Open Access Learning Environments

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Abstract

Educational institutions are increasingly adopting “closed” learning environments that hide learning materials in password-protected areas. While this may be a logical solution to a range of problems, much is lost in this mode of course delivery. Although there are logical reasons for moving toward closed environments, we may be erring too far on the side of caution. Educators and administrators are encouraged to consider the advantages of alternative models that respect the need for privacy while opening learning opportunities to a wider population.

Many of today's online learning environments are private. This privacy is the consequence of institutional decisions that have resulted in the closing of learning environments to all but those who have officially enrolled in an institution or particular course. While many of these decisions are logical from an administrative standpoint, educators interested in making learning opportunities available to the masses may have a different perspective. While the Internet creates the opportunity to publish learning opportunities that are available to millions, at relatively low cost, educational institutions are increasingly responding to issues of privacy and intellectual property by hiding entire learning environments behind passwords.

The convergence of issues related to technology, course management systems, copyright, intellectual property, and privacy become apparent in an examination of online learning environments. Issues related to technology are at the forefront, often to the extent that we may forget the primary objective - teaching and learning. This may be a temporary memory lapse, as the rapid expansion of instructional technology has provided many opportunities for the construction of effective, learner centered, teaching and learning environments. This perspective may also change as educators gain additional experience with the full range of tools available for online learning. However, with the exception of an active group of “early adopters” (Jaffee, 1998:24), many who have been teaching online for several years, the majority of today's online educators use the course delivery system provided by the university. These course management systems have become the primary entry point into using technology for instruction (Morgan, 2003). These programs effectively resolve many challenges faced by early adopters, and the institutions in which they are employed, but over-reliance on these systems has the potential to stifle innovation – especially in settings in which educators are discouraged from experimenting with different models. As a result, many educators are just beginning to reflect on the impact of technology, and the variety of tools available, so their experiences may be limited. While these educators may agree with the philosophy of open access, they are just beginning to invest the time needed to develop a deeper understanding of options available for online learning.

Shulman (1999:12) writes that learning “is least useful when it is private and hidden; it is most powerful when it becomes public and communal. Learning flourishes when we take what we

think we know and offer it as community property among fellow learners so that it can be tested, examined, challenged, and improved before we internalize it." Other scholars have also argued that scholarly activities should be open to public scrutiny and public response (Boyer, 1990; Glasick, Huber & Maeoff, 1997; Richlin, 2001; Shulman, 2004; Trigwell and Shale, 2004). In their examination of the benefits of public learning, these scholars encourage us to look at learning as a process through which we take what we know (or think we know) and compare that to other realities and experiences before reintegrating this new knowledge. This process requires a public process.

Why Closed Learning Environments?

The emergence of the Internet as a tool for course delivery has altered the understanding and importance of privacy, copyright, intellectual property, and other factors important to students, faculty, and institutions. Although most educators are familiar with these issues, it may be time to reexamine these issues in light of these changes.

Privacy

Privacy concerns are responsible for many decisions that result in the closing of online learning environments. The "Family Educational Rights and Privacy Act of 1974," commonly referred to as FERPA, guides many decisions regarding student privacy in educational institutions. Although FERPA focused on privacy regarding personal records, institutional concerns about privacy regulations lead to caution about all student records. Course management systems provide a level of security intended to protect institutions and the records under their control. However, many course management systems have a tendency to lock ALL course activity, from student records to class discussions.

As we move toward greater adoption of web-based educational experiences, many of which rely on written assignments, privacy issues become more complex. Oral discussions that take place in a classroom are not "student records." Arguably, this exception would also apply to online discussion, but the written nature of online discussions facilitates the collection of permanent records, which raises privacy issues. Similarly, written essays submitted for campus-based courses are not "student records," although the grade written on the front of the essay may qualify. Online essays, possibly submitted in publicly available blogs or electronic student portfolios, may raise different privacy issues.

