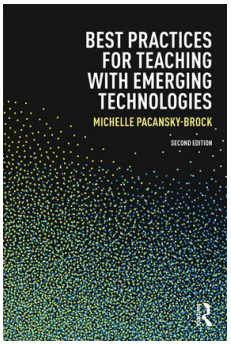

Best Practices for Teaching with Emerging Technologies

Second Edition

by Michelle Pacansky-Brock

Chapter 6: Unlocking Learning

"The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn." – Alvin Toffler

The pages of this book have demonstrated the potential emerging technologies hold for making student learning more active, relevant, and engaging. The technologies that have been featured in this book enable opportunities for developing online content that is visually appealing and rich with human presence, as well as connecting individuals across distances in conversations, reflections, and professional learning networks. If you are a faculty who has always taught with the traditional toolkit used in higher education – a textbook from an academic publisher and a learning management system (LMS) -- you may view these tools as pathways to unlocking your students' learning and connecting with them in new ways.

This has certainly been my own pathway into teaching with emerging technologies. When I started teaching online in an LMS, I was disappointed in the quality of the learning environment I had developed for my students and felt constrained by features available to me. By experimenting with new tools, I discovered different ways of engaging my students and opportunities for being present in their learning. But I still felt the *need* to use an LMS, largely due to concerns about violating the license for the images included in the textbook I was using,

as well as my (former) institution's expectation for faculty to teach with institutionally supported technologies. I imagine many instructors can relate to that experience.

The LMS has become incredibly pervasive in higher education and its extensive use may be contributing to a gap between the skills college graduates *need* and the skills they *have*. When students graduate from college, they are expected to demonstrate to prospective employers how their skills set themselves apart from others. Doing this requires individuals to have a digital identity, which involves, first, being familiar with one's personal strengths and passions and creating digital media to communicate them to a public audience. Creating one's digital identity also requires knowledge of how the web works. Yet, few four-year degree patterns bundle these skills within a degree program.

At the time of writing, the increased adoption of web-based technologies in higher education is making an impact on the LMS marketplace. Early adopter faculty who teach with an LMS and use web-based tools have struggled with finding a way to integrate these technologies seamlessly into their students' learning experiences. As Phil Hill, consultant and industry analyst, explains, "…the LMS does a very poor job at providing a lot of learning technologies desired by faculty and students. There is no way that a monolithic LMS can keep up with the market – it cannot match functionality of open internet tools."[1] Hill goes on to explain how LMS vendors attempted to replicate the functionality of web-based technologies most desired by faculty and students by creating imitations of these tools and including them inside the LMS. This approach was necessary to sustain the traditional model of the LMS, which has functioned very much like a "walled garden."[2]

But this approach didn't work well, resulting in what Hill calls "feature bloat." Alternatively, LMSs are now embracing interoperability as a key feature, which simply means

providing more effective ways to integrate external tools. Learning Tools Interoperability (LTI), is an industry standard developed by IMS Global Learning Consortium, which enables a secure exchange of information between an external tool provider and the LMS. With LTI, an LMS plays nicely with outside tools: assignments that use external tools can be configured from within the LMS, assignments can be assessed from the LMS gradebook; and single-sign-on can be integrated too, eliminating the requirement for faculty and students to have multiple accounts. These plug-and-play features are referred to as interoperability in educational technology lingo. In short, LTI is paving a way for the LMS to co-exist with web-based technologies. Inserting windows and doors into the walls of the LMS is now an option.

