

Workplace Digital Learning

E-Learning Workgroup Report Final Report for Senate Bill 6295



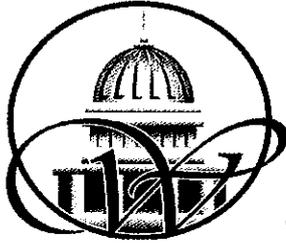
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December 2009



Washington State
Workforce Training
And Education
Coordinating Board





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And Education
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To the Governor and Legislature,

January 7, 2010

Technology is changing the way we run our lives, do business and learn. The enclosed legislatively requested report addresses how Washington can capitalize on these innovations to deliver learning to working adults and others who do not have the time, money or resources to attend school in a traditional classroom.

With under-educated workers (those with no more than a high school diploma) numbering as much as the next 10 high school graduating classes combined, Senate Bill 6295 (2008 session) calls on Washington to test ways to increase educational access to working adults by delivering instruction where they work.

A key ingredient in this workplace-based strategy is the ability to deliver "anytime, anywhere" curriculum digitally to working students.

The "Workplace Digital Learning," report contains:

- eLearning best practices and related student support services.
- Recommendations to increase student access to electronically distributed educational programs, and overcome barriers to participation and completion.
- Methods to increase the institutional supply and quality of open course materials, including digital open textbooks.
- Statistics of online and hybrid learning across Washington public higher education institutions that give us a starting point to build on.

This report complements a preliminary report, presented to you last year, that reviewed national workplace-based learning examples across the nation. That report also included the strategic technology plan from the State Board for Community and Technical Colleges to provide the foundation for understanding the role of technology in eLearning and online student services--key components of workplace-based learning.

In 2009, the Workforce Board continued convening workplace-based learning stakeholders as part of our broader Adult Worker Initiative. We received a boost with the announcement that the Workforce Board is a recipient of U.S. Department of Labor appropriations to be delivered around the end of 2010 to support the pilot projects described in SB 6295.

We look forward to working with you as we continue to advance these important strategies to improve educational access and success for all working Washingtonians.

Sincerely,

Eleni Papadakis
Executive Director,
Workforce Training and Education
Coordinating Board

Charles N. Earl
Executive Director,
State Board for Community and
Technical Colleges

SB6295 eLearning Work Group Report

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Nearly 3.5 million students were taking at least one online course during the fall 2006 term and nearly twenty percent of all U.S. higher education students were taking at least one online course. All types of institutions cite improved student access as their top reason for offering online courses and programs.

- [Online Nation: Five Years of Growth in Online Learning](#) (Sloan Consortium)

This SB6295 eLearning work group report contains the following sections:

- 1) Charge
- 2) What is eLearning?
- 3) Introduction
- 4) Overall Recommendations
- 5) Help Desk Support
- 6) Increasing Access and Identifying Barriers
- 7) Online Student Services
- 8) Open Educational Resources
- 9) eLearning Data
- 10) Work Group Members

1) Charge

This section of the report addresses SB6295 Sec 2 (b) through (f).

(b) Review and, to the extent necessary, establish standards and best practices regarding electronically distributed learning and related support services including online help desk support, advising, mentoring, counseling, and tutoring;

(c) Recommend methods to increase student access to electronically distributed learning programs of study and identify barriers to programs of study participation and completion;

(d) Determine methods to increase the institutional supply and quality of open course materials, with a focus on the OpenCourseWare initiative at the Massachusetts Institute of Technology;

(e) Recommend methods to increase the availability and use of digital open textbooks; and

(f) Review and report demographic information on electronically distributed learning programs of study enrollments, retention, and completions.

A sub-committee of the SB6295 task force called the “eLearning work group” worked throughout 2009 to discuss and write this section of the report.

All of the eLearning work group’s work is online (<http://6295.wikispaces.com>) for open, public use. This report is best read electronically so the reader has access to all of the hyperlinked information.

All other parts of the SB6295 legislation are being reported by the Work Force Training and Education Coordinating Board SB6295 [task force](#).

2) What is eLearning?

eLearning is a comprehensive term for online-mediated instruction. eLearning can be segmented into three major types of educational activities:

- **Online** courses are conducted completely on the web.
- **Hybrid** courses replace some – but not all – classroom time with online learning.
- **Web-enhanced** courses meet in regular class sessions but use online resources for additional interaction, posting of assignments and course materials.

eLearning technologies and pedagogies:

- support new learning models in flexible, anytime, anywhere learning spaces
- increase access to educational opportunities for all students -- not just students at a geographical distance from the college or university
- support learners and faculty using digital, mobile, networked technologies to connect subject matter, experts, and other learners
- enable the sharing and re-mixing of content, data and ideas in new ways

3) Introduction

Any cross-sector committee struggles to locate foundational principles when tasked with describing the state-of-the-art, best practices, and visioning what the future might look like. The eLearning work group quickly concluded this report is all about increasing student access, student learning outcomes, and student success in Washington higher education institutions. When we struggled with complex, controversial issues, we drove to consensus by asking one question: "What is best for student learning?"

As we discussed the multiple topics in Sec 2 (b) through (f), we found common themes, practices, and strategic goals that should be considered by all institutions of higher education considering eLearning. Topics of online student services, open educational resources, and finding ways to increase access and reduce barriers for students to postsecondary education must be addressed.