In addition to FERPA, the USA Patriot Act (2001) raises other privacy concerns. This act targets academic institutions by allowing the collection of educational records relevant to an authorized investigation or prosecution. Since the USA Patriot Act does not specifically abrogate an institution's duties under FERPA, educational institutions must balance traditional protections of privacy and recent requirements regarding participation in government investigations. This conflict is forcing institutions to take control of a wide range of activity as they attempt to comply with conflicting regulations. Again, institutions are likely to be cautious with any student records or communications, resulting in the closing of online learning environments.

As with many privacy issues, expectations are very important. Educators attempting to adopt open learning environments are encouraged to clearly specify the public nature of class activity, thereby notifying students that there is no expectation of privacy regarding activities that take place in public areas. Students should also be reminded to communicate personal information

through a less public forum. From a civil liberties standpoint, this may be preferable to a system that collects information through mechanisms that provide students with an expectation of privacy. Given the broad powers contained in the USA Patriot Act, students may erroneously assume that class activity that occurs in password protected learning environments is private. The open access model removes this potentially false expectation.

Property

Intellectual property and copyright issues also have the potential to result in the closing of online learning environments. Although many university materials are freely available, and institutions such as MIT have made a public commitment to expand availability, individual educators worry about copyright and property issues as they begin to adopt online learning environments. In particular, educators often express concerns about the "ownership" of online materials. Materials prepared by employees in the course of their employment generally belong to the employer. Although they historically have not sought ownership of academic writings, educational institutions have a right to claim these materials, unless the institution has specifically waived that right. Similarly, institutions may be able to legally claim course outlines, lectures, blogs, wikis, assignments, and all other course materials included with campus or distance courses. Respect for "academic freedom" generally prevents this practice, but the dynamics of "ownership" change with web-based materials. As such, a faculty member's decision to open course materials to public inspection is making a decision that may run counter to his or her employer's tacit claim of ownership.

In spite of a variety of concerns regarding ownership, course materials may have limited value. While we learn by examining the teaching practices of others (Huber and Hutchings, 2005), a skilled educator is unlikely to adopt an entire course prepared by someone with different teaching methods and/or perspectives regarding the relative importance of subjects included in a course. In addition, while these materials provide opportunities for learning, which has value in itself, the institution retains the power to grant credentials. When we examine intellectual property in this light, we may question the need for password protection and "ownership" of course outlines, lecture notes, and other course materials. Although a course outline is subject to copyright law, the protection granted to the creator is limited to the creativity of expression. Since the author cannot claim the facts or ideas presented, a copyright on course materials does not preclude another faculty member from creating materials used to teach the same subject matter (Garon, 2002). Educators have reason to be proud of their efforts, but there are only so many ways to arrange the materials typically included their courses. For example, the materials included in an "Introduction to Sociology" course may not vary much from one institution and educator to another. The arrangement of materials may be so unique that "ownership" is possible, but the materials contained within this unique arrangement remain freely available.

The educator's materials may have value to other educators, but again, skilled educators are unlikely to adopt an entire course as their own. Open access to the course materials of colleagues, within the institution and discipline, provides an opportunity to share experiences. The irony is that our efforts to hide materials from public view limit the potential to learn from each other. An analogy is the "open source" software movement, in which software code is freely shared in the hope that others will add to the code in ways that lead to rapid innovation. Open access educational environments allow educators to build on the ideas of others. For example, assuming the course outline of Soc 101 is very similar from one institution to another, why not accept the commonalities and look for creative ways to build on the experiences of other educators? These innovations, if freely shared, lead to an expansion of pedagogical knowledge and theory.

Faculty Skills

Another threat to open access is found when we look at the skills typically held by educators. Educators learn a limited set of skills that eventually become the basis for employment. We often question the fact that college professors are typically not required to take a “teaching” class. Instead, faculty members learn how to teach through their experiences in the classroom, either as students or educators. In spite of limitations, this model is somewhat effective. The majority of today's educators were not educated in an environment that included online discussion, blogs, web pages, and other learning tools. As a result, faculty often lack the skills needed to develop open access learning environments. Uncertainty, time demands, tenure issues, training, attitudes of senior faculty, and other factors may also serve as disincentives to the aspiring online educator.

