

# THE PROMISE OF OPEN EDUCATION

May 2010

A report on the research  
and findings of the Lane  
Community College Open  
Educational Resources  
Team



Open Educational  
Resources

[www.bit.ly/laneoer](http://www.bit.ly/laneoer)







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**MAY 2010**

Prepared by Millennial Associates, LLC  
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# Summary

**Lane Community College** stands at a crossroads in learning opportunity and delivery. As information sharing technologies emerge, the skills required to be successful in today's workforce are being redefined. Employers are increasingly seeking individuals with the ability to actively solve problems, seek resources, analyze information, and communicate effectively. A spirit of lifelong learning is required for college graduates to meet expectations in today's knowledge-based economy.

The Lane Board of Education prioritized the exploration of innovative learning technologies through the 2011-2015 strategic direction, **Online Learning and Teaching**. According to the direction statement, "[Lane Community College's] aim is to identify appropriate technological enhancements to serve the college mission, and to providing fiscally sustainable support and tools."<sup>1</sup> Technologies such as OERs have the immediate capability to align with the intent of this strategic direction and the college mission by providing relevant, flexible teaching materials of value to students and faculty and improving student experience at Lane.

Emerging social and knowledge-sharing technologies have brought a renaissance in learning and content delivery methods to higher education. Of high interest to students, OERs can deliver highly relevant content on-demand, thereby increasing the value of a Lane education to students. With electronic delivery, the possibilities are endless with OERs, having the ability to address some of the critical shortcomings of textbooks and traditional content delivery.

With OERs, information is actively shared and adopted by individuals who likewise share their adaptations. Course materials are modified to meet the specific needs of courses, the instructor, or students. In the end, a new, improved product can emerge, which ignites the revision process once again. With OERs, knowledge has the potential to grow and become more relevant every time it is used, not simply in-between publishing revisions.

The Lane OER Team ([www.bit.ly/laneoer](http://www.bit.ly/laneoer)) was charged with researching and assessing the current state of OERs and providing their findings in a report to the faculty and student body of Lane. This report includes the analysis of over 50 open educational resource providers, organizations, repositories, searches, and producers. The team was also responsible for identifying and recommending actions for Lane Community College to approach the implementation of OERs. This report describes 15 actionable items available for immediate approval and execution aimed to empower faculty in the use of OERs in courses.

## KEY FINDINGS

### AVAILABILITY

A variety of open educational resource modules continue to be developed on a daily basis, all of which are free of license or charge. As OERs continue to be adopted, their quality and value can continually increase due to increased involvement and sharing.

A key challenge surrounding OER adoption is locating and augmenting existing open educational resources to suit individual course needs at Lane. Due to the emergent nature of OERs, many course instructors have yet explored open curriculum and texts, opting for traditional methods provided through textbook publishers.

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<sup>1</sup> Lane Community College Strategic Directions, 2011-2015.  
<http://www.lanec.edu/research/planning/documents/OnlineLearning.pdf>

For Lane courses to effectively use OERs, a strong development component for Lane faculty is needed. Empowering instructors to find, modify, and even create their own OERs can affect the direct relevance to students and improve the quality of the learning materials.

## QUALITY

The culture of open educational resources encourages self-publication and sharing of information. Unfortunately, the traditional functions of an editor in OER publication are frequently omitted from the process. Many open educational resources lack the approval of a central body or publisher, a symbol which traditionally signified quality in a textbook or other learning module.

Despite a lack of official quality standards on the surface, higher-quality educational materials can emerge as a result of OER development and sharing. As more instructors adopt and modify content to meet specific course needs and likewise share their modifications and findings, richer course materials which are highly relevant to students are provided. OER materials can be updated instantly, with both students and instructors not having to wait or pay for new editions of a textbook.

## DEVELOPMENT

Instructors and other subject-matter experts find it difficult to share their knowledge when few quality training options, guidance materials, or other empowerment tools exist. In addition, instructors find it more difficult to both adopt and create OERs when they are not compensated for the time it takes.

The active creation and modification of OERs for classroom and online instruction contributes to the furtherance of academic study. The professional benefits of OER adoption and development can be highly valuable, providing professional development opportunities for faculty in higher education.

Efforts to empower faculty in the adoption, development, and sharing of open educational resources is critical to the success of OERs at Lane. Training opportunities and other supportive programs can be created to assist faculty in the use of OERs in the classroom.

## ACCESSIBILITY

As information increasingly becomes available without requiring membership or subscription, and as information also becomes hyperlinked and searchable, students can find and access relevant material easier than in the traditional textbook format. This could lead to more learning opportunities both inside and out of class.

With multi-channel learning and multimedia course materials also comes the improved ability to convey knowledge across methods of learning. Connecting with students who use textual, auditory, kinesthetic, and digital learning styles is more achievable today given the new tools of communication. This array of multimedia tools could correlate to student success and retention.

Advances in technology in education have also increasingly advanced the capability of individuals with disabilities to participate in classroom learning environments. Due to the electronic nature of OERs, texts and other materials are already converted to a *universal electronic design*, allowing for instant use in alternative formats for students with disabilities. Materials conforming to universal design principles eliminates mandatory cost associated with converting paper texts.

## THE LANE OER TEAM

In fall 2009, the President of the Associated Students of Lane Community College approached the Vice President of Academic and Student Affairs at Lane, expressing interest in exploring the use of open educational resources in courses. Motivated by affordability and increased access to educational materials, ASLCC believed that adoption of OERs could be a win-win-win situation: they hold the potential to benefit students, instructors, and the institution as a whole.

The OER Project was commissioned by the Vice President of Academic and Student Affairs and a team was assembled in spring 2010 to explore the feasibility of OERs. The team was represented by various stakeholder groups at Lane, composed of students, faculty, staff, managers, and technology experts.

*...OERs could be a win-win-win situation: they hold the potential to benefit students, instructors, and the institution as a whole*

The Lane OER Team was chartered to accomplish the following:

- Research available OERs and the organizations that support OERs
- Recommend actions to implement OERs in courses at Lane
- Promote the use of OERs among faculty, staff, and the community
- Train and provide guidance to faculty in the adoption and development of OERs



**The Lane OER Team, Spring 2010**

## RECOMMENDATIONS

Eleven recommendations and three identified areas of additional exploration seek to address challenges, barriers to entry, or outreach components regarding development and usability of OERs at Lane.

### 1 – INFRASTRUCTURE

- **1-A Create a web portal to access Lane OER resources and trainings**  
*Provide a common online storage and access location for all Lane-based OERs and OER training materials*
  
- **1-B Promote OER implementation through marketing and community relations**  
*A marketing and community relations campaign to gain student, faculty, and public support for Lane OER projects*
  
- **1-C Extend the Lane OER Team charter**  
*Continue the research and analysis work of the Lane OER Team*
  
- **1-D Join the Community College Consortium on Open Educational Resources**  
*Join a network of institutions and leaders in OER development*
  
- **1-E Release the Lane OER Team work under a Creative Commons License**  
*The work of the Lane OER Team could help other institutions understand the process Lane has utilized in implementing OERs*

### 2 - DEVELOPMENT

- **2-A Create OER training and educational materials for Lane faculty**  
*Produce valuable training and support materials to empower faculty to adopt OERs*
  
- **2-B Create a faculty OER fellowship to increase faculty incentive**  
*Create a faculty fellowship program to create a cohort of faculty OER developers and provide a cash award to assist with OER adoption*
  
- **2-C Implement FlatWorld Knowledge textbooks in 1-3 courses for fall 2010**  
*Implement full, peer-reviewed textbooks which can immediately realize return on investment and benefit*
  
- **2-D Augment the course packet process to include open access**  
*Develop a process for course packets at Lane to become open educational resources when appropriate*
  
- **2-E Create a Leadership Institute for Student Leaders**  
*Create a student leadership institute using an OER leadership curriculum*

- **2-F Explore the creation of an OER editorial or endorsement board**  
*Improve the quality of OERs by creating traditional editorial and peer revision functions for Lane faculty*

### 3 – FURTHER EXPLORATION

- **3-A Allowing author retention of ownership when concerning OER publication**  
*Allow creators of knowledge works to retain ownership when produced and made available as OERs, providing a valuable incentive to create*
- **3-B Releasing Lane Community College-owned curriculum as OERs**  
*Release appropriate Lane-owned curriculum and course materials as open source*
- **3-C Adopting an equal weight policy**  
*Hold OER development and publication at an equal weight to traditional publication for purposes of hiring, tenure, and promotion.*

# Background

Lane Community College has been an icon of excellence and innovation since its inception. Founded in 1964, Lane's commitment to developing the highest quality pedagogies and empowering its students in the use of emerging technologies remains strong.