The LMS marketplace is changing, but, nonetheless, the pervasive use of LMSs in higher education has generated a monolithic mindset about how to teach online and blended classes. There are alternatives. In this chapter, we will investigate some of these alternative practices that support the development of digital literacy and digital identity in students *and faculty*. Faculty who have always taught in an LMS have not been immersed in the inner workings of the web and this is a problem. Faculty must possess particular skills before they can begin to model them and foster them in their students. But the reality is that teaching in the public web is a fragile topic. When a faculty member makes the leap to subvert tradition and teach outside an LMS, she is likely to receive a cold response from colleagues. While writing this book, for example, I connected with a university professor who was told by a peer to stop having her students use Twitter in her online classes, as it was just "too much" for them. This individual, who preferred to remain anonymous, is a part-time instructor vying for a full-time position. As a result, she elected to scale back her use of social media in her classes, despite believing that using social technologies can improve students' digital literacy and help them to construct a digital identity.

This chapter will provide an introduction to some alternatives to the traditional toolkit. It is my hope that this chapter will encourage a new way of thinking about the technologies employed in teaching and learning and, possibly, start conversations on campus about whether or not the students who graduate from your campus this year will be prepared for a meaningful, productive future.

In the pages that follow, we will delve into the fringes of higher education, where there are communities of professors, instructional designers, educational technologists, administrators, and students exploring the implications of what it means for college students learn in their own public web space (or domain) and leverage open educational resources (OERs) in place of commercial textbooks.

Rethinking the LMS

The higher education LMS market began to develop after access to the web became widely available. An LMS, also referred to as a Course Management System (CMS) and a Virtual Learning Environment (VLE) in the U.K., was conceived to be a centralized, web-based location for instructors to organize content and share it with their students beyond the walls of a classroom. In many ways, an LMS is a digital version of a classroom – a place to present information information and resources, communicate to students, and enable student-student interactions (discussion forums, blogs, and wikis). Much like the walls of a classroom, an LMS segregates content and conversations inside a secure space, dislocating learning from the public web. If one of the purposes of college is preparing students for success in the real world – which is profoundly different from the world that most faculty entered after graduation -- we must

ponder if requiring faculty to teach in an LMS is what's truly best for our students. What alternatives are there?

Once upon a time, college instructors who were interested in enhancing their students' learning with web-based technologies did not have access to an LMS like Blackboard, Web CT, Moodle, Sakai, or Desire2Learn. For many of us, it may seem difficult to wrap our minds around what this experience must have been like. After all, in 2003, just six years after the higher education LMS market was established, more than 90% of higher education institutions had adopted an LMS.[3] Jim Groom, an educator, educational technologist, and entrepreneur who will be referenced multiple times in this chapter, views the LMS as higher education's "solution to the web," which, in turn, undermines the potential for innovations in teaching and learning.[4] The web is a messy, interconnected hub that disseminates knowledge contributed by individuals from around the world. In many ways, it seems like the democratic nature of the web should be received as a dream come true for an educator. But the untamed nature of web-based interactions stands in sharp contrast to the structured type of learning that occurs in an LMS.

In contrast, many educators value the LMS for bringing consistency to the student learning experience. Some feel that the LMS is an essential tool for enabling copyrighted content to be re-used for academic purposes and made viewable only to registered students. Another argument for the LMS is that it protects student information that may otherwise violate federal student privacy laws (FERPA). In short, the LMS is a technology deeply informed by the call for accountability in higher education.

Other educators, however, are critical of efforts to manage learning. After all, learning is, by nature, a complex process. It is social, involves emotions, and evolves over time in a rhythm that is unique to each person. Jennifer Ross and Amy Collier see emerging technologies as an

opportunity to explore the messiness of learning, and are critical of technologies that aim to simplify its natural unruliness. Ross and Collier note, "Working with mess in an age of accountability means acknowledging that learners, too, have complex identities and are embodied in various ways."[5] Collier and Ross explicitly take note of the tendency for educational technology companies to tout how their products help instructors save time, be more efficient, capture data to unveil trends, etc. Similarly, when an instructor is provided an empty course shell to design a course and teach students, that environment is regulated by a set of rules -- things that an instructor can and cannot do – which sets rules for students, as well.