Summary Findings

1. Technology is changing constantly, at an ever increasing pace, and our learning environments need to have the flexibility to take advantage of those changes. Engaging broad segments of our population in higher education requires we collectively recognize and utilize the immense power of technology.
 - a. As products and services become digital (or increasingly are “born digital”) and can be delivered over the web, the costs of duplication, storage, and distribution are falling fast¹, enabling faculty to borrow, remix and share curricula, and students to access free textbooks and learning resources from around the world. However, the costs of development and revision remain.
 - b. The amount of open information is exploding because it is easier than ever for anyone / everyone to participate, though there are still significant digital divide issues to be addressed. Cloud computing, \$200 netbooks and rural broadband initiatives could help Washington education bring a base level of common, commodity services to an ever growing population.

¹ http://en.wikipedia.org/wiki/The_Long_Tail

2. eLearning and online student services have become core to higher education. These online learning and services opportunities are no longer fringe elements of colleges and universities; they have become mainstream and should be connected and coordinated throughout higher education activities including: accreditation, curriculum development, data collection, funding, strategic planning, professional development, job descriptions, etc.
 - a. eLearning courses should be weighted the same as any other curriculum development / delivery. As such, all stakeholders need to be at the table when discussing eLearning solutions and resources.
 - b. eLearning, student services and open educational resources solutions should be aligned and funded to meet the learning and service needs of all students and faculty at all Washington public and private colleges and universities.
 - c. All digital content and online student services must legally be [ADA 508](#) and [W3C](#) compliant (e.g., so a web page or digital file can be read by screen reader software). Not only is this the law, but we have an obligation to make digital content and services accessible to all students, faculty and staff to accommodate learner differences.
3. Higher education should work to integrate our information technology efforts with our partners in public K-12 schools in order to create a seamless “P-to-Retirement” online learning environment for students to promote seamless transitions between institutions.
 - a. Because online education and digital resources easily cross geographical boundaries, Washington colleges and universities should also collaborate with their peers nationally and internationally.
4. eLearning, student services, help desk and all other software and services that support students and faculty must be online and available 24/7/365.
 - a. This does not mean faculty are on call 24/7. The asynchronous nature of online instruction can lead to student (and instructor) expectations that the instructor will always be available for immediate comment; however, we must recognize limitations on the hours that instructors can and should put into interaction.
5. Interactive teaching and good instructional design are essential whether delivered in-person, online or in a hybrid learning environment. The use of digital technologies does not make the educational experience better or worse... it simply provides access to an additional set of educational resources and new modes of access.
6. eLearning quality is affected by faculty preparation, wrap-around student services, technology implementation and support, learning resources, organizational commitment, and data management and use. As eLearning activities continue to grow (see Data section), resources will need to flow to support that growth for both academic and support services.
7. We must provide comprehensive professional development for students, faculty and staff in the use of evolving technologies. Students, faculty and staff must be involved in directing these efforts.
 - a. Faculty often express frustration that there are more than enough opportunities to discuss how the software works, but not enough opportunities for faculty to discuss pedagogical strategies for utilizing digital technologies.
8. We should collectively promote a system of rigorous assessment of courses, curricula and systemic outcomes that will enable sustained development and generational responses to student needs, institutional growth and new technologies. Assessment of courses and learning

can be more formative (i.e., occur more frequently) in online spaces, generating the data needed to make iterative improvements.

9. Information literacy skills are fundamental to the attainment of academic skills and success in the 21st century workplace. Unprecedented diverse information sources necessitate efficient access to reliable information. Students' academic experience needs to prepare them for the information seeking and knowledge management challenges they will face. They will need information skills to be effective members of society and the workforce, locally and globally. This includes the ability to discern usefulness of information in all media from all parts of the world. These skills are built through instruction, instructional tools, and services for all modes of instruction.
10. Students and faculty should have access to both (a) a customizable portal interface (with single sign-on) to all of their eLearning, student services and help desk tools and (b) access to the same information via open standards / web services (e.g., RSS, widgets, apps).
11. We need to cultivate the culture and practice of using and contributing to open educational resources such as open textbooks, courseware and journals. Faculty require academic freedom to sculpt learning spaces, and are eager to focus on pedagogy, freed from the constraints of a tome-like textbook and limited time in class. That is, the real promise of digital open educational resources is being freed to think about learning in new ways with a global buffet of open content and using participatory technologies to share, network and learn.

Institutional Commitment Required

Doing all of this requires focused institutional commitment, a willingness to work with other colleges and universities, and resources. Such an institutional commitment requires attention to all the elements outlined in this report." The following institutional strategies are helpful in advancing eLearning and online student services.

1. Make eLearning and online student services part of the institution's strategic plan². Senior level support and faculty and administration leadership is required.
2. Include faculty contributions to and use of eLearning activities in promotion and tenure processes.
 - a. For example, contributing an online course to an open repository that is then used by 75 courses in 10 countries should be valued as contributing to one's discipline.
3. Fund online or hybrid courses in the same way as courses conducted entirely on-campus.
4. Commit to funding and providing time for faculty professional development. If we want to encourage eLearning, we have to recognize it takes a lot of faculty time to develop online courses and to learn how to leverage the unique affordances of digital, networked content and technologies.
 - a. New educational innovations require additional resources up front and ongoing -- until the innovation becomes part of the norm.
5. Make sure intellectual property rights for all digital content and locally created software are known and clear to all.