The recent emergence of open educational resources, or OERs, encourages colleges and universities to explore new methods of distributing knowledge to students. It is becoming more apparent that the integration of innovative technologies and content delivery systems in the classroom could further empower students to be successful in today's knowledge-based economy.

As a member of the League for Innovation in the Community College, it is in Lane Community College's interest to determine the availability, feasibility, and potential success in the use of open educational resources. Adoption and development of open educational resources can achieve multiple institutional and student goals.

## BACKGROUND OF OPEN EDUCATIONAL RESOURCES

Open educational resources include text, videos, audio, and images with which instructors, departments, institutions, and students are able to freely use without cost and are legally allowed to modify the content to suit their needs. This offers the opportunities to distribute educational materials in an unprecedented manner in academia, not being as hindered by traditional barriers of access to books or instructors.

Recent developments in communication and information technologies have given rise to global sharing of knowledge. Specifically with the Internet, information can now be published and distributed far cheaper and more efficiently than ever before. Due to the potential for increased sharing of information and creative works, traditional models of publication and print are being challenged.

The Internet provides a platform on which any individual may publish and access information for far less resources than the textbook publishing industry has been able to provide. This is coupled with an increase in desire for sharing through social technologies such as social networking, personal publication through blogging and websites, and email.

Open sharing licenses have drastically increased in popularity as participation has increased via the web. The most common of these, the open attribution license, is one in which the creator of content gives free and unrestricted permission to use, change, reuse, and even sometimes resell their content as long as whoever uses it attributes the original author to its creation. The author retains the ability to remain in control of the original content. This greatly differs from the traditional "all rights reserved" copyright, with the author retaining sole use of the material.

It is the rise of both the open attribution license and sharing via the Internet that promoted the concept of open educational resources in higher education. The potential of a body of continually-growing knowledge and the ability to openly modify this knowledge to suit student needs is the great driving force behind the adoption of OERs. Materials can improve without having to wait for new textbook editions. In addition, the affordability of open educational resources is a valuable motivation for students. Coupled with the July 1, 2010 enacting date for the transparency and affordability-motivated Higher Education Opportunity Acts textbook provisions, OERs can provide a solid method in which to address the growing concern of the costs associated with higher education.

*Due to the potential for increased sharing of information and creative works, traditional models of publication and print are being challenged.*

## HISTORY OF OPEN EDUCATION AT LANE

In 2006, Lane faculty webmaster Joe Escobar attended a conference workshop on open educational resources sponsored by the League for Innovation in the Community College. Bringing his findings back to Lane, Mr. Escobar planted the seed which would bring Hal Plotkin to present at the Lane 2007 Spring Faculty and Staff Conference. As an OER pioneer from the Foothill-De Anza Community College District in California, Mr. Plotkin demonstrated to Lane faculty and staff the potential of OERs at college campuses in his presentation “Building and Using Public Domain/Open Education Resources as Substitutes for Commercial Textbooks.”

Due to a variety of challenges including the lack of dynamic technologies, Lane’s OER efforts were set aside to wait for viable options to emerge. As content delivery, social networking, and other internet technologies improved over the years, the Associated Students of Lane Community College expressed interest in 2009 in reopening OER research at Lane, seeking to implement relevant, valuable, and affordable course materials. Coupled with the concept of universal content design and electronic text, learning technologies and content delivery methods have become more robust. The culture of knowledge sharing has also become increasingly popular in academia. It is this combination of opportunities which invoked a revival of research at Lane.

## LANE’S ROLE

Actively pursuing and developing open educational resources directly supports the Lane Community College Mission and multiple Core Values.

Online Teaching and Learning is a strategic direction adopted by the Lane Board of Education for the college. This goal seeks to identify resources and methods which could improve the quality and relevance of a Lane education today and empower both faculty and students in the use of such emerging technologies.

*Traditional textbook prices have risen at four times the rate of inflation since 2000. An average textbook costs more than \$75*

The vision of the college to *transform lives through learning* further justifies the exploration of adopting OERs. By integrating accessible, affordable, and technology-empowered knowledge into course materials, Lane will equip students with the necessary tools to be successful in today’s workforce.

A variety of learning styles are addressed with OERs, offering visual, audio, and other multimedia components in addition to text. When using open educational resources, students are able to access content in a myriad of ways and can find learning opportunities which best suit them.

## WHY OPEN EDUCATIONAL RESOURCES?

In their 2006 commissioned report titled “*A Test of Leadership, Charting the Future of U.S. Higher Education*”, the U.S. Department of Education highlighted that “academic programs must be transformed to serve the changing needs of a knowledge economy.”<sup>2</sup> Open educational resources exemplify this priority by providing valuable opportunities through innovative course delivery methods.

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<sup>2</sup> U.S. Department of Education. (2006). *A Test of Leadership, Charting the Future of U.S. Higher Education*. Washington, D.C.: U.S. Dept. of Education [<http://www.ed.gov/about/bdscomm/list/hiedfuture/index.html>]

In 2008, the United States Congress passed H.R. 4137, the Higher Education Opportunity Act (HEOA). The bill contained measures specifically aimed to reduce the cost of textbooks for students at institutions of higher education in the United States. It was the focus of these provision to improve the transparency in the textbook selection process at colleges, increase the availability of text versions (bound, unbound, electronic, etc.), and justify the costs associated with new textbook editions.<sup>3</sup>

Taking effect on July 1, 2010, the HEOA's textbook provisions are now becoming a federal requirement for publishers, college campuses, and bookstores. While not specifically mentioning open education, the spirit of the textbook provisions HEOA are exemplified by the transparent and accessible nature of open education, as well as the affordability opportunities which OERs could provide. As the provisions of the bill begin to take effect, OERs could increasingly become a viable option for institutions, bookstores and faculty to meet the spirit and requirements of the law. The affordability of course materials for students will continue to be a driving force behind the implementation of OERs in the near future and beyond.

OERs also create professional and institutional development opportunities for faculty and staff. When using OERs, students, faculty, and the institution can also find value in increasing their competency with technology-based information retrieval, which is critical in today's information-heavy workforce.

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<sup>3</sup> The Higher Education Opportunity Act of 2008, § 133. H.R. 4137. 110<sup>th</sup> Cong. 2<sup>nd</sup> Sess. (2008).  
[http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110\\_cong\\_public\\_laws&docid=f:publ315.110.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_public_laws&docid=f:publ315.110.pdf)

# Findings

The Lane OER Team conducted an extensive study of over 50 open educational resource primary sources, including platforms, repositories, search centers, and databases. In addition to the primary sources, the team researched information located at organization websites, expert interviews, webinars, conferences, blogs, news articles, and social media profiles.

These findings are those of the Lane OER team on the current state of the availability, adoption, and development of open educational resources in the community college.

It is the hope of the team that these findings can be used as a primer on open educational resource familiarization and can provide the necessary background to encourage further exploration into the use of OERs.

## AVAILABILITY

The availability of open educational resources is scattered or non-uniform. Multiple organizations and collaborations exist to collect, store, and categorize OERs. However, these organizations don't always work collaboratively or categorize their resources in a way which is intuitive or easy for instructors to browse, leading to a challenge in OER adoption.

In addition to a non-uniform, non-central location to search for OERs, full course materials are not readily available for many disciplines or courses, leading to a large required time investment for faculty who wish to teach solely with OERs. With no clear path or direction in finding and adopting OERs, faculty at Lane are hard-pressed to find the time and energy to launch a full-scale search of the Internet to find a quality collection of course materials.

Many **thousands** of open educational resources exist in some form today from institutions, organizations, and authors. The challenge, however, is empowering faculty to navigate the repositories of OERs given their relative lack of organization, search capability, and availability across subjects and disciplines.

Any OER which does not sufficiently provide enough material for an entire college course is commonly called a **module**. Most OERs available today are modules. Knowledge collection, including the process of assembling traditional textbooks and courses, operates as a combining of modular ideas, topics, and discussions. It naturally requires more resources to gather a complete college course worth of materials than to find or create a module. Complete textbooks or course collections occur far less frequently in the OER sharing realm. As there are few, peer-reviewed, open texts in existence, the lack of OER adoption across college campuses is understandable.

