

# Over, Under, or Through: Design Strategies to Supplement the LMS and Enhance Interaction in Online Writing Courses

Heidi Skurat Harris  
University of Arkansas at Little Rock  
haharris@ualr.edu

Michael Greer  
University of Arkansas at Little Rock  
msgreer@ualr.edu

## ABSTRACT

Online writing instruction is a process of design that includes both spatial and temporal dimensions. Ideally, this process brings together design and pedagogy to move students through their online writing work successfully. Institutionally mandated LMS platforms often constrain this process. This article establishes three design principles and concepts for designing learning environments that take into account both space and time as designed elements of online classes. Applying the principles of backward design, modular content, and student choice to course design can help instructors design more thoughtful, participatory classes centered on student learning and instructor presence.

## Categories and Subject Descriptors

H.0 Information Systems: General

## General Terms

Documentation, Design

## Keywords

Learning management systems (LMS), spatial design, temporal design, online writing instruction, backward design, modularity, student engagement

## INTRODUCTION

To teach writing online is to design an environment. A virtual classroom has both spatial and temporal dimensions that, ideally, reflect the philosophy of the class and assists students in meeting course learning outcomes. As a designed space, an online course bears some similarities to a face-to-face class. Students enter into and participate in a virtual space that shapes their work and interactions in a variety of ways. The arrangement of that space may support collaboration and dialogue, or it may be designed primarily to enable one-way communication and content delivery. As a designed experience that unfolds in time--usually over a semester or quarter--an online course can be seen in temporal terms as a choreographed sequence of events; rhythm and pacing are vital elements in online course design. This temporal dimension has, to date, not received as much attention as visual and spatial design in research in online course design. Ideally, the online writing class brings together spatial and temporal design with pedagogy to move students through their online writing work successfully.

The purpose of this article is to explore established effective practices for online writing instruction (OWI) and to use those practices to design effective online writing spaces both within and beyond institutionally mandated and supported learning management systems (specifically, Blackboard Learn 9.1, SP6, as of Fall 2016). In particular, we discuss how online writing faculty can work over, under, and through institutionally mandated LMS constraints to design more habitable learning spaces for our students. Our approach assumes that many instructors are, like ourselves, required to deliver courses using an institutional LMS like Blackboard.

Many instructors do not have the time or institutional support necessary to design and create their own course websites. In this context, design strategies that work in tandem with an existing LMS, as opposed to entirely outside of one, are both more practical and likely to be more effective. At the same time, many instructors are, like ourselves, aware of the structural and design constraints of LMS platforms, and are eager to design learning experiences that are more collaborative and student-centric than typically accounted

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page.

*Communication Design Quarterly*. ACM SIGDOC, New York, USA.

Copyright 2016 by the author.

for in content-delivery platforms like Blackboard. We propose three primary design principles for online courses that take into account both spatial and temporal dimensions of digital learning environments. We aim to leverage the tools we have (and to work against the grain of the tools given to us) to design more thoughtful, participatory classes centered on student learning and instructor presence.

## LITERATURE REVIEW

Technology—including large-scale commercial course management systems—is never neutral. Any digital platform designs and shapes spatial and temporal relations among users. In the case of the dominant LMS model, the design reinscribes the teacher-centered space of the traditional physical classroom. In other words, an LMS is not simply a tool for the delivery of content to students. The LMS design structures the way students engage with the instructor, the content, and each other.

Scholarly attention to issues of spatial design in online course design has been driven by a corresponding rise in multimodal and multimedia texts in the culture at large. In 2012, the editors of a *Kairos* special issue on Spatial Praxes contended that “our discipline has reached a critical stage in the development of pedagogical praxes as a result of the rapidly increasing media in which we teach and research” (Haley-Brown et al). In part, spatial rhetoric has reached this critical stage for historical reasons. More teachers are composing and designing online spaces, and more students are logging on to those spaces (see Allen & Seaman, 2015). At the same time, technological developments have made it possible for both teachers and students to compose, design, and deliver far more sophisticated, multimodal texts.

This literature review addresses four interrelated issues in the scholarly literature on online course design. We first review the relationships among design, power, and participation in online course design and delivery, where research helps to identify a historical shift taking place around 2010 with the emergence of “Web 2.0” technologies. Then we describe scholarship which argues that institutional decision making has tended to favor large-scale delivery platforms that support a systems approach (as opposed to a user-centered approach) to design. A third section reviews competing frameworks and standards for online course design, ranging from proprietary models like Quality Matters™ to open-source frameworks developed by educators themselves. We conclude by considering more recent work on mobile technologies and related issues of student access to and navigation of content.

### Design, Power, and Participation

Researchers have recognized the power issues involved in online course design and delivery (Anderson, 2006; Arola, 2010; Blair 2007). Arola (2010), in particular, outlines an important historical shift in the relationship between writing instructors and the technologies of online course design. In the 1990s, when online writing instruction and online learning were in their early stages, many instructors were also technologists who embraced the challenge of writing code and designing their own course websites. By 2010, Web 2.0 and social media technologies had reduced the barrier of entry and made it possible for most faculty and students to easily create their own websites and social media profiles using template-driven tools that required no knowledge of the underlying code. Paradoxically, these easy-to-use Web 2.0 tools democratized content and publishing while limiting users’ choice when it came

to design. Template-driven, drag-and-drop tools, from Facebook to Weebly, allow everyone to be an author while sometimes reducing design agency to a choice between a few literally superficial “themes.”