² [Online Learning as a Strategic Asset: APLU-Sloan Findings and Recommendations](#)

4) Overall Recommendations

1. Accelerate adoption of web and mobile technologies for eLearning and self-service student services.
 2. Provide mutually agreed upon state wide eLearning tools and support services so that all Washington colleges and universities have the capacity to offer eLearning and online student services to their students, through state level purchases of software licenses, and centralized, outsourced hosting and help desk services when relevant and applicable.
 3. Provide “skunk-works” spaces, funding and opportunities for testing, trying out new technologies and pedagogies.
 4. Develop strategies to ensure that all students, especially low income students, have access to technology supported courses and services, and ensure all campus facilities have accessible, ubiquitous wireless access.
 5. Provide opportunities for all faculty to participate in designing instruction for open courseware and open textbooks, and put that content in a global, online repository that can be shared by all students, all faculty, at all of Washington’s K-20 education institutions.
 6. Invest in college faculty and staff by offering professional development opportunities focused on using emerging web and mobile technologies and on effective strategies to increase student achievement, especially for underserved populations.
 7. Improve access to education by providing professional technology and pedagogical development for faculty and staff, creating new enrollment strategies and more technology enhanced public spaces, improving learners’ technology and information literacy skills, using logical course enrollment caps, providing emergency resources for students who need “immediate but temporary assistance,” and providing mentors to help students new to online learning.
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5) Help Desk Support

Help desk support provides assistance to students, faculty and staff of an institution using delivery methods that are appropriate to the user. College help desks might provide technical support for eLearning tools, for on-campus hardware and software or for services such as registration, financial aid, advising, counseling or tutoring. Help desk support can be delivered either by the institution, by third-party vendors, or by using collaborative models.

Access to help desk support is an important tool for student retention, completion and satisfaction. Institutions should provide all necessary resources to ensure all students supported by the institution will have a quality learning experience. The help desk services should be offered through reliable, efficient and readily available technologies. Learners need access to help desk and technical support services 24x7.

Some help desk best practices³ include:

1. One easy-to-use help desk for all users for all services. Combine multiple help desk functions into a single contact center; break down the silos between different services for students, faculty and staff.

³ <http://net.educause.edu/ir/library/pdf/ERB0309.pdf>

2. A ticket tracking system reduces the time it takes to find solutions for users, reduces duplication of effort, and generates a sharable online FAQ.
 3. Use ticketing data to drive improved business processes, improve student and/or faculty professional development, and improve help desk support services.
 4. Quick, reliable, consistent response times.
 5. 24x7 availability because some of our students are learning 24x7. This may be a reason to outsource some help desk support for some services.
 6. Multiple methods (telephone, live chat, "knowledge base" FAQs, email, mobile apps)
 7. Standard processes, escalation procedures and clarity on who is responsible for what level of support for shared enterprise help desk support.
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6) Increasing Access and Identifying Barriers

Student access to eLearning courses and programs refers not only to the ability of students to enter the programs, but also their ability to successfully complete the programs and accomplish their educational goals. Barriers refer to obstacles encountered by those attempting to facilitate eLearning programs, the faculty teaching the classes, and by the students attempting to successfully complete the programs.

Online or hybrid programs of study should be considered a tool that can be used to enhance student success. The ultimate goal is to deliver opportunities for students to acquire quality education.

In order to identify access best practices, the barriers they address are listed first.

Barriers to Participation

Barriers to Providing Access (Institutional Barriers)

1. Lack of online student services.
2. Lack of technology resources: e.g., lack of equipment, strategic planning, and systems integration needed for colleges to effectively handle increases in online and hybrid enrollments
3. Lack of time, support, and professional development opportunities needed for faculty to "keep up" with constantly changing technological advances and pedagogical approaches.
 - a. Need for faculty teaching courses to not only be experts in their fields, but to become skilled in multiple technologies as well. Concurrently, eLearning and IT experts, working with faculty and students, need select and support technologies that are so user-friendly as to be transparent to faculty and students.
4. Lack of flexibility for adjusting to changes in down economic cycles. For example, reduced budgets can lead to cancelled software licenses and mandated migrations from one learning platform to another.
5. Decrease in student contact time with advisors, faculty and institutions.
6. Misperception about education and learning -- education is more than dispensing information.

Barriers to Gaining Access (Student Barriers)

1. Lack of access to a personal computer.
2. Lack of access to broadband Internet access
3. Online / hybrid "tech fees" added to the expense of attending the course.
4. Federal and State requirements for student aid programs. For example, colleges have to verify attendance for an online student. Who should verify and how?
5. Attitude and ability of student toward using digital, networked technologies.
6. Undeveloped organization, study and information literacy skills.
7. Lack of "personal contact" needed to enhance motivation. We need to better connect online students to the college, a challenge when they are not regularly on-campus.

Participation Solutions

1. Web and mobile technologies. To meet student expectations a predominant means of delivering education will increasingly shift to web and mobile technology, including students who do their learning on campuses. Even if current eLearning growth rates slow down, by 2020 all students will be taking web-enhanced courses, and all students will be interacting with college student services online. The more diverse methods of access we can provide students, the more we increase access to WA higher education.
 - a. Wider accessibility to mobile devices and to low-bandwidth users has a large effect on how the courses will be designed. Content design for mobile devices must account for lower bandwidth connections and small screens.
2. Faculty Professional Development. Increased and consistent funding needed for constant professional development for faculty and staff in order for them to keep up with technological advances not only in terms of tech skills, but with the impacts of technology on pedagogy as well.
 - a. Faculty Learning Communities. Faculty often prefer to learn new technologies and pedagogies from their colleagues. [A faculty learning community](#) is a group of faculty engaging in active, collaborative activities with a curriculum about enhancing teaching and learning and learning to leverage technologies to help students learn.
3. Equitable Access to Technology and Support. Equitable access to common, baseline eLearning and student services technologies and support will require providing these services to all colleges and universities and all students without extra technology fees. These tools and services have moved from being "extras" to being a basic part of how colleges do business and how teaching and learning take place.
4. Pooling Enrollments. WA universities and colleges and could work together to expand the breadth of online courses available to students by adopting and offering online courses taught by other WA colleges or universities. There are many challenges including different tuition rates, different calendars, articulation and transfer, and technical integration.
5. Increase Access to the Network. Provide more public spaces (e.g., public libraries and branch campuses) with computers and broadband connectivity, and increase access by expanding hours of operation.