While many educators are developing the content and structure of online courses, the complexity of online learning environments is likely to alter the role of faculty. As new tools are developed, much of this work will shift to “content experts” and “instructional designers.” While this change will enable faculty experts to focus on content and learning, rather than the development of learning environments, this shift has the potential to take educators “out of the loop.” If we accept the premise that educators are going to be relatively strong proponents of open access learning environments, the move toward wider input and loss of control may lead to an even greater tendency toward closed environments as educators are pushed to the perimeter as important decisions about course delivery are made by administrators, technical support staff, and others.

Corporate Publishing

The role of corporations, and the increasingly corporate educational environment, is another factor to consider as we examine the motivation behind the closing of online learning environments. Intellectual property laws, intended to promote innovation, now have the potential to stifle creativity (Lessig, 2002; 2004). Laws intended to protect profits gained from a perpetual claim on Mickey Mouse may be poorly suited for educational environments. The solution to this issue may involve modifications in copyright law so that “commercial” property is treated in different ways than “intellectual” property.

In addition to questions of copyright, corporate publishers face a rapidly changing environment in which they may lose control of content distribution (Willinsky, 2005). In some ways, new technology and associated publishing options have eliminated the need for corporate publishers. Thanks to new technology, coupled with innovative licensing agreements such as Creative Commons, we can easily publish materials online while retaining property rights. E-books, blogs, wikis, and other options function as “killer apps” when viewed through the eyes of a large corporate publishing empire. Christianson (1997) refers to “disruptive technologies” that are a threat to established business models due to reductions in costs, coupled with increases in performance and functionality. This concept is also active in Hedberg's (2006) suggestion that if our investment in online learning is to be recouped, we will need a paradigm shift to the employment of “disruptive pedagogies” that involve the use of strategies that exploit technology options in ways that enable student engagement, motivation and higher order thinking skills (Hedburg, 2006).

In response to threats posed by new technology, corporations are attempting to protect property

rights through a reliance on outdated legislation, often coupled with threats to customers. Corporate efforts to protect ownership rights have placed additional demands on educational institutions. External threats to institutional efforts to provide secure environments, including efforts to respond to hackers, spam, defacement, and other attempts to exploit security weaknesses, are increasing at a rate that makes this a very difficult job. Similarly, threats to copyright have increased to the extent that significant institutional resources may be expended as the result of the "deputization" of public educational institutions. In response to threats of legal action if they fail to protect corporate owned copyrights, public institutions are subsidizing corporate profits as they build processes intended to protect corporate ownership of intellectual materials. Ironically, much of this "property" has been created by academics employed by public institutions.

Why Open Access?

Each of the factors discussed above is active in decisions to close learning environments. The "all or none" model that prevents the sharing of even the most basic learning materials is a logical response by administrators who fear a variety of legal issues. Technical support people who are already overworked are also likely to adopt a path of least resistance. In response to this changing environment, educators seeking to alter the path toward closed learning environments will need to reassert themselves, through the process of faculty governance within their institutions (among other things). Given the benefits of open access, educators are encouraged to consider the implications of decisions that result in the closing of online learning environments.

Open access shares many of the ideas and philosophies that are active in the "open source" software movement. Open source software is rapidly created and altered through a process of widespread peer review. According to the Open Source Initiative website, "The basic idea behind open source is very simple: When programmers can read, redistribute, and modify the source code for a piece of software, the software evolves." Similarly, open access learning environments have the potential for rapid innovation and improvement through peer review. In order to be defined as "scholarship," a learning environment should be open to public scrutiny. Shulman (1998:5) offers the following definition of scholarship:

For an activity to be designated as scholarship, it should manifest at least three key characteristics: It should be public, susceptible to critical review and evaluation, and accessible for exchange and use by other members of one's scholarly community. We thus observe, with respect to all forms of scholarship, that they are acts of the mind or spirit that have been made public in some manner, have been subjected to peer review by members of one's intellectual or professional community, and can be cited, refuted, built upon, and shared among members of that community. Scholarship properly communicated and critiqued serves as the building block for knowledge growth in a field.