In an LMS, the rigidity of the technology determines *who* your students can interact with, *how* they may express themselves, and *what* content they may engage with. For example, when I use Blackboard, I can choose to use folders or the learning modules feature to arrange the content with which I want my students to engage. I could choose to set up a link for my students that would take them outside an LMS into the public web. But when we are used to teaching in an LMS, we understand these moments as intrusions that need to be tamed (for example, embedding content in an LMS instead of linking out to content).

But what if these unwelcome intrusions are, instead, pathways to learning that offer students opportunities to foster skills necessary for succeeding in a digital society? What other types of content and dialogue might a student encounter upon clicking a link that takes her into the web? How might this impact her perception and understanding of the course topics? What choices might she need to make about where she clicks, who she interacts with and what she chooses to share? Are these scenarios to be avoided or are they opportunities for students to learn how to foster relevant life skills?

Embracing the Potential of Messiness

Laura Gibbs, an online instructor at the University of Oklahoma, embraces the messiness of the public web to create relevant learning experiences that foster her students' creativity and critical thinking skills. Gibbs teaches two online classes, Mythology and Folklore and Indian Epics. Her institution has used the LMS, Desire2Learn (D2L), for more than ten years and, at the time of writing, is in the process of transitioning their campus LMS to Canvas. But, unlike most faculty at her institution, Gibbs does not teach her classes in an LMS. She explains, "I have no use for an LMS, aside from using it to communicate grades to my students. If I have my students do something, I want it to be really useful to them and to others, but if you put a class in an LMS, it's not useful to anyone."

To Gibbs, an LMS is like a "locked filing cabinet" -- it is good at providing a place for instructors to store confidential information, like grades, for students. Aside from that, she has no use for an LMS in the design of her classes. Gibbs started teaching traditional, face-to-face classes in 1999. She reflects, "Back then we didn't have Blackboard or any LMS at all at my institution. Instead, we had a funky, homegrown photo roster of students and a links board. That was all faculty had." At this time, Laura was already tinkering with the possibilities of enhancing her students' learning with the web. She reflects, "Even before I taught online, the web was an essential part of every class." Her institution provided faculty and students with 3MB of web space – which wouldn't be enough to do anything meaningful with these days, but back then it was enough to host a site! In 2002, when she started teaching online, she kept building upon the blended learning strategies she had in place.

In the design of her course, she uses a combination of blogs, wikis, Google docs, Twitter, Diigo, Pinterest, and YouTube to share content with her students, and pulls it all together in a

single website at MythFolklore.net/. From there, students may click out to supporting sites for their particular class, which include a class announcements site, online syllabi, open educational resources (see later in this chapter), blogs from current students, samples of former student work, reflections from past students, and more.

So in what way does Gibbs use an LMS then? At the time of writing, Gibbs is using Canvas, her institution's newly adopted LMS, to provide a simple, clear framework for her students. Unlike other LMSs, Canvas gives instructors the option to make the content within a course fully public (if the course includes student contributions and grades, these items remain secure and visible only to those enrolled in the course after they authenticate into Canvas). If you'd like to see the framework of her courses in Canvas, go to: Myth.MythFolklore.net and India.MythFolklore.net. These links take you (and her students) directly to the course announcements page.

I visited Laura's course page as the semester was unfolding. When I clicked on the link, Canvas opened without a prompt to log-in. I was greeted with a friendly written welcome announcement and much more! On the course homepage (where her blog is embedded), there is some content that changes. This dynamic content is comprised of content feeds that stream in from various external sites. One feed shows Tweets sent by Laura via the course Twitter account, as well as Tweets by students that Laura has Retweeted (see Figure 6.1). There is also a motivational image (or meme) that changes each time the page loads. Laura used the tool RotateContent.com to add the rotating images feature (by the way, this tool was created by one of Laura's former students). The image that appears relays an inspirational message that relates to Carol Dweck's growth-mindset. At the time of writing, I was presented with an image of two Siamese kittens playing with toilet paper rolls that read, "We do things better…together."