In order to find value in the vast array of open educational resources on the web, faculty need to know where to look, know what to look for, and know the best practices associated with creating their own course materials out of OERs. To help solve this challenge, Lane can create a common web portal for faculty which provides a comprehensive directory to all known available resources and training materials. This would empower faculty to learn about OERs, browse and find resources, and develop their own courses using these resources.

Training and guidance materials outlining the best practices associated with adopting and developing new OERs is surprisingly absent from the primary OER providers. Efficient training opportunities which establish the importance of OERs and prevent frustration are essential as faculty time is highly valuable.

*Most OERs available today are modules...It naturally requires more resources to gather enough resources for a complete college course than to find or create a module.*

## QUALITY

Traditionally published course materials exhibit a strong editorial component. Texts are reviewed for content, style, and consistency. Subject experts weigh in on the reliability of the information being presented. Multiple revisions are often made to satisfy an editorial board's standards and opinions.

The culture of open educational resources encourages self-publication and sharing of information, but unfortunately the traditional functions of an editor are frequently omitted at no fault of the author: no centralized or widely utilized process exists. However, this lack of centralized approval body is hardly new.

In the early 2000s, the publishing industry experienced a similar groundswell of independent and individualized publications. Over the last ten years, Web 2.0 technologies have literally given capability to anyone to publish thoughts, research, opinions, and observations.

Blogging, once thought to be low-quality, unreliable information, is now a powerhouse of the daily American media cycle. Wikis and other online encyclopedias are constantly enriched by their countless users, with information constantly becoming more relevant, updated, and correct. Other social media have empowered millions of people to publish valuable, rich, and relevant material of interest to their social circles. New methods for filtering unwanted and unreliable information have emerged.

A new culture of use and contribution has emerged, and open educational resources used by the higher education industry stand to gain from this rich individual involvement. OERs are able to be updated, revised, or modified instantly, thereby increasing the relevance and value to students and faculty. Mistakes can be eliminated and new versions shared. The quality of OERs can be improved with every course, taking careful note of student needs, classroom environment, and technological trends.

User-generated content is becoming the standard method for information distribution and Web 2.0. Open educational materials follow this trend as they can be freely shared and consumed, allowing anyone to contribute and improve the product. OERs can increase in value to the consumer at a rate unachievable by traditional publication methods.

It is imperative to retain the highest-quality materials in college courses as student success is likely correlated in part to the relevance and quality of the materials with which they are presented. In addition, students expect the best materials in return for their tuition dollar. OERs provide a valuable opportunity for instructors to increase the relevance of their learning materials at any time. Students can contribute to the relevance and value of their materials. Instructors can “feel the pulse” of their courses through the use of their OERs.

Most OERs available to instructors in higher education lack clear standards for quality (FlatWorld Knowledge's hybrid commercial/open model being an exception). No widely utilized peer revision or editorial opportunities exist for publishers of OERs, causing their work to suffer a lack of adoption or seriousness. At no fault of the authors of OERs, those who publish open resources are generally prohibited from enjoying the credibility offered by traditional commercial publications.

### How Quality is Assessed

It is a primary function of faculty members to conduct curriculum development. This includes the review of potential curriculum that could be used in a course. Using a set of personally developed or shared standards, an instructor can assess the value, credibility, and quality of an OER (both modular or full text) and provide his or her approval of the material.

*At no fault of the authors of OERs, those who publish open resources are generally prohibited from enjoying the credibility offered by traditional commercial publications*

*...students expect the best materials in return for their tuition dollar.*

A tacit endorsement of the quality of materials can be inferred from faculty and institutions which have already adopted open educational resources. For instance, the popular open textbook *Collaborative Statistics* by Barbara Illowsky and Susan Dean has been adopted for use by De Anza Community College in California.<sup>4</sup> The use of this text by the college in an actual course implies that the instructors who teach this course endorse the materials and that the course meets the curriculum guidelines of the college. While not often providing a formal endorsement in examples such as this, the actual use of an OER in course settings provides some indication as to the quality of a resource.

Quality measures such as offering institutional and expert endorsements, references, and popularity or “crowd” voting are being explored by many open resource organizations. However, these measures are not yet to the level of providing the expected indication for faculty who are browsing available OERs.

Instructors who are looking to adopt OERs in their courses are encouraged by most organizations to critically examine an open resource’s content for style, subject, and semantics. In addition, it is valuable for faculty to adopt recommended content standards for OER adoption.

## DEVELOPMENT

The continuous creation of new and valuable OERs is a challenging piece of the OER puzzle. Often requiring large amounts of time, financial capital, and knowledge, it appears that although the technologies that support the development sharing of OERs have become increasingly available, the actual adoption of OERs can lag due to the required resources to explore methods past the status quo (i.e. traditional textbook distribution).

This obstacle to campus-scale OER adoption is caused by the lack of faculty empowerment and guidance. Instructors and subject-matter experts often find it difficult to share their knowledge when they do not understand available OER options and don’t have time to conduct research in finding OERs. In addition, instructors are rarely financially compensated for OER development, frequently leaving only “free time” for the development of OERs.

The volunteering of knowledge and information has increased over the last few years due to the expansion of individual participation on the Internet. Participants are generally motivated by the gratification of advancing knowledge in their fields of interest. However, daily faculty responsibilities frequently triumph over exploratory and uncompensated OER research.

*The volunteering of knowledge and information has increased over the last few years due to the expansion of individual participation on the Internet.*

As the commercial sale of OERs is not viable, alternative encouragement to participate is being sought out by OER practitioners. Incentives are critical to promoting the development of OERs among faculty and subject matter experts.

Charitable grants and institutional investment in open educational resources appears to be a viable model providing financial capital in support of continued development and maintenance of open educational resources. As the OER industry is still in an infant state, however, the realized return on investment may take some time to become quantitatively evident.

While not officially established in any institution identified by the Lane OER Team’s research, institutional grants to faculty could provide a valuable incentive for production. In addition, the professional development opportunities of joining a network of OER developers, interacting with subject-matter experts, and contributing to one’s field can be valuable. Compensatory incentives and organizational support can make obsolete the challenges encountered by instructors who seek to develop OERs.

<sup>4</sup> Connexions. (2010). *Collaborative Statistics*. [<http://cnx.org/content/col10522/latest>]

## Professional Development an Incentive

Faculty at institutions of higher education, including Lane Community College, are increasingly developing open educational resources and other materials to advance both the knowledge in their field and to improve the success of their students. This non-traditional form of publication is giving value to the individual instructor and demonstrates their commitment the advancement of their field of expertise.

Lane Community College would greatly benefit from the development of OERs. Promoting the creation and implementation of OERs could improve the reputation of the institution as well as increase the value for both students and faculty through relevant material and individual professional development opportunities.

When developing OERs, metrics should be identified and used to assess if a resource creates student, faculty, and institutional value as well as promoted success. Reward for high assessments could increase the incentive to improve course materials as well as increase the adoption of OERs across institutions.

*The publication of materials is a valuable professional development opportunity for faculty.*

## ACCESSIBILITY

The advances in technology in education have increasingly improved the capability of individuals with disabilities to participate in classroom learning environments. Due to the electronic nature of OERs, course materials are already transitioned into digital-ready alternative formats such as audio and speech software designed to read to visually-impaired students. When needed by students, alternative formats are federally mandated. OERs are a natural fit and a welcome blessing for the Lane Disability Resources Department, who spend thousands of hours annually converting paper copies of texts into digitally readable formats.

If an electronic text is not readily available for students who need alternative formats, physical textbooks must be converted from paper to digital form. This is a process that can last on average between five to fifteen days, leaving the student without a textbook during that period. As texts often don't arrive on bookstore shelves until days before the next term, this timeframe can be extremely limiting for students, especially if there is an unusually-heavy workload in the Disability Resources Department. It takes on average between two and ten staff hours to convert a single textbook for simple projects, longer for more complicated projects such as math and science textbooks. Once completed, a student's textbook is rebound and returned, but retains no resale value as the original binding is literally cut from the book and discarded. This process alone shows great potential for OER implementation at Lane, where electronic-ready course materials have additional value to students with disabilities.