Completion Solutions

1. Limit Course Size so students get individual attention critical to student success. Ideal course size depends on the subject, approach, requirements, and course design.
 2. Online Self-Assessments. Students are more successful when they are self-motivated learners and have requisite technology and information literacy skills. Use pre-testing to help students determine whether their learning styles are better suited to online, hybrid and/or on-campus courses.
 3. Advise Students on the Rigors of Online Learning and give them tools to measure their preparedness to study online⁴. Inform prospective online students of the negative impact on their transcripts of withdrawing / failing an online course.
 4. Provide Emergency Resources for students who need "immediate but temporary assistance." Sometimes \$200 to pay the power bill for one month can mean the difference between the student completing a course or dropping out.
 5. Provide Mentors to help students new to online learning acquire skills and develop confidence. Provide better training to mentors on regarding the realities of online learning and how to help students succeed in an online environment.
 6. Track Students Academic Progress, so when they are vulnerable to failure we can help them get back on their feet and get back into higher education. Offer strong oversight to identify struggling students early on and bring them support and remediation.
 - a. The [WA Education Research and Data Center](#) effort to track students from Kindergarten through higher education to the workforce is a good start.
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7) Online Student Services

Online student services use the Internet to deliver integrated support services designed from the student's point of view. The services are customized and personalized for each student and integrate the student's college life path in an immediate, comprehensive, and interactive way to ensure the student understands college opportunities and requirements⁵. Regardless of place or time, all students should be able to access state-of-the-art functions that make their individual college pathway clearly sensible and allows them services to make informed decisions at critical junctures.

Best practices for online student services allows each function to integrate and interact together within an Internet-based platform that allows data to build over time to create an increasingly all-embracing relationship with the student. The Center for Transforming Student Services (CENTSS) defines hierarchical stages or generations of how online student services have been implemented at higher education institutions and may provide a useful framework to audit and evaluate Internet-based student services they offer:

⁴ For an example of information and tools, see [Bellevue College](#).

⁵ Akweks, K. & MacClennan, R. (2008). Student Services in Community and Technical Colleges: A Practitioner's Guide, 2007, p. 54.

- Generation I: Institutional View/Content: presents information as a set of static Web pages for most services where visitors to the Web site have an opportunity read about available services.
- Generation II: Customer Group View/Content in Context: adds interactive forms, self-assessment tools, and email capability allowing students to use the Web site as a communication tool for getting assistance from staff.
- Generation III: Web Portals/Individual View or Customization, Personalization, and Community: provides some personalized services, establishing a one-on-one relationship with students. Students can access their records and customize the display information on their personal home pages.
- Generation IV: High Touch and High Tech (inside/outside portal) – uses Web portals to establish communities of interest and to build an ongoing relationship between students and the institution.

A review of online student services literature and resources reveal the following common best practices:

1. Services are fully integrated and convenient. Students want colleges to provide a complete, full-service (integrated) approach. Integrating web applications with the college's student information system and other administrative core systems allows students to access their own academic records.
2. Services are customized and personalized to unique student needs (not a one-size fits all approach) from a student's point of view, beginning with their recruitment experience through program completion and beyond.
3. Services are integrated in a single place for students, including the use of a secure, single login so that students do not have to enter and exit a service with each discrete interaction.
4. Services are easy to use and navigate and take into account the ability to easily add new services as they are developed or released.
5. Services are delivered on reliable, fast, and secure networks-both wired and wireless.
6. Services are advertised to students so they know about them and how to use them.
7. Services are delivered by the latest technologies. Access is no longer limited to personal computers⁶. Many students are proficient in tools that include, but are not limited to, hand-held devices, podcasts, Internet, email, instant messaging and social networking⁷.

Students are active partners in the design and implementation of their academic experience. In addition to the technology that is available to them, students more importantly care about the activity or service the technology enables. Students and student services professionals must articulate a clear vision that

⁶ Moneta, L. (2005) Technology and student services: Redux. In K.Kruger (Ed.), Technology in student services: Supporting Student Learning and services. New Directions for student services, no. 112, pp. 3-14. San Francisco, CA: Wiley Periodicals.

⁷ Junco, R., & Cole-Avent, G.A. (2005). An introduction to technologies commonly used by college students. In K. Kruger (Ed.), Technology in student services: Supporting Student Learning and services. New Directions for student services, no. 112. San Francisco: Jossey-Bass Publisher.

provides the framework for the set of services and the technology that will help improve a student's success.

Advising

Academic advising goes beyond the clerical functions of scheduling classes and preparing degree plans. Good academic advising assists students in clarifying personal and career goals, developing consistent educational goals, and evaluating the progress toward established goals. Academic advising utilizes the resources of the University and refers students to the appropriate academic support services. It is a decision-making process in which the sharing of information between student and advisor promotes responsible and appropriate choices and facilitates a successful academic experience⁸. Additional advising definitions are available online on the National Academic Advising Association's [web site](#).