Students who click on the "more info" link near the cat image are taken to the growth mindset blog, which includes a collection of fun and inspirational messages, as well as challenges that encourage students to conceive of learning as a lifelong journey that you are in control of, as opposed to something some people are good or bad at.

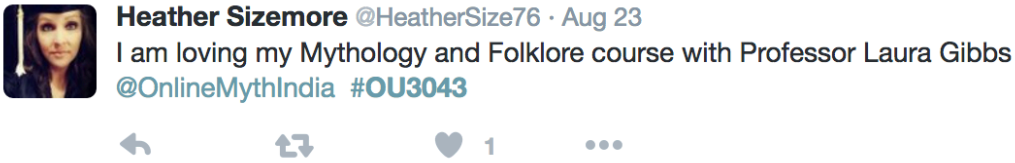

Figure 6.1 Tweet sent from one of Laura Gibbs' students containing the course hashtag. Printed with permission from Heather Sizemore.

At the end of Gibbs' first course announcement, students are offered the chance to view a video embedded from YouTube of Mr. Rogers reminding us all, "You can grow ideas in the garden of your mind. It's good to be curious about many things." That video represents Gibbs' teaching philosophy, views of education, and the technologies she chooses to use in her teaching. In Gibb's class, open-ended assignments put students in the position of making choices, which promotes problem-solving and creativity skills.

Each week, Gibbs' students read fables, fairy tales, and other traditional stories by clicking on links to websites. Students create their own blog on which they make several posts each week: they share their reading notes, a story that they have written based on the reading, along with other research and reflection posts. In the weekly storytelling post, students step into the role of storyteller by choosing one story from the course materials and in their own writing, tell the story through a unique lens. For example, a student may tell a story through the

perspective of a minor character, requiring students to engage deeply with the narrative, analyze the characteristics of other characters, and create a unique twist on an old fable.

You may be asking, however, "Why can't this be done in an LMS?" Well, some of it could be done in an LMS, but it would change the student experience immensely. Gibbs explains, "I want the students to be able to share not just with each other, but also with their friends and families. They frequently report doing this and I can tell they are happy and proud about doing so. Also, students enrolled in my two separate classes interact with each other, which would not be possible if the course was taught in a traditional LMS, as the classes would be walled off from one another. Students are also very aware that future students will read their work since I rely heavily on past student work as part of the course content."

In short, the activities that Gibbs' students participate in are not *disposable* like nearly all their other course work is and has been prior to college. Robin DeRosa, Professor and Director of Interdisciplinary Studies at Plymouth State University who also teaches in the public web, shared via Twitter, "My class could remember only one 'non-disposable' assignment from high school: a teacher kept one student's project as a 'bad example' for future students." A non-disposable assignment, in our context, is work a student produces that has a life beyond the end of the class. Every year when the school year ends, my own children come home, empty the contents of their back pack onto the floor and there it sits – until I throw it away. When faculty design classes in a secure LMS, they are dislocating themselves from the immense possibilities that the web holds for designing meaningful activities that result in work students can share and be proud of.

Beyond increasing motivation through non-disposable assignments, participating in the public web immerses individuals in the process of navigating today's digital landscape. Creating

and sharing content and responding to comments online is how one learns to become digitally literate and master digital citizenship skills. When I was young, I remember sitting in a classroom listening to a presentation about how to be safe in public places. I was informed about the risks of speaking to strangers and taught how to identify safe places in my community where I could turn for help. However, none of that information would have been useful to me if I didn't have the opportunity to walk through my neighborhood, go to the park, or hang out at the mall with my friends.