In the classroom setting at Lane, students can benefit from OERs in their personal educational programs and courses due to the open nature of the materials. As information becomes increasingly available without membership or subscription and as information also becomes hyperlinked and searchable, it is possible to find and access relevant material easier than in the traditional textbook format, leading to increased learning opportunity.

Students can find related resources which may not be assigned in-class, but can enhance the learning process just the same. Assistance gained with the use of OERs and individual instructors, Lane students can increase skills in finding appropriate information on the web. With the increased availability and accessibility of hyperlinked knowledge and multimedia content, students and faculty alike are able to have more information at their disposal, contributing to success.

*With the increased availability and accessibility of hyperlinked knowledge and multimedia content, students and faculty alike are able to have more information at their disposal, contributing to success.*

With multi-channel learning and multimedia course materials also comes the improved ability to convey knowledge across delivery methods. Connecting with students who use textual, auditory, visual, kinesthetic, and digital learning styles is more achievable today given the new tools of communicating knowledge. This array of multimedia tools could correlate to student success and retention.

Challenges currently exist within the current infrastructure in the delivery of course materials over the Internet at Lane. Some segments of the student body are limited in their ability to personally access, download, and print required course materials, and do not either have access to technology or strong technological skill. Lane staff and technological resources currently assist with these challenges, but in some departments acquiring additional resources or exploring new models of technology delivery to students is highly suggested.

In addition to individual student challenges, larger-scale issues currently faced by some departments could be exacerbated by the implementation of OERs and other electronic resources on campus. At the moment, a portion of the Technology Fee assessed per term is allocated to fund paper and printing costs in computer labs and other locations around campus, with students not being charged based on the amount nor are students specifically limited in the amount of allowed printing. As challenges in the use of technology exist currently on campus, further exploration to solving these challenges and empowering students will be increasingly necessary.

Current operating procedures would to be amended to be more sustainable in funding if print copies will increasingly be needed by some of the student population, including those regarding the use of on-campus technology such as computer labs and printers.

### **Community Lifelong Learning**

Outside of the educational institution, OERs are influential in increasing public knowledge. Distribution of OERs can provide opportunities for non-college students to access educational resources, thereby enriching lives at all age levels and backgrounds. In addition, as the financial barriers to entry to accessing the Internet are disappearing, OERs are promoting universal access to education for the first time.

The ability to openly reach so many Lane County residents with high-quality educational materials fulfills Lane's mission to provide affordable, quality, lifelong educational opportunities.

## **INTELLECTUAL PROPERTY**

The traditional © *all rights reserved* copyright with creative works in intellectual property law with has recently been challenged with the advent of attribution and public licenses such as the GNU public license and Creative Commons attribution licensing. The collaborative nature of the Internet has encouraged a culture of sharing and derivative works, with authors, artists, and other creators finding value in that their works are used, appreciated, and widely distributed. Attribution licenses such as those from Creative Commons encourage sharing and are used by countless individuals and organizations over the Internet, requiring only that the original creator of content be attributed to the work.

The OER movement is based on this culture of sharing. Coupled with the ability to retain ownership of ones' creations and observations, instructors and experts worldwide are able to share knowledge and actively participate in the growth of their field. Attribution is critical to the success of OERs. Faculty and experts depend on their contributions to increase their reputation and authority in the field, affording them new opportunities.

Lane Community College could greatly benefit from promoting a culture of sharing among faculty, students, subject-matter experts, and the community. The outcome could expand the

community's academic, economic, business, and leadership capabilities in positive ways. In addition, the college could benefit in the increased reputation brought by faculty members who are becoming emerging leaders and experts in their fields, in turn making a Lane education considerably more valuable.

## RETURN ON INVESTMENT AND INCENTIVES TO PARTICIPATE

While the barriers and challenges of adoption that have been identified can be discouraging, the benefits and potential returns of investment for students, faculty, and the institution can far outweigh these shortcomings. The incentive for stakeholders to participate are essential as well, as OER adoption is dependent upon a robust community of supporters, both student and faculty.

### BENEFITS TO STUDENTS

- **Affordability.** Open educational resources are available to students for free or for greatly reduced cost in comparison to traditional commercial course materials. Even after costs associated with infrastructure, maintenance, and technology investments (such as the purchase of a personal computer to access materials), the cost of OERs remains likely much lower than their traditional counterparts.
- **Relevant content.** Open educational resources promote customized and relevant course materials for students that can be applied to students' coursework, lives, and career paths. OERs show great promise to be more flexible to meet student needs, interests, and paths.
- **Technological competency.** The use of OERs promotes technological competency with students by engaging them with dynamic content and electronic course materials. The ability to retrieve information across platforms (e.g. the Internet, electronic readers, email) is a critical skill for success in today's knowledge economy.

OERs also promote the use of multimedia and social components in course materials. Fluency with these methods increases the likelihood for students to gain skills in communicating effectively with coworkers, business partners, and customers.

- **Multiple learning styles.** With increased exposure to a variety of learning tools including textual, auditory, visual, kinesthetic, and digital multimedia content in course materials, students can potentially learn more effectively using their individual learning styles and better identify ways to solve problems. Increased fluency in multimedia can also increase students' ability to present information in ways which speak across learning and communication styles.
- **Value of education.** As OER course materials increase in quality, relevance, and affordability, the overall value of a Lane education will increase.
- **Increased employment opportunity.** As the value of a Lane education increases, so does the marketability of a student in the workforce with a Lane degree.

### BENEFITS TO FACULTY

- **Professional development.** Faculty who develop or create OERs increase the value of their career work within Lane, within their field of expertise, and to their students. This could lead to greater opportunity for promotion, improved experiences, and greater sense of contribution to their students and their field.

- **Saved faculty time.** OERs are immediately editable. Inconsistencies and updates can be updated within a moment's notice. Course materials may be modified or augmented without much procedural issues, especially within the convoluted Lane course packet production process.
- **Ownership of content.** Faculty members who publish OERs can retain the rights of their work, allowing authors to use their work however they deem fit. This can directly translate to increases in professional opportunity, income, and improved reputation within fields of expertise. On the other hand, commercial publications often restrict use and usually assume partial or full ownership of content, leaving the author without any ability to control his or her content.
- **Increased marketability.** By producing OERs, faculty have the increased opportunity to promote their work which could help them reveal future opportunities, obtain grant funding for research, or network with others in their field.
- **Improved pedagogy.** OERs are based on a culture of continual improvement. As student needs change, faculty members are increasingly able to respond to and adapt course materials and teaching styles to meet these needs with OERs.

## BENEFITS TO LANE COMMUNITY COLLEGE

- **Mission, vision, and core values.** The use of OERs directly meets multiple college goals which speak to innovation. Specifically, OERs are aligned with the Online Teaching and Learning strategic direction at Lane through use of emerging technologies in the classroom, increased access to education, and improved learning experiences.
- **Recruitment and retention.** The use of OERs within the institution can improve college recruitment and retention. Course materials which are adaptive, high-quality, and relevant to student interests and career goals will likely stimulate demand for a Lane education and increase student interest.
- **Leadership.** Lane is regarded as a leader in innovative learning methods, use of technology, and community education. Implementing OERs in courses at Lane affirm Lane's commitment to identifying how technology can be used to improve the educational experiences of students and to increase access to education.
- **Student engagement.** Due to their dynamic, interconnected, and high social nature, OERs can greatly increase student involvement with courses and course material.
- **Sustainability.** The development and adoption of OERs reaffirms Lane's commitment to sustainable practices by reducing waste, creating low-cost opportunities, increasing access, and establishing the college as a leader in development.

# Recommendations

These fourteen recommendations are presented to the Lane Community College Vice President of Academic and Student Affairs and the Lane Student Affairs Leadership Team after careful deliberation and analysis of the available OER data, information, commentary, and references. Additional research will be conducted by the team over the life of the project, with new information being presented in areas which could positively affect outcomes. As new evidence regarding the use of OERs is discovered, these recommendations may be amended or changed. These recommendations are non-binding on any party and are simply offered as ideas for the meaningful implementation of OERs at Lane.

Additional investment may be required to complete certain recommendations. These recommendations, however, have all been identified as critical to the success of Lane's OER efforts.

## 1 – INFRASTRUCTURE

The recommendations in this section outline the organizational, infrastructural, or other support components which are necessary to provide the robust environment and resources for faculty to adopt OERs at Lane.