A review of online advising best practices reveal these common features:

- Expert interactive advising
- Direct service to students (would not require an admin staff member's involvement)
- Personalized to the student (based on the students' academic records and affiliations - a portal of sorts)
- Secure web-based delivery (access to these services any time)
- Multiple development teams (voice of student critical)
- Standards based (presentation and technical standards to ensure the end user experiences a seamless set of services).

Examples of online advising include:

- [eLion @ Penn State](#): virtual student service center which integrates campus student services.
- [San Diego City College](#) provides live counseling and advising to students enrolled in both online and on campus classes.
- [City University NY](#) chat program. Click on Live Advisor button.
- Central Piedmont Community College: [iCAN Chat](#)
- [Montgomery College](#): A Student's Guide to Online Success Demonstration Site
- [Valencia Community College Life Map](#)
- [State of Washington -- Academic Guidance and Planning System \(GPS\)](#)⁹

Counseling

Online counseling service can assist students in their educational pursuits, including, but not limited to information such as study skills, test taking, and how to succeed in college, as well as links to self help virtual pamphlet collections ranging in topics from alcohol and drugs issues, eating disorders, depression and other mental health issues that may keep a student from succeeding in college. The service may also provide email access to a counselor, question and answer chat rooms and support groups; however, it generally does not provide ongoing online therapy sessions. Due to its sensitive nature, most personal

⁸ Western New Mexico University as retrieved on 07/08/05.

⁹ As part of the 2009-11 operating budget, a new technology initiative was developed collaboratively by the Higher Education Coordinating Board (HECB), the State Board for Community and Technical Colleges (SBCTC), and the state's colleges and universities that would serve as the state's primary resource for academic advising. It was intended to provide online access for students, parents, faculty, and advisers to powerful degree-planning tools and services that would increase student academic progress. The system would also enable students to examine their entire college history online, and to view in real time how credits earned or planned may apply to any degree program offered by any state institution. The proposed Academic GPS responded to a principal goal of E2SHB 2783: Develop a statewide transfer planning system and online planning tool (subsequently vetoed by the Governor and unfunded in the 2009-11).

counseling for students has been delivered face-to face. If this service is going to be provided online, it may present added challenges when offered on the web. Now that students may also receive additional support in the form of chat rooms and online support groups, colleges must address new issues of internet protocol, confidentiality, privacy, and security.

Examples of online counseling:

- [Online Counseling: Long Beach City College](#)
- [Career Counseling: North Carolina State University](#)

Tutoring

Tutoring provides a student with supplemental, additional or remedial instruction, generally focused on the acquisition of skills or knowledge associated with a course or discipline. Online tutoring generally allows tutors to work with students synchronously and asynchronously, answering questions in real time, or replying to questions and essay submissions that students have left for review and commentary.

A review of online tutoring vendors/practices reveal these common features:

- **Live tutoring** where students can meet with a tutor in one-on-one tutoring sessions via a fully interactive, virtual environment.
- **Offline questions** where student can leave a specific question for an eTutor who will respond within an established timeframe, e.g., within 48 hours.
- **Online writing lab** where students can submit a draft of a paper, ask for specific feedback, and receive a tutor's response with an established timeframe, e.g., within 24-48 hours.

Washington State University and the State Board for Community and Technical Colleges have partnered with the Connecticut Distance Learning Consortium to provide eTutoring to Washington students. The [NW eTutoring Consortium](#) currently includes 24 Washington Community and Technical Colleges, Washington State University and three Oregon community colleges.

Mentoring

While mentoring programs vary across higher education institutions, the general concept focuses on pairing a new student with a more experienced student. Oftentimes, mentors will guide new students by helping them set their schedules, by providing campus tours, or by offering to serve a new student as an [academic tutor](#) or study buddy¹⁰. When engaging in a mentoring program, *mentors* are considered to be the "experts" in their field or organization, while *mentees* are the more novice and less experienced organization members. For example, see Washington State University's [Distance Degree Program Hometown Locator](#) (alumni mentor email program). For additional eMentoring resources see [mentoring.org](#) and [eMentoring](#) -- a clearinghouse that provides resources and online training for both e-mentors and e-mentees.

¹⁰ Chen, G. (2008) The Value of Mentoring Programs in Community Colleges. Community College Review.

8) Open Educational Resources

We are on the cusp of a global revolution in teaching and learning. Educators worldwide are developing a vast pool of educational resources on the Internet, open and free for all to use. These educators are creating a world where each and every person on earth can access and contribute to the sum of all human knowledge. They are also planting the seeds of a new pedagogy where educators and learners create, shape and evolve knowledge together, deepening their skills and understanding as they go.

This emerging open education movement combines the established tradition of sharing good ideas with fellow educators and the collaborative, interactive culture of the Internet. It is built on the belief that everyone should have the freedom to use, customize, improve and redistribute educational resources without constraint. Educators, learners and others who share this belief are gathering together as part of a worldwide effort to make education both more accessible and more effective. - [Cape Town Declaration](#)

Open Educational Resources¹¹ (OER) are digitized learning materials, offered freely and openly for educators, students, to use, change and re-use for teaching, learning and research. OER is important because this is the first time in human history when (a) most higher educational content (courses, assessments, video, audio, textbooks) is “born digital” (that is – it was created on or with a computer) and (b) the marginal costs of making copies of, storing and distributing digital content have dropped significantly.