Similarly, some of the most powerful learning experiences I had in college involved leaving my classroom and applying what I was learning to my surroundings. For example, as an undergraduate in a beginning drawing class, I remember listening to a lecture about linear perspective, which is a formula that artists have used since the 15th century to represent the illusion of three dimensional space on two-dimensional surface (paper, canvas, etc.). I remember sitting inside the Student Union with my drawing board on my lap, analyzing the lines along the top and bottom of the hallway that extended in front of me. I remember identifying where the "vanishing point" and "orthogonals" were in my own surroundings and replicating them on my paper. As I developed my drawing, I began to understand the concept of linear perspective at a deep level and I also viewed paintings in my art history class entirely differently. The point here is that taking students outside the walls of a classroom has always been a powerful teaching practice.

As Gibbs' class unfolds, students spend the first week completing an orientation of sorts, that functions like a living syllabus. That is, instead of reading what the course will consist of, they do it. And by the end of the week, students are in full swing. To get started, students view a clear, organized outline that details what they need to do each day of the week. But this

structured outline is packed with choices, requiring students to make decisions about their own learning from the outset. For example, on Tuesday, students are assigned to "design your course," "create your blog," and make a first post on the blog that describes "a favorite place." The heart of her class for students is the Story Book project, which involves creating a website that showcases a collection of stories, written by the student-author, that are aligned with a particular theme. Students may also opt to create a portfolio project instead, which is a series of their best stories written during the class, improved through many revisions. To view a large collection of story books from Laura's past students, go to this link: StoryBooks.MythFolklore.net

As I engaged with Gibbs' course workflow and projects, I began to understand that her course design intentionally immerses her students in an organized mess to guide them into the driver's seat of their own learning. She has developed a framework for students that presents them with a buffet of topics, themes, and projects from which they piece together their learning plan for the class. As students embark on their own learning design, they learn about myths, fables, epics; hone their writing skills; and also develop digital literacy.

As I ponder Laura Gibbs' class, I am impressed with the time and commitment she dedicates to her online classes. She is incredibly present in her students' learning (which is a hallmark of any great online learning experience) and all of us can see this presence, given her option to teach in the public web. I am also pulled into a reflection about the digital citizenship skills fostered through Laura's course. Students are learning how to appropriately participate in online conversations, re-use content appropriately, design and create a website, as well as create a blog. Beyond all of the "how to's," however, they learn how it feels to make contributions to the web. As Gibbs explains, "My goal is for my students to re-vision the impersonal vastness of

the Internet into something they create and benefit from: their own learning network." These are not skills and experiences that most college students master in higher education. If college and university faculty were not given a shell in an LMS to teach each online class, perhaps they would likely, instead, be learning how to build and share content in the public, like Laura Gibbs, and modeling these skills to their students.

Developing Digital Identity, Digital Literacy, and Creativity Through a Domain of One's Own

Laura Gibbs' approach to course design is unique; however, she did not develop her approach independently. Several years after she started teaching online, Gibbs heard about an open online course about digital storytelling, called DS106, offered through University of Mary Washington. It wasn't just a typical course; however, it was a course that was taught in the public web and anyone could participate or follow along. Laura did not enroll; she lurked. Along with many others from around the world, she followed the class dialogue across blogs and Twitter and interacted with the course facilitators. By having the opportunity to slip right into this public course, Gibbs learned a great deal about how to design a student-centered learning experience that embraces the hyperlinked-nature of the web.

The story about how DS106 got started, loops back to 2007 when University of Mary Washington embarked upon the creation of an institutional blogging system that became known as UMW Blogs. Essentially, the project involved the creation of a WordPress Multisite, which allowed anyone at the institution to generate their own WordPress blog, which came along with a collection of themes and plugins provided by the institution. WordPress is an open source blogging platform that is used heavily in industry, as well as education, to provide a fairly

straightforward method of creating a website. Plugins for WordPress are developed by the user community and offer an endless array of options for customizing the look, feel, and functionality of a site. UMW students used WordPress to websites that served as literary journals, online exhibits, poetry publications, and interconnected spaces to converse with authors of the works they are reading.[6]

In 2011, UMW Blogs was an inspiration for a computer science class about digital storytelling, DS106 (#DS106), taught by Jim Groom and several other faculty at the same institution. DS106 is not a typical online class. In fact, it is, by nature, designed to encourage participants to question all things "typical." Consequently, unlike most classes about digital storytelling, this class does not define what storytelling is; instead, it is more of a postmodern deconstruction of the topic.