### **1-A Create a web portal to access Lane OER resources and trainings**

It is recommended that the web subdomain **<http://oer.lanecc.edu>** be immediately created and outfitted to be the official Lane OER Portal. This website will house the entirety of Lane's OER research, serving as a repository for OERs that have been developed by Lane faculty members and other subject matter experts. In addition, the portal will serve as an educational and training hub by providing all of the guidance and training materials designed to encourage and empower faculty adoption and development of OERs.

Using the **eduCommons** open source software specifically designed for OER storage and distribution, this web asset will provide a common ground for Lane faculty members, students, and the general public to access open educational resources. A common repository and access point for all visitors to store and access knowledge is essential.

In conjunction with recommendation 1-G, the Lane OER Portal would serve as a storage and distribution center for course packets, open course materials, and OER training.

Some critical issues addressed by implementing the Lane OER Portal:

- Training, guidance, and other educational materials will be placed here to assist with faculty members who are beginning their exploration into OER adoption and development
- Unique web addresses (URLs) are assigned to each resource for easy retrieval
- Resources can be accessed and printed by students
- Authors of content can easily modify and update their content, ensuring the same version is always being used
- Resources can be taken to print shops and other facilities for student textbook creation and print-on-demand
- Authors can be contacted directly concerning content issues, permission, licensing questions, and other information

This recommendation would be likely implemented over a variety of phases along with the goals and outcomes of the other related recommendations in this report. Close consultation with Lane's information technology team would be required and a phased plan could be developed upon authorization of this recommendation and investment of the required resources.

### **1-B Promote OER implementation through marketing and community relations**

A comprehensive promotion and education campaign will greatly improve the overall efforts to implement and develop OERs at Lane. The Lane OER Team can accomplish the following critical tasks:

- Foster partnerships with individuals, organizations, and supporters
- Create community support and awareness
- Secure greater opportunities for funding and outside commitments
- Provide greater incentives toward instructor adoption of OERs
- Increase institutional reputation and value to the community
- Increase the value of a Lane education
- Identify challenges and barriers toward adoption thereby improving OER offerings

A campaign should be composed in a marketing and communications plan and should at least include the following elements to best connect with the student body, faculty, Lane County, professional industry, and greater web communities:

- Overall efforts to promote OERs and address the challenges or barriers to adoption
- Public and community relations efforts to gain media coverage on OER efforts
- Events, conferences, workshops, seminars, and symposiums on campus, in the community, and via the web to promote the college's efforts
- On-demand online promotional materials such as fact sheets, testimonials, case studies, audio and video interviews, video events, and webinars outlining why OERs are valuable and how people benefit from open knowledge
- Collaboration with influential and leading individuals and organizations, as well as organizations emerging into the field of OERs
- Marketing and communications of Lane's OER offerings geared to increase participation and awareness and to meet or surpass OER effectiveness goals (using both traditional and new media channels)
- Communication with admissions audiences to increase interest and recruitment in Lane programs involving OERs, as well as to create active engagement with current students currently enrolled in courses to provide a more vibrant, valuable, and relevant experience.

### **1-C Extend the Lane OER Team charter**

By maintaining the team, advanced research and monitoring functions as new OER trends and applications emerge.

The team's future work can include the management of approved recommendations in this report, continuing research, and regular updates on the status of OERs, including the description and implication of emerging trends and innovative principles. The team should provide regular reports to the college on OERs and the Lane experience at least once or twice annually.

Continued monitoring can be achieved through active involvement with some of the following channels:

- Newsletters and magazines on higher education
- Conferences and industry meetings
- Blogs, websites, and other social media
- Symposiums, workshops, events
- Faculty & industry leader interviews and surveys
- Call for papers highlighting specific trends and events in OER development

#### **1-D Join the Community College Consortium on Open Educational Resources**

Free membership in the CCCOER will provide Lane the opportunity to connect with like-minded researchers and innovators in the field of open education and draw from their collective knowledge, experience, and body of evidence. The networking and information sharing potential would be a great asset to the college. By actively participating, Lane can establish itself as a trusted partner in the exploration of open education feasibility.

Membership in the CCCOER is free and non-binding.

#### **1-E Release the Lane OER Team work under a Creative Commons License**

The valuable research and work products of the Lane OER Team would be a valuable testimony to Lane's commitment to leadership in the innovation of classroom technologies and improved access to education.

By releasing the work and research of the Lane OER Team under a Creative Commons attribution license, Lane will begin to establish itself as a leader in the adoption and development of OERs in Oregon. By opening the team's collected work and information, the college will have a unique opportunity to guide other community colleges and institutions of higher education toward the development of their own OER programs, and quite possibly, enriching the value of OERs at Lane through increased inter-institutional involvement.

## **2 - DEVELOPMENT**

These recommendations account for the various opportunities, resources, and other tools which could be created, distributed, and promoted among Lane faculty and students. Increasing empowerment, professional development, and competency with OERs is the underlying goal of this section.

#### **2-A Create OER training and educational materials for Lane faculty**

The Lane OER Team recently submitted a proposal to the Lane Integrated Learning Center's Research and Development program to invest in the creation of quality OER educational and training materials for Lane faculty. With the valuable research that has been recently conducted by the Lane OER Team, a variety of guides, manuals, frequently asked questions, step-by-step checklists, videos, and audio materials can be produced and distributed in order to meet this goal.

After hosting discussion groups and informational sessions at Lane, it was found that many Lane faculty members don't have a high awareness of the potential benefit and availability of OERs. Many faculty members support the movement and have taken

measures in their courses to reduce costs to students through the open and free release of course packets, utilization of previous course text editions and supplements, and textbook sharing or otherwise free distribution of course materials.

## **2-B Create a faculty OER fellowship to increase faculty incentive**

A separate but related proposal forwarded by the Associated Students of Lane Community College (ASLCC) seeks to address some issues related to providing incentives and opportunities for faculty members to develop, adopt, and publish OERs. The process of finding OER modules, collecting the resources into a full course, and modifying materials to suit specific, individual course needs can be arduous. ASLCC seeks to alleviate some of the organizational, methodological, and financial burdens associated with the adoption and development of high-quality course materials.

This proposal will create the **Lane Community College Open Education Excellence Fellows Program**. This program will perform the following essential tasks:

- Train and empower Lane faculty in the use of OERs
- Provide monetary grants and faculty leave time to develop OER curriculum
- Closely guide faculty fellows by working through issues frequently encountered in the OER adoption process and offering support
- Create a valuable network among faculty fellows
- Develop tangible and course-ready OERs for Lane upon the completion of the program
- Maximize faculty expertise and financial resources with OERs at Lane
- Encourage mentorship of instructors who are beginning their exploration into the use of OERs

ASLCC will invest \$150,000 with the goal of increasing the incentive for faculty members at Lane to publish and maintain OERs for their courses. Also, this project serves to provide insightful research into the incentives surrounding OER development with instructors and subject matter experts.

## **2-C Implement FlatWorld Knowledge textbooks in 1-3 courses for fall 2010**

One of the primary goals of the Lane OER Team was to identify open educational resources that could be implemented at Lane within 6 months. After searching the variety of providers, primary OER sources and repositories, FlatWorld Knowledge is recommended as an immediate pilot implementation of OERs at Lane.

Due to the modular format of most OERs, it would take considerable resources and investment to promote, engage, and gain commitment from faculty in implementing OERs as participating faculty members would need to investigate available modular OERs with little direction and no clear road map. Courses would have to be pieced together from multiple open modules and course teaching plans would be required to be redesigned to outfit OERs into instructors' personal teaching styles and content interests.

An immediate, effective, and efficient pilot program with little required design effort is desired to begin tracking the benefits, interest, and opportunities afforded by open educational resources at Lane. Most complete, open-licensed textbooks available on the Internet have little or no editorial or quality review process associated with them. As Lane seeks to provide the highest-quality course materials, it would take considerable time for faculty to review resources for implementation, even if they are complete texts.

FlatWorld Knowledge ([www.flatworldknowledge.com](http://www.flatworldknowledge.com)) is a producer and primary source for quality complete text open educational resources. The company delivers content to students with costs ranging from free to no more than \$40. An author's work undergoes a complete editorial and peer revision process, promoting high quality with all materials associated with the FlatWorld brand – a trait rarely found so strongly in other OER offerings.