In 2001 MIT announced its [Open Courseware](#) (OCW) project. MIT OCW is a web-based publication of virtually all MIT course content. On their web site they state: “OCW is not an MIT education, does not grant degrees or certificates, does not provide access to MIT faculty, and materials may not reflect entire content of the course.” These are important points. Accessing open content at an institution is not the same as attending that institution, having access to the faculty, and being supported by all of the institution’s student services. But MIT did get the higher education institutions to think about sharing their digital content with the world.

Higher education has moved from a culture of information scarcity where more physical books in a library equals a better institution to a culture of information abundance where books are scanned and available through [Google Books](#) and the leveraging of resources both local and “in the cloud” to provide better student and faculty services equals better opportunities for learning. While all the digital information in the world won’t necessarily help would-be learners actually learn, faculty and [peer-to-peer learning groups](#) matching open resources with deliberate design of a sequence of readings, activities, and feedback creates many new opportunities for learning.

OER is about providing:

- students and faculty with substantial choice when building learning spaces
- opportunities for sharing the abundant digital learning resources that are currently locked up and either not used or not shared
- opportunities for faculty to select and/or change the parts of open content when designing their course(s)
- opportunities for students to pick and choose the pieces of open content they want and the format (print, web, podcast, mobile, Kindle) they want.

¹¹ The term “open educational resources” was first adopted at [UNESCO](#)’s 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries.

OER is not about:

- mandating common, core curriculum – it is about providing students and faculty with an open buffet of content choices when building learning spaces.
 - Mandating OER would simultaneously miss the openness and flexible points of OER and limit faculty academic freedom.
- cost cutting – it is about sharing the abundant digital learning resources that are currently locked up and either not used or not shared.
- all or nothing. That is, one does not need to adopt 100% of an open course, textbook or program. Faculty can select and/or change the parts they want when designing their course.

Philosophical Statement

Where possible, higher education should develop solutions that create equal opportunities for all students through cost-effective shared open resources.

In September 2007, education and business leaders met in Cape Town, South Africa to gather to discuss open education. The resulting [Cape Town Open Education Declaration](#) provided not only reasons to open and share education content, but also gave specific recommendations for what students, professors and governments can do to open up global stores of digital knowledge.

1. Educators and learners: First, we encourage educators and learners to actively participate in the emerging open education movement. Participating includes: creating, using, adapting and improving open educational resources; and inviting peers and colleagues to get involved. Creating and using open resources should be considered integral to education and should be supported and rewarded accordingly.

2. Open educational resources: Second, we call on educators, authors, publishers and institutions to release their resources openly. These open educational resources should be freely shared through open licenses which facilitate use, revision, translation, improvement and sharing by anyone. Whenever possible, they should also be available in formats that are accessible to people with disabilities and people who do not yet have access to the Internet.

3. Open education policy: Third, governments, school boards, colleges and universities should make open education a high priority. Ideally, taxpayer-funded educational resources should be open educational resources. Accreditation and adoption processes should give preference to open educational resources.

These strategies represent more than just the right thing to do. They constitute a wise investment in teaching and learning for the 21st century. They will make it possible to redirect funds from expensive textbooks towards better learning. They will help teachers excel in their work and provide new opportunities for visibility and global impact. They will accelerate innovation in teaching. They will give more control over learning to the learners themselves.

Why is this Urgent?

1. According to the [Advisory Committee on Student Financial Assistance](#), 200,000 qualified students fail to enroll in college each year due to cost. The high cost of college textbooks can be a significant financial barrier for many students.
2. Full-time students spend approximately \$1000 on textbooks every year.
 - Consider One High Enrollment Course in the WA Community and Technical Colleges: English Composition I = 37,200+ enrollments / year x \$100 textbook = \$3.7 Million.

- What if we looked at student textbook costs for the 100 highest enrolled courses in WA Colleges and Universities?
 - [2005 GAO report](#): College textbook prices have risen at twice the rate of annual inflation over the last two decades.
 - The [College Board reported](#) that for the 2007 through 2008 academic years each student spent an estimated \$805 to \$1,229 on college books and supplies.
3. Students ran a national campaign called "[Make Textbooks Affordable](#)" to both raise awareness and to ask faculty to "[state their intent](#)" to include open textbooks in their search for the most appropriate course materials, and they declare their preference to adopt an open textbook in place of an expensive, commercial textbook, if the open textbook is the best option."
- WA Community and Technical College Student Legislative Academy have kept "Textbook Affordability" on the top of their legislative platform for two years running.

Best Practices

1. Make "openness" part of the normal way of building and sharing digital content ([best practices from UNESCO](#))
2. Invite all stakeholders to the table when discussing OER projects including: faculty, librarians, bookstore manager, academic senate, department chairs, faculty association and unions, academic deans, curriculum committee, professional development leads, eLearning directors, administrators, boards of trustees, etc.
3. Sustainable OER investments need to be for local projects - for local reasons. That is, do what you were going to do anyway ... just do it digitally, and then put [CC BY](#) licensing on it and share it with others. The global sharing piece doesn't have to be expensive ... post it in [Connexions](#) and do some quick blog, twitter and listserv advertising through your network - and, if the content is quality and useful, word will spread.
4. Join and participate in national OER consortia: for example, [Open Courseware Consortium](#) and [Community College Consortium for Open Educational Resources](#)
5. Leverage others' efforts to address the high cost of instructional materials.
 - [Florida](#) is offering 120 free online books to college students.
 - [California](#) is reviewing open, free K-12 textbooks.
 - CCCOER [Open Textbook Project](#) pre-screens [open textbooks](#) for Community and Technical Colleges.
 - WA Community and Technical College faculty are designing and opening the systems' 80 highest enrolled courses in an [Open Course Library project](#).
6. Provide clearinghouse services to help faculty find the OER they are looking for. More open resources give faculty more choice, but the amount of information quickly becomes overwhelming. Filtering services, better searching, indexing technologies, semantic web technologies, and suggestions / recommendations may help faculty find quality, context appropriate educational materials.