Students of DS106 engage in a self-directed journey that examines how the web works and how meaning is produced. Anyone may participate in DS106 with UMW students and participants are encouraged to engage with the parts of the course that interest them. The open nature of the course has attracted other institutions around the world teaching similar courses. The participant experience is comprised of layers – each person chooses their pathway, which is both fueled by the web and part of the web. To participate, one is expected to acquire (or already have) their own web space or domain. In their web space, participants create content independently on sites that are their own. Groom and his fellow course assistants used syndication as a method to curate the student content onto a main course portal (DS106.us/flow/). Syndication allows for portions of a web site's content to be made available to other websites through the use of feeds. To be clear, syndication merely provides a way of collecting and

presenting content, but the actual look/feel and functionality of the students' sites is driven entirely by student choice.

Standardization is avoided in DS106. In fact, students are encouraged to submit ideas for assignments to the DS106 Assignment Bank (Assignments.DS106.us/). Assignments are contributed and tagged by assignment type (visual, design, audio, video, web, mashup, etc.). And participants are invited to share feedback, ideas, and tutorials to each assignment page to improve the experience of future students. At the time of writing, the assignment bank contains about 1,000 assignments and 11,000 assignments have been submitted.[7]

After an assignment is added to the bank, class participants may rate its difficulty by assigning 1 to 5 stars. Then, for a particular course topic, participants are instructed to complete, for example, 10 stars of web assignments. This approach allows students to choose the assignments that are the most intriguing and relevant to them. For example, by clicking on "Web Assignments" from the Assignment Bank, students may choose from an array of options: To earn 4 stars, create a mindmap that visually communicates how things and entities are interconnected (contributed by Stephen Rechter); 3 stars for contributing a comment onto the page of a product on Amazon or eBay to understand how comments can function as mini-stories (contributed by Adam Levine); or for 4 stars, write a post that examines the motives that inspired a group to came together (contributed by Lesya Melnychenko). Upon completing an assignment, participants create a new post on their blog about the assignment and add tags to the post (provided on the assignment page), which ensure the posts are auto-populated into the course syndication feed. Participants also join in on the Daily Create project, each of which is designed to take 20 minutes or less. Each day, a new create prompt is posted (Daily.DS106.us), students respond (usually by writing a blog post, creating an image, recording a video), and share their

creation from Twitter with the designated hashtag (search for #tdc1692 on Twitter to view recent contributions).

DS106 demonstrates the potential of the web's messiness to provide endless opportunities for creative, collaborative, self-directed and learning. As Emily Strong, a former DS106 student shares, "Between daily creates and projects from the assignment bank, I am constantly creating things, and I find myself taking more creative approaches to everything else in my life, from approaching problems at work to noticing the interesting angles and textures of a room."[8] Yet, DS106 has also contributed to the professional development of other faculty, as well. It has served as an inspiration for countless educators to understand a way to teach *with* the web, as opposed to in an LMS, *against* the web. As Laura Gibbs notes, "Because DS106 was a public course, I was able to watch and learn from it along every step of my own online teaching journey." Unlocking learning is a key to promoting innovations in teaching and learning, as well as developing meaningful, relevant skills for students.

This concludes the CC-licensed version of this chapter excerpt. The complete, final chapter is copyrighted to Routledge and is only available by purchasing the book.

Notes

[1] Hill, P. (2014, Sept 15). LMS and open: The false binary is based on past, not future markets. E-Literate Blog. Retrieved on August 26, 2016 from http://mfeldstein.com/lms-open-false-binary-based-past-future-markets/.
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