript, etc.
- Online Bookstore—buy textbooks and software
- University Catalog
- Learner Handbook--policies
- Student Success Center—includes access to the Writing Center, Library, Computer Skills, Personal Success Strategies and Virtual Learning Teams
- "Learner Stories"
- Streaming video "Night in the life of a Capella University Student"
- Streaming video "Course Room Tour"—includes area for announcements, my grades, my progress and course calendar

- Alumni Center
- Request for more information

Appendix M: Student Services Case Studies

Case Study 1

Nursing (LPN and ADN/RN)

Participating College(s): Central Oregon CC in partnership with Cascades East AHEC (CEAHEC) and six central and eastern Oregon hospitals (Incumbent worker project). The following colleges provided pre-requisite and support courses for the students: Treasure Valley Community College in conjunction with TVCC Centers in Lakeview and Burns, Lane Community College, Eastern Oregon University, Clackamas Community College, Chemeketa Community College, Central Oregon Community College, and Portland Community College.

Date begun: Pre-requisites/advising and case management services began in spring 2003. Students completed PN portion of the program in Winter of 05 and sat for the NCLEX-PN in the spring of 05 and then continued for AAS/RN—12/05 graduation. The program is currently on hiatus pending sustainability funding.

Degree, certificate and/or transcript (non-certificated coursework) issued by: certificate in Practical Nursing (LPN licensure eligible) and an AAS with eligibility for RN licensure issued by Central Oregon Community College.

Student Support Services Model: A case management model was adopted to meet the needs of the academically and geographically diverse student population. A case manager (0.5 FTE) was hired by CEAHEC and worked closely with the project director and the COCC Nursing program director in meeting student needs. The case management position, formally titled the Nursing Student Advocate and Services Coordinator, worked closely with students and faculty to ensure students had a full range of supports to be successful in the nursing program. This component is especially designed to assist in addressing the rural isolation issue with a distance education program as well as other challenges typical of adult learners, many of whom come from educationally or economically disadvantaged situations, or who are minority students, and/or those whose first language is not English most of whom are juggling work, home and school life.

During the pre-nursing program admission phase, COCC granted permission to the case manager to administer the placement exams to the potential students in each of the distance sites. A team, including the case manager, traveled to each site to meet with potential students to conduct academic advising, administer placement tests, assist with course selection and answer program application questions, transcript acquisition, etc. There were seventy-three interested students. When not on site, the manager was available via telephone and e-mail and often communicated daily with students. The role of the CEAHEC staff to handle administrative details and intensive student support services and case management was very important in the success of the project.

Once eighteen of the students were admitted to the COCC nursing program, the case manager worked closely with the students in a variety of ways:

- Tutored and referred students to the COCC faculty for instructional assistance
- Provided resource materials to meet the needs of individual students (math concepts, nursing process, etc.)
- Faxed articles from specialty journals
- Assisted students in sorting out information on the web, identifying valid sites
- Assisted students in using Blackboard course management software
- Provided review sessions via video conference
- Provided skill development assistance during site visits
- Assisted with understanding the nursing process and nursing care plans
- Offered referral to community and college resources for counseling related to personal issues
- Listened to student concerns, let students vent
- Assisted student to set priorities
- Mentored and coached incumbent worker students to resolve scheduling issues with worksite managers, meeting with the manager if needed
- Let students vent
- Assisted students to locate resources/financial aid
- Encouraged students
- Acquired grade reports
- Calculated grades to determine status per student request
- Worked through issues with clinical faculty and preceptors

The following table represents the number of case manager/student interactions per term by topical area for 18 students/term

	Academic	Personal	Work	Clinical	Grade Report	Venting	Financial	Preceptor
Term 1	65	21	28	5	72	13	5	6
Term 2	102	35	21	21	72	11	7	18
Term 3	79	15	11	15	68	34	4	3
Term 4	111	7	9	13	90	9	1	10
Term 5	108	25	2	31	90	33	5	5
Term 6	101	12	3	15	72	49	0	0

Case Study 2

Portland Community College Health Information Management

Participating College(s): Portland Community College has been the sole provider of this program to students throughout Oregon and to some students in Washington. All students register through PCC. The program is currently in discussion with other Oregon community colleges (Chemeketa and Lane) regarding the transfer of students with a one-year certificate into the second year of PCC's program.

Date Begun: 2003 and continues at this time.

Degree, certificate and/or transcript (non-certificated coursework) issued by: AAS by PCC and eligibility to sit for the American Health Information Management Association certification examination.

Student Support Services Model: Once in the PCC web site, the student is able to access the student support services for all students, college catalogue, and the Health Admissions web site.