Course content from FlatWorld is open to all faculty and students, released under a Creative Commons attribution license. This allows for faculty to customize texts and course materials based on their needs without worry about copyright infringement. To provide a sustainable model for its resources, FlatWorld Knowledge charges various fees for materials based on the delivery method including printed texts in black-and-white or color (costing below \$40), an online edition of texts (free), individual printable chapters (ranging from \$2-\$10), ePub (a standard format for e-readers), and other formats. In addition, FlatWorld's course materials include premium study guides, notes, and other valuable resources to students for an additional fee. These materials are not bundled with the core products and are available on-demand for students. For many courses offered by FlatWorld, instructor guides and supportive materials such as PowerPoint presentations and class notes are available.

It should be noted that FlatWorld has a limited offering of texts at this time as the company has just recently started. Current available texts most represent the business and management disciplines, however, according to recent company press releases, a variety of new offerings are planned in the near future in many new disciplines.

The resources provided by FlatWorld Knowledge offer an immediate implementation opportunity with little training and education required on the technical aspects and search time required for assembling a course.

The Lane OER Team has reached initial agreements with faculty to explore the use of FlatWorld Texts in fall 2010 courses:

Intro to Business
Principles of Management (business)

## **2-D    Augment the course packet process to include open access**

Course packets provide great potential in releasing course materials openly and freely to students. Course packets are collections of materials provided by instructors to the bookstore, often travelling through a long process before they are received by students. The open sourcing of course packets when appropriate can reduce the wasted time, physical resources, and frustration that the current convoluted production and distribution process of course packets provides. This can be accomplished on the Moodle system currently employed by Lane as well as the eduCommons software which is referenced in recommendation 2-C.

The packet publication process is frequently cited as being highly confusing, with students often purchasing the wrong packet which is not returnable after being opened. In addition, if supplies run short at the Titan Store, it could take many days for a student to receive a packet. During the production process, there are documented cases of previous and outdated editions, omitted pages, and altogether wrong packets being printed and packaged for students, with no opportunity for refund once opening.

Greater access, student affordability, and efficiency can be achieved through streamlining and redefining this publication and delivery process such as on the Moodle or eduCommons platforms (see recommendation 2-C). In addition, higher levels of control for faculty would be valuable to prevent inaccurate or unrelated materials from being distributed.

Interestingly, many course packets are already composed of open resources through public domain or attribution licenses. The Lane OER Team has already made agreements with faculty at Lane to move multiple course packets to electronic and open distribution methods. This course material transition is occurring presently. The further exploration into course packets will undoubtedly identify more instructors who would support this cause.

## **2-E Create a Leadership Institute for Student Leaders**

A separate, but related OER project proposal has been forwarded by a Lane faculty member in the business department who teaches a variety of leadership workshops at Lane using a curriculum developed under the creative commons attribution license. These leadership development and training course materials can be released as part of a larger leadership training and development institute.

This proposal provides an excellent opportunity to launch a unique open educational resource that could benefit many Lane students as well as the greater Lane County community and beyond. As leadership development is a valuable component to a college education, the open availability and official endorsement of a leadership training institute would affirm Lane's commitment to open educational resources as well as in the training of new leaders in Lane County.

This student leadership institute exemplifies the spirit and benefits of open education, reaching far beyond the immediate classroom and providing relevant and valuable training materials to both Lane students and the community.

## **2-F Explore the creation of an OER editorial or endorsement board**

Instructors seeking to implement OERs are left with little guidance as to the quality of an OER when searching materials, a function which traditional publishers help eliminate by providing editorial services and a critical peer review process.

Exploring the formation of a faculty-based OER editorial or endorsement board could review manuscripts and a variety of other educational materials and compare the product to an established set of quality criteria. If materials meet qualifications, the material could be branded with the editorial board's seal, assuring anyone who reviews the resource that it has met critical quality assurance criteria and principles, indicating readiness for classroom use.

Receiving an endorsement from would not remove ownership or copyright of the resource from the author. In addition, endorsement could allow the resource to be added to a broader index or library of previously board-approved materials for easy browsing and selection.

The open nature of OERs ensures that data is open and sharable, but the canonized or original version which was approved by the board could remain intact, ready for download as approved by the board. Derivative works should not be endorsed by the board and derivative works should not be able to use the board endorsement if the original work earned it.

## 3 – FURTHER EXPLORATION

After the Lane OER Team’s research and various conversations, certain issues became apparent which were of concern to stakeholder groups. This section outlines ideas and challenges which deserve further exploration and action, but are beyond the scope of this report to provide a substantive or authoritative recommendation.

### **3-A Allowing author retention of ownership when concerning OER publication**

The incentives in developing open educational resources are largely aimed toward self-gratification, professional development through contribution to one’s field of expertise, and personal beliefs toward open knowledge distribution. The publication of OERs has many positive benefits for students, faculty, and Lane alike, but overcoming some of the barriers which traditional commercial publications provide (namely financial) can be difficult.

One of the positive benefits of the open movement is the free use and distribution of knowledge. With the attribution license, owners are free to change and adapt their content as well as receive credit for their contributions when used by others. However, in order to encourage faculty members and subject-matter experts to continue their contribution to the field in noncommercial ways, additional incentives should be sought out.

It is recommended that Lane Community College explore the granting of ownership of materials which qualify under Open Educational Resources to the author of such materials, even if developed under allocated curriculum development or faculty work hours. Under this recommendation, authors would be required to release their work under a Creative Commons attribution license to retain ownership. This will ensure sharing and free use of the materials.

As the materials can be freely used regardless of who retains ownership, retention of the ownership license will afford the author an incentive to continue to contribute to their field of expertise and maintain their course materials. This is of great benefit to Lane students and the institution, as the materials grow in value and richness if the author maintains ownership over the curriculum.

### **3-B Releasing Lane Community College-owned curriculum as OERs**

Materials that would benefit the open education initiative and would not compromise the effectiveness, competitiveness, or ability of the college to provide a quality education could be released via a Creative Commons attribution license (CC-BY or other). This would open Lane’s knowledgebase to be commented upon and improved by interested parties, potentially improving the curriculum.

Specifically, this recommendation seeks to potentially release all identified Lane-owned curriculum and course materials to be delivered as open educational resources. There may be, however, other resources which could be beneficial being openly available.

### **3-C Adopting an equal weight policy**

The value of open educational resources must be equal to that of a traditional, commercial resource in order for faculty members and subject-matter experts to consider publishing course materials and other OERs in an open format.

The academic profession, particularly that at four-year and other research institutions, places great value on published research, teaching materials, and other resources which expand and benefit a particular field or subject. Typically, such materials are published under rigorous publication standards, long processes, and high barriers to entry, signifying the scientific or contributive value of the material if it endured such a process. The appeal of traditional publication through commercial means remains a high priority for instructors and professors in the academic world.

Lane Community College could hold OER publication at equal weight as traditional publication in the hiring and promotion process in order to encourage faculty members to actively develop OERs. The college should also develop a clear set of standards on the consideration of OERs in hiring, tenure, and promotion decisions. In addition, quality measures should be identified and measured when considering OERs, placing various promotion value on OERs based on their level of reviewed quality (e.g. peer revision, endorsements, recommendations).

By accepting OERs at equal weight to their traditional counterparts in all decisions where traditional publication can hold weight or provide advantage, Lane Community College will assume a leadership role in accepting the innovative use of OERs in academia. If even just a statement, equal publication weight at Lane can encourage other institutions which value traditional publication to follow suit, thereby increasing the interest in the creation of quality OERs worldwide.

# Conclusion

**Open educational resources** provide great potential in making college more accessible and affordable. Despite the challenges associated with the nascent open education movement, more educational materials become available daily. In a short time, the quality and richness of open educational resources could surpass that of traditional publications due to the ability for knowledge to be shared freely.

Lane Community College has a great opportunity to be pioneers in the open education movement. The evidence supporting the availability, quality, and usability of open educational resources justifies the investment in exploration as a member institution of the League for Innovation. As technology continues to transform education, colleges must anticipate changes in the systems which assist with the learning process. Open education is no exception. In order to remain competitive and innovative as a world-class learning institution, Lane Community College should explore, learn from, and promote these new technologies and methods.