Global OER Open Repositories

One way to get higher education excited about OER is to see what other people are sharing. This often helps us see the value in sharing and spurs a desire for us to share our digital resources for others to use. There are over 400 global OER repositories of open content including: [Connexions](#), [CK-12](#), [FREE.ed.gov](#), [OER Commons](#), [iTunes U](#), [OCW Finder](#), [MERLOT](#), [MIT for High School](#), [Search by Creative Commons](#), [YouTube EDU](#) and hundreds more.

Copyright 2.0

To understand why open licensing is so important in this digital age, watch [Lawrence Lessig's](#) Educause 2009 keynote on copyright titled: [It Is About Time: Getting Our Values Around Copyright Right](#) (start at time index 27:55). He reviews the progress of the "open access" movement in education and makes a call for educators to finally resolve this issue in a way that enables the potential of technology for education.

1. [Copyright](#) is restrictive and makes it difficult to share and re-mix digital content and textbooks.
 - a. Copyright is also an effective legal method to protect one's IP rights ... and there are many instances where that is the goal and is appropriate.
 - b. One does not give up copyright when sharing - one gives some, but not all of their rights.
2. [Creative Commons](#) licensing provides us all with a new legal way to share our digital content, when the copyright holder chooses to share, without giving up one's copyright / ownership.
 - a. There are multiple creative commons licenses to provide the copyright holder with extensive options on what rights to retain and what rights to share.
 - b. Foundations that provide funding for OER initiatives (Hewlett¹², Gates, Lumina, etc.) are moving toward requiring open creative commons licenses on grant products and reports.

Federal and State OER Initiatives

This is a list of 2009 federal government examples where federal tax dollars could be used to fund open educational resources and require open access.

1. On September 24, 2009, Senator Dick Durbin (D-IL) introduced a [bill in the US Senate](#) that would make open textbooks available to students, professors and the public for free. The Open College Textbook Act, would authorize \$15M for the Department of Education to award one-year competitive grants to create, update or adapt high-quality introductory level open college textbooks.
2. President Obama's American Graduation Initiative, if passed, will provide \$50M / year for the creation and distribution of open courseware. The courses would be open and freely available.
3. The [2009 Federal Research Public Access Act](#) would require that 11 U.S. government agencies make journal articles stemming from research funded by that agency to be open and freely available.

¹² [Hewlett Foundation OER Overview](#)

- a. The presidents of 57 liberal arts colleges released an [open letter](#) endorsing the [Federal Research Access Act of 2009](#).
- b. This bill is fundamentally about “open access” to research. Open access, part of the OER philosophy, is based on the idea that academic scholarship is based on open access to others’ findings and research methods (e.g., [public library of science](#)).

Challenges

1. Faculty are aware of and concerned about high textbook costs, though sometimes the only high quality option is a commercial textbook.
2. There is concern among faculty that open content and/or textbooks might be mandated as the "best textbook" or the "best course."
 - a. Faculty autonomy and academic freedom must be maintained¹³. Avoid forcing textbook choices in situations where there hasn’t already been a decision for a common text.
 - b. Faculty do not like “one size fits all” and online instructors need to be invested in their course materials. Therefore it’s important to think of online resources and course design as something to be orchestrated by a good instructor.
3. Because OER is relatively new, the quality and accuracy of available OER materials is often inconsistent.
 - a. Open does not = garbage. Open does not = good. Quality content can be open or closed.
 - b. Finding and evaluating quality open learning materials is hard. There is a lot of “junk out there” and there are a lot of gems. Finding the gems and sharing that information is not trivial.
 - c. Rigorous review of open resources by content experts is critical. This is a key service that publishers now provide, yet the academy has an opportunity to re-think and re-define how digital content is produced, reviewed, published and shared.
4. Open does not = free; there are still production and maintenance costs. Though, if we are paying for production and maintenance for local use anyway... we need to ask “what is the incremental cost to open and share digital materials?”
5. Customization is often necessary to match departmental and/or college curriculum requirements.
6. Opening one’s intellectual property is a major cultural shift for some in higher education. The Academy is built on sharing knowledge, but the Internet makes sharing digital content easier and faster.
7. Promotion, tenure, compensation and work load policies often do not account for (or give equal credit for) faculty engaging in OER initiatives and sharing their digital resources. Institutions and the state need to think about extrinsic incentive systems to encourage and reward sharing.

¹³ [Affordable and Open Textbooks: An Exploratory Study of Faculty Attitudes](#)

- a. Faculty having access to the world of open resources from which to design a course is great, but sorting through that world to create a set of meaningful learning experiences takes a lot of time. That time needs to be recognized as a part of faculty workload.
8. Printing. We need to work with print-on-demand services or a college bookstore to print OER materials (when students want printed versions). Failure to do so will result in students printing 300 page open textbooks in the college library.

OER materials may not meet [ADA 508](#) accessibility or [SCORM](#) requirements and must be modified to bring into compliance.