The majority of students who enter this program are working in the field and many have degrees from other institutions, so they are mature learners. Jo Ann Pitz, the PCC Cascade campus Health Admissions Advisor, is frequently the first person to interact with the students, via e-mail, telephone, or in person on campus. She has found that students find e-mail to the easiest form of communication. The comprehensive program information packet and college catalog answer most questions the students may have. The students are notified of program acceptance via e-mail and if it "bounces back" the information is sent via traditional mail. Once the students are accepted into the program Ms. Pitz's role is primarily related to working with the students to ensure completion of the general education, math, and writing graduation requirements.

Younger students require more time primarily because they have not completed the math, writing, and general education requirements. Guidance is provided by the health program advisor and the program director.

The program director, Susan Williams, conducts a two-and-half- hour on-campus orientation session, which is mandatory for all students, no exceptions given, as Susan learned early on that students who did not attend were not successful.. During the session, advisors are available to answer individual student questions.

Ms. Williams rarely talks with the students on the telephone, using e-mail almost exclusively. She also has campus office hours, and local students utilize the time to meet with her. Once Chemeketa and Lane continuation students are enrolled, Ms. Williams envisions being on each of the campuses one time per month to meet with the students and in the meantime will use email to communicate with the students.

The Student Graduation Petitions are online, and Ms. Williams is able to access them for evaluation. She obtains the graduates' email addresses so she can forward job announcements she receives.

Ms. Williams has not utilized videoconferencing but wants to try the Luminex connection with students. She recognizes the need to include visual interactions.

Information for student-directed practicum experiences is handled via Web CT. Shells have been developed, and all correspondence is shared through the site. If the student lives outside of the metro area, a faculty member contacts a clinical site to make arrangements for the student. Ongoing contact with the student and site preceptor is conducted via telephone. If there is a large enough cohort, a faculty member would travel to the area rather than communicate only via telephone.

When students are admitted to the program, they are given a booklist. The students tend to purchase their books online through a variety of sources.

When students enter the program, Ms. Williams has students introduce themselves in writing to the rest of the class. She finds that students accept one another and form natural groups. If someone is not joining a group or if a new student transfers into the program, Ms. Williams will assist that person to join a group. She has found the students are very supportive of one another.

Issues and possible solutions Ms. Williams outlined in relation to student support services include:

- All of the students utilize Web CT for coursework, but as Jo Ann Pitz does not have access to Web CT, neither she, the program director or dean are able to broadcast a message to all HIM students, and it is labor- intensive for them to communicate via e-mail with each individual.

- Students often change their e-mail address so there is no way to reach them between terms—when they are not on Web CT.

- Ms. Williams works individually with students who find the course load too heavy, often devising a program spread over three years. Students need this flexibility.

- Ms. Williams would like to develop a Web CT "homeroom" for HIM students. The students would register, tuition free, for a course where content such as the HIM Code of Ethics, national association information, notification of Oregon HIM meetings and reminders (petition for graduation deadlines, etc) can be posted. The faculty, health program advisor and division dean would have access to the site for posting information.

- Practicum experience paperwork needs to be scanned in so it can be sent electronically to the site and student; currently it is mailed to each.

- If faculty members wait until the first day of class to notify students of required textbooks, distance learning students are unable to acquire the textbook in a timely fashion. This is a barrier for students.

Case Study 3

Portland Community College Medical Laboratory Technology

Participating College(s): Portland Community College in partnership with Lane Community College, Rogue Community College and area employers. The student's local college provided co-requisite courses with Portland Community College delivering the MLT courses via distributed delivery.

Date Begun: This pilot project began fall term 2005 with the admission of ten students and will offer a first year and the second year of the program in the 2006-2007 academic year. Additional colleges and their students will be added in Fall 2006.

Degree, certificate and/or transcript (non-certificated coursework) issued by: Successful students will be awarded an AAS from Portland Community College. Following graduation the students are eligible for national certification examination.

Student Support Services Model:

Once in the PCC web site, the student is able to access the Student Support Services for all students (see PCC in Appendix B, p. 31) and in addition, the MLT Program web site, which includes information on how to succeed with links to the Counseling Services and the Career Resource Centers. Further, online students are directed to the department chair, with contact information listed. Additional resources include Why Choose MLT, admissions requirements, a program Application, a list of program faculty and advisory committee members, professional organization links, MLT resources web links, and a PCC Laboratory Assistant/Phlebotomy course link.

This web site is being revised with a very new look. The faculty would like to develop a tracking system for program inquiries so they can follow up and "track the student into the program." Since the students are frequently taking pre and co-requisite coursework through their local community college, the MLT faculty is spending a lot of time doing one-on-one advising with students to determine which courses meet the PCC degree requirements. A department priority is to train counseling and advising staff at each of the partner colleges about the program requirements. The faculty believe a template to evaluate transfer courses would dramatically decrease their workload. They envision the student typing in the college name, course number and title, and the software program determining whether the course transfers to PCC to meet the MLT program requirements.