Open education can empower students to be successful in today's knowledge-based economy. By fostering a culture of open knowledge access, sharing, and progress, Lane leads the way in providing the best learning tools and classroom experiences.

# Appendix I

## SUMMARY OF RECOMMENDATIONS

### 1 – INFRASTRUCTURE

- **1-A Create a web portal to access Lane OER resources and trainings**  
*Provide a common online storage and access location for all Lane-based OERs and OER training materials*
- **1-B Promote OER implementation through marketing and community relations**  
*A marketing and community relations campaign to gain student, faculty, and public support for Lane OER projects*
- **1-C Extend the Lane OER Team charter**  
*Continue the research and analysis work of the Lane OER Team*
- **1-D Join the Community College Consortium on Open Educational Resources**  
*Join a network of institutions and leaders in OER development*
- **1-E Release the Lane OER Team work under a Creative Commons License**  
*The work of the Lane OER Team could help other institutions understand the process Lane has utilized in implementing OERs*

### 2 – DEVELOPMENT

- **2-A Create OER training and educational materials for Lane faculty**  
*Produce valuable training and support materials to empower faculty to adopt OERs*
- **2-B Create a faculty OER fellowship to increase faculty incentive**  
*Create a faculty fellowship program to create a cohort of faculty OER developers and provide a cash award to assist with OER adoption*
- **2-C Implement FlatWorld Knowledge textbooks in 1-3 courses for fall 2010**  
*Implement full, peer-reviewed textbooks which can immediately realize return on investment and benefit*
- **2-D Augment the course packet process to include open access**  
*Develop a process for course packets at Lane to become open educational resources when appropriate*
- **2-E Create a Leadership Institute for Student Leaders**  
*Create a student leadership institute using an OER leadership curriculum*
- **2-F Explore the creation of an OER editorial or endorsement board**  
*Improve the quality of OERs by creating traditional editorial and peer revision functions for Lane faculty*

### 3 – FURTHER EXPLORATION

- **3-A Allowing author retention of ownership when concerning OER publication**  
*Allow creators of knowledge works to retain ownership when produced and made available as OERs, providing a valuable incentive to create*
- **3-B Releasing Lane Community College-owned curriculum as OERs**  
*Release appropriate Lane-owned curriculum and course materials as open source*
- **3-C Adopting an equal weight policy**  
*Hold OER development and publication at an equal weight to traditional publication for purposes of hiring, tenure, and promotion.*

# Appendix II

## BIBLIOGRAPHY AND SOURCES CONSULTED

### *Primary sources, searches, repositories, and indexes*

Academic Earth	<a href="http://academicearth.org/">http://academicearth.org/</a>
AMSER	<a href="http://amser.org/">http://amser.org/</a>
BioSciEdNet	<a href="http://www.biosciednet.org/portal/index.php">http://www.biosciednet.org/portal/index.php</a>
BookBoon	<a href="http://bookboon.com/us/textbooks">http://bookboon.com/us/textbooks</a>
ck-12	<a href="http://about.ck12.org/">http://about.ck12.org/</a>
Capilano University OpenCourseWare	<a href="http://ocw.capcollege.bc.ca/">http://ocw.capcollege.bc.ca/</a>
ChemEd DL	<a href="http://www.chemeddl.org/">http://www.chemeddl.org/</a>
Community College Open Textbook Collaborative	<a href="http://collegeopentextbooks.org/textbooks/textbooksbysubject.html">http://collegeopentextbooks.org/textbooks/textbooksbysubject.html</a>
ComPADRE	<a href="http://www.compadre.org/">http://www.compadre.org/</a>
Connexions	<a href="http://cnx.org/">http://cnx.org/</a>
CSERD	<a href="http://www.shodor.org/refdesk/">http://www.shodor.org/refdesk/</a>
Curriki	<a href="http://www.curriki.org/xwiki/bin/view/Main/WebHome">http://www.curriki.org/xwiki/bin/view/Main/WebHome</a>
Digital Marketplace	<a href="http://www.dmproject.org/">http://www.dmproject.org/</a>
DiscoverEd	<a href="http://discovered.creativecommons.org/search/">http://discovered.creativecommons.org/search/</a>
Engineering Pathway	<a href="http://www.engineeringpathway.com/ep/">http://www.engineeringpathway.com/ep/</a>
Ensemble Computing	<a href="http://www.computingportal.org/">http://www.computingportal.org/</a>
FlatWorld Knowledge	<a href="http://www.flatworldknowledge.com/">http://www.flatworldknowledge.com/</a>
FolkSemantic	<a href="http://www.folksemantic.com/">http://www.folksemantic.com/</a>
Forum Network Videos	<a href="http://forum-network.org/station/wgbh">http://forum-network.org/station/wgbh</a>
FREE – Free Resources for Educational Excellence	<a href="http://free.ed.gov/index.cfm">http://free.ed.gov/index.cfm</a>
Free Digital Textbook Initiative – CERN	<a href="http://www.clrn.org/fdti/">http://www.clrn.org/fdti/</a>
The Global Text Project	<a href="http://globaltext.terry.uga.edu/">http://globaltext.terry.uga.edu/</a>

GoldNodes – Excellent Webpages for Learning	<a href="http://www.learnodes.com/findability/findabilityAnimation.html">http://www.learnodes.com/findability/findabilityAnimation.html</a>
HippoCampus	<a href="http://www.hippocampus.org/">http://www.hippocampus.org/</a>
iMedPub Medical Resources	<a href="http://knol.google.com/k/medicine-healthcare#">http://knol.google.com/k/medicine-healthcare#</a>
Internet Archives’ Book Server	<a href="http://www.archive.org/bookserver">http://www.archive.org/bookserver</a>
Internet Archives’ Open Educational Resources	<a href="http://www.archive.org/details/education">http://www.archive.org/details/education</a>
iTunes U	<a href="http://www.apple.com/education/itunes-u/">http://www.apple.com/education/itunes-u/</a>
Math DL	<a href="http://mathdl.maa.org/mathDL/">http://mathdl.maa.org/mathDL/</a>
MatDL	<a href="http://matdl.org/repository/index.php">http://matdl.org/repository/index.php</a>
MERLOT	<a href="http://www.merlot.org/merlot/materials.htm">http://www.merlot.org/merlot/materials.htm</a>
MIT OpenCourseWare	<a href="http://ocw.mit.edu/OcwWeb/web/home/home/index.htm">http://ocw.mit.edu/OcwWeb/web/home/home/index.htm</a>
National Science Digital Library	<a href="http://nsdl.org/">http://nsdl.org/</a>
Notre Dame OpenCourseWare	<a href="http://ocw.nd.edu/">http://ocw.nd.edu/</a>
OCW Finder	<a href="http://www.ocwfinder.org/">http://www.ocwfinder.org/</a>
Open Courseware Consortium	<a href="http://www.ocwconsortium.org/">http://www.ocwconsortium.org/</a>
Open Learn – Learning Space (The Open University)	<a href="http://openlearn.open.ac.uk/course/index.php">http://openlearn.open.ac.uk/course/index.php</a>
Open Learning Initiative	<a href="http://oli.web.cmu.edu/openlearning/index.php">http://oli.web.cmu.edu/openlearning/index.php</a>
Open.Michigan	<a href="https://open.umich.edu/">https://open.umich.edu/</a>
Open Yale Courses	<a href="http://oyc.yale.edu/">http://oyc.yale.edu/</a>
The Orange Grove – Florida’s Digital Repository	<a href="http://www.theorangegrove.org/OGMain.asp">http://www.theorangegrove.org/OGMain.asp</a>
Smile Pathway	<a href="http://www.howtosmile.org/">http://www.howtosmile.org/</a>
SOFIA	<a href="http://sofia.fhda.edu/">http://sofia.fhda.edu/</a>
SOL*R	<a href="http://solr.bccampus.ca/cms2/">http://solr.bccampus.ca/cms2/</a>
Stanford Encyclopedia of Philosophy	<a href="http://plato.stanford.edu/">http://plato.stanford.edu/</a>
Student PIRGs Open Textbook Catalog	<a href="http://www.studentpirgs.org/open-textbooks/catalog">http://www.studentpirgs.org/open-textbooks/catalog</a>
Teaching With Data	<a href="http://www.qssdl.org/qssdl/welcome.action">http://www.qssdl.org/qssdl/welcome.action</a>
Teacher’s Domain	<a href="http://www.teachersdomain.org/">http://www.teachersdomain.org/</a>