9) eLearning Data

Common Definitions

- FTE and headcounts are annualized counts.
 - Counts do not include other forms of eLearning (Telecourse, Correspondence, ITV, Teleclass, etc.)
- Growth % = $(\text{New} - \text{Old}) / \text{Old} \times 100$ (rounded up at .5)
- The Community and Technical College numbers include all 34 colleges.
- The Independent Colleges of Washington numbers include all 10 private, liberal arts, nonprofit colleges.

Divergent Definitions

- Online
 - Public universities: 50% or more of instruction delivered online.
 - A WSU Faculty Senate review of self-sustaining online flexible-enrollment undergraduate courses recommended a change to state-funded online semester-based courses which was implemented beginning spring 2008.
 - Community and technical colleges: uses the Internet to provide a predominant portion of instruction.
- Hybrid
 - Public universities: PCHEES did not track “hybrid” programs or courses, so very little hybrid data was provided.
 - Community and technical colleges: use online technologies for less than 51% and displaces some face-to-face classroom time.

New eLearning Coding Definitions

- Public Universities will use a new PCHEES data definition going forward:
 - Online = 75% or more of the instruction is online
 - Hybrid = 74% or less of the instruction is online
- Community and Technical Colleges will use updated eLearning codes starting in Summer, 2010:
 - Online = A course that uses web-based tools and where 100% of the instruction and interaction between instructor and student is done online.
 - Hybrid = A course that displaces some, but not all face-to-face class time with web-based tools.
 - Web-enhanced = A face-to-face course that does not replace any face-to-face seat time, and access to web-based tools is required.

- Optional = A course in which the student can choose to attend class face-to-face or take the class online.

Online and Hybrid Data

Public Universities (Baccalaureate)

	ONLINE		HYBRID		ONLINE		HYBRID	
	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT
	AY 2007-2008				AY 2008-2009 (% growth)			
University of Washington								
State Funded	105	947			43	- 59%	131	- 86%
Non-State Funded	111	1123			124	+ 12%	1188	+ 6%
Washington State University								
State Funded	859	2137			1320	+ 54%	2877	+ 35%
Non-State Funded	169	187			13	- 92%	14	- 93%
Western Washington University								
State Funded	2	7			1	- 50%	4	- 43%
Non-State Funded	114	397			71	- 38%	253	- 36%
Eastern Washington University								
State Funded								
Non-State Funded	141	371			183	+ 30%	469	+ 26%
Central Washington University								
State Funded	244	899			470	+ 93%	1481	+ 65%
Non-State Funded	25	8			9	- 64%	30	+ 275%
The Evergreen State College								
State Funded	0	0			0		0	
Non-State Funded	0	0			0		0	
TOTALS	1770	6076			2234	+26%	6447	+6%

Community and Technical Colleges (All Degrees & Certificates)

	ONLINE		HYBRID		ONLINE		HYBRID		ONLINE		HYBRID	
	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT
	AY 2007-2008				AY 2008-2009 (% growth)							
State Funded	13,750	66,048	3,594	20,793	16,701	+22%	78,284	+19%	5,204	+45%	29,114	+40%
Non-State Funded	3,138	15,679	548	3,639	3,882	+24%	18,387	+17%	819	+49%	4,996	+37%
CTC TOTALS	16,888	81,727	4,142	24,432	20,583	+22%	96,671	+18%	6,023	+45%	34,110	+40%

Public Universities (Graduate)

	ONLINE		HYBRID		ONLINE		HYBRID		ONLINE		HYBRID	
	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT
	AY 2007-2008				AY 2008-2009 (% growth)							
University of Washington												
State Funded	72	241			26	- 64%	79	- 67%				
Non-State Funded	222	1205	82	274	254	+14%	1475	+22%	125	+52%	417	+52%
Washington State University												
State Funded	29	89			49	+69%	139	+56%				
Non-State Funded	5				10	+100%						
TOTALS	328	1535	82	274	339	+3%	1693	+10%	125	+52%	417	+52%

ICW (Baccalaureate)

	ONLINE		HYBRID		ONLINE		HYBRID		ONLINE		HYBRID	
	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT	FTE's	HEADCOUNT
	AY 2007-2008				AY 2008-2009 (% growth)							
ICW TOTALS	340	1285	22	86	443	+30%	1623	+26%	36	+68%	132	+53%

10) Work Group Members

Organization	Name	Title
Superintendent of Public Instruction	Judy Margrath-Huge	Director, Digital Learning Department
Workforce Board	Madeleine Thompson	Policy Analyst
HECB	Bob Billings	Chief Information Officer
DeVry University	David Stewart	President, Seattle Metro
Washington State University	David Cillay	Director of Instructional Development & Technology
Eastern Washington University	Gary Pratt	Chief Information Officer
University of Washington	James W. Harrington	Faculty Legislative Representative & Faculty Senate Vice Chair
AFT Washington	Phil Ray Jack	Faculty @ Green River CC
Highline CC	Ben Thomas	Faculty
Western Washington University	John Purdy	Faculty
Seattle Pacific University	David Wicks	Director of Instructional Technology Services
Centralia College	Sue Gallaway	Dean Library Services and eLearning
North Seattle CC	Brandin Watson	Student, S.A.C. Project Manager
Bellevue CC	Marcus Sweetser	Student, Vice President, WA Student Association
SBCTC	Cable Green	eLearning Director
SBCTC	Cynthia Torres-Jimenez	Student Services Director
SBCTC	Connie Broughton	Managing Director of WashingtonOnline

A special thanks to the work group members for their time and efforts to discuss these important topics.

Group members found this cross-sector work very useful and recommend that this K-20 eLearning group continue beyond the report.

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