The faculty would also like to see a resource guide for distance learning students that would include an orientation, with tips on how to take a course online, including student responsibilities and tips for keeping motivated.

The MLT curriculum requires the student to learn how to conduct specific lab tests. The learning must take place in a student lab prior to performing the skill in the clinical lab site. During the pilot an attempt has been made to have the student utilize local clinical lab sites, which takes a lot of MLT faculty time to arrange and is an inconvenience for the local lab. In the future the faculty believes it will be easier to designate a day two or three times per term for the students to come together in Portland or in a regional site for this learning experience. The students may find this to be expensive, so supplemental funding will be important. This activity will also provide the opportunity for the students to have periodic face-to-face experiences that will assist them in getting to know one another and forming a support system.

Locating clinical sites for students is a critical student service. This requires one-on-one meetings between the MLT faculty and the clinical lab manager. If the faculty member times it right he/she is able to visit the partner college staff, the student, and the clinical site in a single visit

The training of preceptors is another issue; the MLT faculty is considering using ITV meetings for the training and for other preceptor meetings throughout the program. Making arrangement for ITV access will be labor intensive but it is hoped that it will take less time each time it is used. This is a difficult transition for some faculty who value the face-to-face interaction with preceptors, so traveling to the sites may continue to be a chosen option.

A challenge for the faculty is the absence of human touch with the students. They often feel they need to see the students in class to read non-verbal cues, which they can't do online, and students can't just drop by the office to ask questions or obtain tutoring with the result that faculty can lose students and not know it until test time. Faculty are discussing the development of a hospital lab mentor system with the student assigned to a mentor/coach who will be a role model, mentor (safe person) and someone who can assist the student with course content and concept questions.

Appendix N: AHOSST Glossary

ADA (Americans with Disabilities Act)- The ADA prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, State and local government services, public accommodations, commercial facilities, and transportation. It also mandates the establishment of TDD/telephone relay services.

AHEC (Area Health Education Center)- The AHEC Program is a partnership between OHSU and Oregon communities. Its purpose is to improve the education, training and distribution of health care professionals in Oregon. There are five regional AHEC'shttp://www.ohsu.edu/ahec/home/ahec_cp.html statewide, each dedicated to working with local health care facilities and providers, community leaders, schools and citizens to identify and meet local needs. All five AHECs have programs to encourage young people, before they leave home, to consider a health career.

AHOSST-Allied Healthcare for Oregon: Seeking Solutions Through Technology project is a one-year, statewide planning project to identify barriers and emerging practices for expanding access to health occupations throughout Oregon with technology.

Asynchronous delivery- All archived and stored material belongs in this category, including media such as CD-ROM, web pages, email, fax, videotape, and so forth.

ATLAS-Articulated Transfer and Linked Audit System

CCHAP-The Community College Healthcare Action Plan (CCHAP) was created by Oregon's 17 community colleges in 2003 to facilitate the development of healthcare education capacity-building collaborations and partnerships between community colleges as well as with healthcare providers, four-year public and private colleges, high schools, and communities across Oregon. CCHAP is facilitated by a statewide leadership team with expertise in community college administration, healthcare education, distance education and resource development.

CCWD (Oregon Department of Community Colleges and Workforce Development- The mission of the Department of Community Colleges and Workforce Development is to contribute leadership and resources to increase the skills, knowledge and career opportunities of Oregonians. Oregon has 17 independent community colleges and seven local WIA Boards.

Distance Learning Student-A student is defined as one who is enrolled in a course which is primarily delivered in modalities which may include the Web, telecourses, videoconference, hybrid courses that incorporate on-campus and distance modalities, or other technology assisted approaches.

Distributed Learning- A learner-centered approach to education, which integrates a number of technologies to enable opportunities for activities and interaction in both

asynchronous and real-time modes. The model is based on blending a choice of appropriate technologies with aspects of campus-based delivery, open learning systems and distance education. The approach gives instructors the flexibility to customize learning environments to meet the needs of diverse student populations, while providing both high quality and cost-effective learning.

E-Board- When the Legislature is not in session, the Emergency Board meets to address issues that arise and to prepare for issues likely to arise during the next regular session. Voters created the Emergency Board in 1952. It consists of eight senators and nine representatives. The Emergency Board is the most important interim committee of the Oregon Legislature.

EDI project- A data interchange system for exchanging student transcript information.

FAFSA- Free Application for Federal Student Aid

FERPA (Family Educational Rights and Privacy Act)-is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education.

FTE (full time equivalent)- This term is used in relation to employees and students and often relates to funding; an FTE of 1.0 means that the person is equivalent to a full-time employee or student.