Tokyo Institute of Technology	<a href="http://www.ocw.titech.ac.jp/index.php?lang=EN">http://www.ocw.titech.ac.jp/index.php?lang=EN</a>
Tufts University OpenCourseWare	<a href="http://ocw.tufts.edu/">http://ocw.tufts.edu/</a>
UMass Boston OpenCourseWare	<a href="http://www.ocw.umb.edu/">http://www.ocw.umb.edu/</a>
University of California System College Prep	<a href="http://www.ucopenaccess.org/">http://www.ucopenaccess.org/</a>
University System of Georgia SHARE	<a href="http://usgshare.org/logon.do">http://usgshare.org/logon.do</a>
Utah State University OpenCourseWare	<a href="http://ocw.usu.edu/">http://ocw.usu.edu/</a>
Wikibooks	<a href="http://en.wikibooks.org/wiki/Main_Page">http://en.wikibooks.org/wiki/Main_Page</a>
Wikieducator	<a href="http://wikieducator.org/Main_Page">http://wikieducator.org/Main_Page</a>
Wikiversity List of OERs (Hunter-Gatherer Project)	<a href="http://en.wikiversity.org/wiki/Hunter-gatherers_project">http://en.wikiversity.org/wiki/Hunter-gatherers_project</a>
YouTube Edu	<a href="http://www.youtube.com/edu">http://www.youtube.com/edu</a>

### **Organizations, Collaborations, Coalitions**

Access to Knowledge Initiative (BYU)	<a href="http://education.byu.edu/a2k/">http://education.byu.edu/a2k/</a>
The Bill and Melinda Gates Foundation (OpenEd)	<a href="http://www.gatesfoundation.org/postsecondaryeducation/Pages/default.aspx">http://www.gatesfoundation.org/postsecondaryeducation/Pages/default.aspx</a>
Community College Consortium on Open Educational Resources	<a href="http://www.oerconsortium.org/">http://www.oerconsortium.org/</a>
Institute for the Study of Knowledge Management in Education	<a href="http://www.iskme.org/">http://www.iskme.org/</a>
Intute (UK)	<a href="http://www.intute.ac.uk/">http://www.intute.ac.uk/</a>
IssueLab's OER Research	<a href="http://oer.issuelab.org/research">http://oer.issuelab.org/research</a>
Jorum (UK)	<a href="http://www.jorum.ac.uk/">http://www.jorum.ac.uk/</a>
OECD Centre for Educational Research and Innovation	<a href="http://www.oecd.org/edu/ceeri">http://www.oecd.org/edu/ceeri</a>
OER Commons	<a href="http://www.oercommons.org/">http://www.oercommons.org/</a>
Open Courseware Consortium	<a href="http://www.ocwconsortium.org/">http://www.ocwconsortium.org/</a>
Open Education Resource Center for California	<a href="http://grou.ps/oercenter">http://grou.ps/oercenter</a>
The Open University (UK)	<a href="http://openlearn.open.ac.uk/">http://openlearn.open.ac.uk/</a>

Students for Free Culture	<a href="http://freeculture.org/">http://freeculture.org/</a>
The Student PIRGs – Make Textbooks Affordable	<a href="http://www.studentpirgs.org/textbooks/">http://www.studentpirgs.org/textbooks/</a>
UNESCO Open Educational Resources	<a href="http://oerwiki.iiep-unesco.org/index.php?title=Main_Page">http://oerwiki.iiep-unesco.org/index.php?title=Main_Page</a>
Wikiversity	<a href="http://en.wikiversity.org/wiki/Wikiversity:Main_Page">http://en.wikiversity.org/wiki/Wikiversity:Main_Page</a>
The William and Flora Hewlett Foundation	<a href="http://www.hewlett.org/programs/education-program">http://www.hewlett.org/programs/education-program</a>
Zunia Knowledge Exchange	<a href="http://www.openeducation.zunia.org/">http://www.openeducation.zunia.org/</a>

### ***Blogs on OERs***

Abject Learning	<a href="http://blogs.ubc.ca/brian/">http://blogs.ubc.ca/brian/</a>
Andrew Rens' Blog	<a href="http://cyberlaw.stanford.edu/blog/andrew-rens">http://cyberlaw.stanford.edu/blog/andrew-rens</a>
Brave New World	<a href="http://bookseller-association.blogspot.com/">http://bookseller-association.blogspot.com/</a>
Community College Consortium for Open Educational Resources	<a href="http://oerconsortium.org/">http://oerconsortium.org/</a>
Connexions Blog	<a href="http://blog.cnx.org/">http://blog.cnx.org/</a>
Creative Commons – Commons News	<a href="http://creativecommons.org/">http://creativecommons.org/</a>
Disruptive Technology Library	<a href="http://dltj.org/">http://dltj.org/</a>
Jester	
Open Education News	<a href="http://openeducationnews.org/">http://openeducationnews.org/</a>
Open Thinking	<a href="http://educationaltechnology.ca/couros/">http://educationaltechnology.ca/couros/</a>
NIXTY	<a href="http://nixty.com/blog">http://nixty.com/blog</a>
WA Open Educational Resources	<a href="http://blog.oer.sbctc.edu/">http://blog.oer.sbctc.edu/</a>

### ***OERs on Twitter***

@Curriki	<a href="http://twitter.com/Curriki">http://twitter.com/Curriki</a>
@educ8ter	<a href="http://twitter.com/educ8ter">http://twitter.com/educ8ter</a>
@edustyle	<a href="http://twitter.com/edustyle">http://twitter.com/edustyle</a>
@flat_world	<a href="http://twitter.com/flat_world">http://twitter.com/flat_world</a>
@iskme	<a href="http://twitter.com/iskme">http://twitter.com/iskme</a>

@MITOCW	<a href="http://twitter.com/MITOCW">http://twitter.com/MITOCW</a>
@oer_center	<a href="http://twitter.com/oer_center">http://twitter.com/oer_center</a>
@OERCommons	<a href="http://twitter.com/OERCommons">http://twitter.com/OERCommons</a>
@onlinelearningu	<a href="http://twitter.com/onlinelearningu">http://twitter.com/onlinelearningu</a>
@openculture	<a href="http://twitter.com/openculture">http://twitter.com/openculture</a>
@openednews	<a href="http://twitter.com/openednews">http://twitter.com/openednews</a>

# Appendix III

## LANE OER TEAM MEMBERS

### TEAM LEADERSHIP

**James Manning**  
ASLCC President 2009-2010

**Jennifer Steele**  
Director, Lane Titan Store

**Jeremy Riel**  
Millennial Associates, LLC

### OTHER MEMBERSHIP

**Velda Arnaud**  
Faculty, Business

**Barbara Delansky**  
Director, Student Life &  
Leadership Development

**Brad Hinson**  
Division Dean of Academic  
Technology

**Tom Johnson**  
Project Coordinator, Printing  
and Graphics

**Meredeth Keene-Wilson**  
Faculty Technology Specialist  
Faculty, Art & Applied Design

**Sheri Kendall**  
Faculty, Health Professions

**Vicky Kirkpatrick**  
Faculty Technology Specialist  
Faculty, Mathematics

**Don McNair**  
Executive Dean; Academic  
Affairs Transfer

**Lynn Lodge**  
Staff, Disability Resources

**T.C. Osborn**  
ASLCC Representative

**Marika Pineda**  
Director, Library

**Katie Taylor**  
ASLCC Representative

**Kienan Wear**  
ASLCC Representative

For more information on the Lane OER Team and Lane's OER efforts, visit the project site at [www.bit.ly/laneoer](http://www.bit.ly/laneoer)

Many thanks to the various individuals and organizations who dedicated their time and knowledge to this project. The Lane OER Team is excited to see where we will go in the next couple years as OERs become an integral part of the learning experience in higher education!

This report and its recommendations were delivered to Sonya Christian, Vice-president of Academic and Student Affairs in May 2010. Reports of the ongoing progress of the Lane OER Team may be found at the project website, [www.lanec.edu/OASA/OpenEducation](http://www.lanec.edu/OASA/OpenEducation).

Millennial Associates LLC was retained to assist with the management, research, and staffing components of this project. This report was written and prepared by Jeremy Riel and Millennial Associates LLC under authority and commission of the Lane OER Team.