In a process of innovation through sharing and review, coupled with an effort to embrace the scholarship of teaching and learning, open access online learning environments can be adopted and altered by other educators. Ideally, these altered environments are shared with others, and the cycle of improvement continues. This brings up a second key to the overlapping philosophies of open source and open access. Those who espouse open information question the right to "own" ideas. Property rights have been the foundation for many innovations, but property rights have always been limited. This tenuous balance has been the subject of debate and recent events and legislation have jeopardized this balance to the extent that ownership has extended to "ideas" rather than simple property (Lessig, 2002; 2004).

Open access also applies to a variety of efforts intended to release the hold corporate publishers have on the dissemination of scholarly research. Willinsky (2005) reminds us that a commitment to scholarly work includes a responsibility to circulate that work as widely as possible. This responsibility includes the investigation of new publishing technologies, and different economic models, directed toward improve access to scholarly work. Willinsky argues that open access publishing models provide a wide range of benefits for all educators, from researchers working at research universities, to the teacher struggling to find resources in an impoverished high school. While much of the open access debate focuses on new forms of publishing, this issue is active throughout the range of "scholarship," as defined by Boyer (1990). As we know, policies related to faculty rewards typically offer a premium to those who add to the body of knowledge through publication. While this philosophy has been less active in relation to teaching than in other areas of scholarship, open access learning environments have the potential to offer the opportunity to develop peer review opportunities for teach and learning. Boyer and others have provided a strong theoretical basis for different conceptualizations of scholarship. Open access learning environments provide an opportunity to put these theories in action.

Building Open Access Learning Environments

In spite of the work involved in such efforts, educators seeking to build open access environments often adopt a "do it yourself" mentality that allows them to regain control over online learning environments. While this effort is often undertaken by the small percentage of faculty who are typical of Jaffee's (1998) early adopters, the process can be as simple as placing a course outline online or encouraging students to create publicly accessible websites or blogs. Other educators have taken the process much further, but given the incremental nature of such change, educators can experiment with options as they increase the percentage of open to closed content.

The rapid and continuing evolution of open access learning tools provides educators with the freedom to actively separate technology considerations from more important issues regarding pedagogy. The first step in the development of any learning environment is to make choices regarding student learning. This is just as important when choosing online learning environments. In effect, decisions about pedagogy are made before selecting the technology required for course delivery. The next step is to select appropriate tools for content delivery, discussion, the exchange of assignments and grades, the integration of shared learning objects, and any other features to be included in the environment.

A pedagogy-based open access learning environment will typically require a combination of public and private areas. The exchange of grades and other sensitive information must occur in private areas. Discussion and journals may be placed in publicly accessible areas in an effort to encourage interaction with a variety of individuals, possibly including learners at other institutions or from the general public. Drop boxes, or other options for the submission of assignments, can be placed in public or private spaces, depending on pedagogy-related decisions made by educators. Again, the guiding force is pedagogy rather than technological convenience.

Publicly accessible websites become the foundation for most open access learning environments. Even if the learning site is limited to an interactive course outline, the educator has made a decision about access. While many educators do not have the expertise needed to build a website, the tools needed to complete this process, and reductions in the number of steps required, are removing this obstacle. The rapid development of open source tools including bulletin boards, open source courseware, blogs, wikis, portals, and content management systems has resulted in

many options for educators seeking to open learning environments to all learners. While it is clear that course management systems will become more important in the future (Harrington, Staff, and Wright, 2006), corporate courseware providers may have fallen into the "disruptive technology" trap described by Christensen (1997), in which corporations fail to capitalize on potential efficiencies, cost-savings, or new marketing opportunities created by new technologies. While t here are signs that commercial courseware providers are beginning to incorporate of many of these tools, the potential is limited when these tools are placed in closed environments.