Governor's Healthcare Workforce Initiative-To address Oregon's projected shortage of healthcare workers Governor Kulongoski developed a Healthcare Workforce Initiative and appointed a coordinator. Workforce training funds have been utilized to fund many of the activities.

Health Occupations Programs- Health occupations programs include community college short-term training, certificate and degree programs that lead to healthcare workforce employment. These programs include practical and registered nursing and allied health programs which include but are not limited to dental assistant, dental laboratory technology, dental hygiene, radiological technology, fitness technology, gerontology, medical assistant, health information management, medical laboratory technology, ophthalmic technology, surgical technology, physical therapy assistant, nursing assistant, pharmacy tech, clinical laboratory assistant, phlebotomy, coding specialist, transcriptions, emergency medical technician, paramedic and medication aide.

HIPAA (Health Insurance Portability and Accountability Act)- Title I protects health insurance coverage for workers and their families when they change or lose their jobs. Title II requires the establishment of national standards for electronic health care transactions and national identifiers for providers, health insurance, and employers. The provisions also address the security and privacy of health data.

Host/provider courses- Distance Learning courses shared among community colleges in which the host college enrolls students in courses taught by a provider college. There is a system for selecting such courses, as well as for funding them.
IP (Internet Protocol)- Standard for delivering video over the Internet.

Hybrid Courses-Courses that combine on-campus and on-line learning activities.

ISP (Internet Service Provider)- Institution, usually a commercial venture, that provides connectivity of individuals and institutions to the commodity Internet.

IT (Information Technology)- Operational unit in most colleges responsible for supporting administrative and academic computing, and network services.

ITV (Interactive Television)-Videoconference system, providing synchronous communications between classrooms via the Internet.

LMS (Learning Management System)-Primary technology used for distance learning which provide a reliable and functional method for delivering didactic portions of a course (Web CT, Blackboard, Moodle, etc)

OCCA-(Oregon Community College Association)- The Association represents the seventeen publicly chartered community colleges and their locally elected board members as well as the interests of the faculty, staff, administration and students in those colleges. OCCA's purpose is to support the colleges before policy-makers and partners whose actions affect the well-being of community colleges across the state. The association does this through a variety of services including legislative advocacy.

OCCDLA (Oregon Community College Distance Learning Association)-
OCCDLA is a representative body of all 17 Oregon community colleges that seeks to strengthens the professional practice and continuous improvement of distance education in Oregon through facilitation of an open exchange of knowledge and sharing of experiences.

OCCDLA (Oregon Community College Distance Learning Administrators)-A group who works collaboratively to coordinate development of distance learning in Oregon.

OFAX (Oregon Financial Aid eXchange)-OFAX is a co-enrollment project developed to exchange enrollment information between schools for students who are enrolled at more than one eligible institution.

Oregon Health Workforce Institute-as part of the Governor's Healthcare Workforce Initiative, the institute is a new, private-public model to address the health

care worker shortage in Oregon and to improve the delivery of health care services to Oregonians.

Oregon Simulation Alliance (OSA)- has a goal of increasing the Oregon health system's simulation capacity. High-fidelity simulators and virtual reality software are currently in use or development in all regions of the state. Primary focus is upon multi-sector, multidisciplinary and interdisciplinary healthcare workforce development including pre- and post-service, reentry and refresher, and career ladder programs.

OUS (Oregon University System)- Oregon State system of higher education comprising 7 public state universities

POP (Policy Option Package)-legislative budget request.

Student Support Services- This report defines student support services as services provided the student from his/her first communication with the college until after graduation. Traditional services include admission, counseling, advising, orientation, registration, bookstore, library, financial aid, placement testing, student records, disability services, veteran's affairs, transfer centers, computer labs, tutoring, multicultural services, women's resource centers, and student health centers. Once the student has applied for a program, the student support services are defined as advising, registration, tutoring, clinical placement, faculty/student interaction, student mentoring, counseling, graduation petition reviews, job preparation (resume writing, interviewing skills), notification of employment opportunities, reference letters, and Board or Certification information.

Synchronous delivery- the transfer of information without delays; in distance education examples would include audio and/or video transmitted "live" among instructors and students via TV, Internet or radio.

WIA (Workforce Investment Act)- The federal Workforce Investment Act (WIA), which superseded the Job Training Partnership Act, offers a comprehensive range of workforce development activities through statewide and local organizations. Available workforce development activities provided in local communities can benefit job seekers, laid off workers, youth, incumbent workers, new entrants to the workforce, veterans, persons with disabilities, and employers. The purpose of these activities is to promote an increase in the employment, job retention, earnings, and occupational skills improvement by participants. This, in turn, improves the quality of the workforce, reduces welfare dependency, and improves the productivity and competitiveness of the nation.

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