Open source options have evolved to the point where open access alternatives are often superior to commercial courseware. For example, online discussion boards are powerful, stable, easy to install, and highly modifiable. The same can be said for wiki and blogging programs, each of which is expanding into educational settings as educators discover the potential of these learning tools (Embrey, 2002; Ferdig and Trammel, 2004). These programs can be used for easy web publication of online journals, newsletters, and other forms of publication. As such, these programs are an increasingly powerful tool for student journals, class lectures, multimedia presentations, and the sharing of other digital content. Unfortunately, this ease of use may lead to conflicts between faculty and technical support. University policies often cite security concerns as they restrict the use of cgi and php scripts that are the foundation for many of these open source programs. These programs may also require mySQL or another database program that may not be available on campus servers. If university policy restricts the use of these programs, one response is to host these tools on an off-campus server. Outsourcing of these projects is a minor inconvenience and is likely to provide benefits in terms of reduced cost and greatly improved customer support, but again, this may conflict with university policies that favor centralized control.

In addition to security concerns, technical support staff is likely to make a "slippery slope" argument. In effect, they ask, "what if everyone does this?" It is clear that technical support departments are coping with an increasing set of demands. However, since these open source tools are currently being installed by those with low levels of technical skill, and demonstrate high levels of stability on many platforms, there is reason to question whether these programs would lead to increased demands on support staff. In fact, faculty members using open access solutions often become their own technical support staff, thereby reducing demands on university support systems. Finally, if university support staff is devoting large amounts of time in support of commercial courseware, or have skill sets that prevent innovation, they may have also fallen into the "disruptive technology" trap.

Conclusion

Note that a faculty member wrote this article. The ideas expressed within this paper may be dismissed as naïve and idealistic when viewed through the eyes of technical support staff, administrators, and fellow educators. However, these ideas are firmly rooted in a belief that educators have a responsibility to educate, and that "education" should be available to all. Although it is beyond the scope of this paper to describe specific experiences, the author and many others with limited technological expertise have successfully installed and adopted many of the course tools mentioned in this article.

The range of tools available for the development of open access learning environments has never been larger. The selection of tools will continue to increase as development proceeds at a rapid pace. Commercial options will surely evolve, but are currently in a "catch-up" mode. Even if these providers are able to offer robust learning environments, there is no indication that these

environments are moving toward a more inclusive open access model. Although these tools provide comfort, and a certain degree of flexibility when planning a course, the limitations of currently available courseware should not prevent caring educators from building learning environments that function best for a particular subject matter, the skills of the students, and the motivations of the educator.

In addition to the efforts of individual educators, institutions can make a variety of policy choices that encourage open access. These policies have advantages beyond the adoption of appropriate pedagogy in individual courses. For example, a public repository of course outlines would make it easier for students to make informed decisions about courses. Institutions seeking to broaden their reach through the adoption of open access models may also need to effectively encourage corporate providers to consider pedagogy. Rather than focusing on pedagogy, corporate courseware providers often adopt a "lowest common denominator" stance as they strive for an environment that is easily accessible to the majority of educators, many of whom are relatively inexperienced in relation to online pedagogy. Knowing that many educators are moving to online education with little experience, these platforms attempt to replicate a traditional classroom – with tools traditional educators understand. These environments are designed to make it relatively easy to begin developing skills as an online educator. As a result, these programs are the beginning, rather than the end. As educators and administrators gain experience, and learn more about the benefits of open access models and the pedagogies associated with new forms of teaching and learning, many begin to strain under the constraints of commercial courseware.

Although there are many barriers to the adoption of open access models, each of us has the potential to take small steps toward open access. Educators committed to the concept of open access learning may also have to identify, or create, a network of educators with similar perspectives. These collaborations may cross traditional boundaries as educators work with colleagues in other disciplines and institutions. Such collaborations, rooted in a different philosophy about learning, have the potential to create linkages between universities, secondary schools, professional groups, and others seeking to provide a wide range of educational experiences.

Much of this change may come from internal pressure offered by skilled online educators. Beaudoin (2002:39) encourages d istance educators to "no longer see themselves as protectors and survivors of isolated programs for which they have labored mightily, but rather as valued strategic partners who can enable the larger institution, often long seen as the enemy, to catch up with them and emulate their practices and successes." This struggle can occur from within the institution as committed educators begin to envision new ways to create learning environments. Given the rapid growth of online learning, we may soon reach a critical mass of educators committed to the focus on pedagogy rather than efficiency and convenience.

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