Arola concludes with a call to “make design visible”:

Those of us committed to engaging with modes of meaning beyond the alphabetic need to work to bring design to a discursive level so that we, along with our students, become attuned to the ways in which design encourages users to participate in online spaces. If we are to enact a meaningful multimodal pedagogy, then we need to make design visible. (Arola, 2010, p. 13)

Making design visible in the context of an online writing course involves asking students to reflect on and respond to the way course objectives are written and implemented within the online learning environment. Most importantly, making design visible is a way of inviting students to view themselves as co-creators and co-designers of an online course instead of simply as recipients of the content being delivered. Power involves the relationships between instructors and students, and also between instructors, students, and the technology. Arola, in turn, asks us to pay attention to power relations throughout the process; relying on pre-constructed course design templates, while certainly practical for instructors pressed for time in online classrooms, can cede power to the technology or its (often commercial) developers.

### Institutional LMSs and Online Course Design

For many online faculty, the primary learning environment is the learning management system (LMS). In the early 2000s, LMSs, and in particular Blackboard, provided a means of moving curriculum online quickly, allowing students to take hybrid and online courses and for online courses to rapidly enter the mainstream. As competitors (such as Wimba, Angel, WebCT, Elluminate, Wimba, NTI Group, Presidium, Edline, Moodlerooms) emerged, Blackboard expanded by absorbing some parts of the competing platforms. Between 2014 and 2015, Blackboard acquired nine additional companies, folding functional pieces of those companies into the Blackboard system (EdTech Business, 2015).

Because LMSs are purchased by systems and institutions, those who select these systems and pay for them frequently mandate and support their use. As Stuart Blythe (2001) identifies, those who design and control these systems fall into one of two categories: systems approaches and user-centered approaches to design (p. 331). In systems approaches, Blythe writes,

[T]he emphasis is on creating a formal specification and then building a system that meets it. Politically, owners who commission those specifications have the most influence over the design of the system; those with the resources necessary to purchase the system have the power to dictate the design, in consultation with the experts they hire to draft the specifications and execute the plan. (p. 331)

A systems approach, in Blythe’s view, creates the environment in which design decisions are made at the institutional level. Decisions made by administration and purchasing, based in a systems approach, result in some of the design constraints and challenges that impede student usability in LMS platforms. Blythe proposes an alternative in the form of a user-centered approach. In contrast to

a systems approach, in Blythe's user-centered approach to design, designers "create technologies for human use by beginning with the user's practical knowledge (rather than with a set of formal specifications). In this user-centered approach, specifications emerge from designers' observations of actual technology use, or, in more participatory instances, they emerge from interaction between designers and users" (p. 332) (see also Bowie, 2009).

However, many faculty may not see themselves as "designers," either because they do not consider instructional design or web design to be their role, or because they simply do not have time to study the principles of online course design. Even users who might be willing and able to experiment with alternatives to mandated LMS systems are constrained by time and the computer use policies of their particular schools in addition to the labor and political issues within any institution (Reilly & Williams, 2006). Faculty may find that the open and participatory pedagogies with which they engage are sometimes at odds with the institutionally mandated LMS systems. In some situations, faculty must make decisions about moving to or revising materials online so that their roles and presence in online assignments work within and, when necessary, outside of the technologies imposed upon them by institutions, such as a standard LMS (Cason & Jenkins, 2013). However, as Carr-Chellman and Duchaste (2000) note, "the vast majority of online learning materials, particularly those translated directly from residential lecture notes, are behaviorist in nature. Creating constructivist or student-based courses online presents a host of obstacles that may challenge the economies of scale within universities interested in the web as a revenue generator" (p. 148).

As others have pointed out, however, LMS technologies create spaces that are constrained in particular ways that affect and often restrict student access and learning. Beck, Grohowski, and Blair (2016), for example, critique the design of dominant LMS systems (Blackboard and Canvas in particular), arguing that the designs of these virtual spaces "ultimately lead to a confinement of virtual space at the expense of student learning" (Introduction, para. 1). The authors explore design decisions made by the developers of mainstream LMS platforms, concluding that these decisions effectively "reinscribe power dynamics through surveillance practices, constraints upon identity expression, and limited student participatory action" (Section 3, para. 1). Mandated LMS use, while "practical" for institutions, tacitly reinforces the systems approach to design.

A systems approach to online course design, then, stifles Beck, Grohowski, and Blair's (2016) call for "students and teachers [to] develop beyond functional users of technology into critical users" (Section 4, para. 2). For students and faculty to be critical users of technology in online spaces, moving from functional to critical literacy in technological spaces (Selber, 2004), all users must be dialogic. And to be in dialogue, teachers and students must be present in the time and space of the class to work within and beyond the constraints of institutional LMS platforms and design and employ learning spaces that achieve this more collaborative model of student-instructor co-creation.

## Principles and Standards for Online Course Design

While online writing instructors might seek to design more collaborate online classrooms, they might also need to follow proprietary design principles. A number of organizations have identified best practices in online course design and implementation

(Online Learning Consortium's Online Framework, Chico State Rubric for Online Instruction, Quality Matters™). These national standards inform institutional standards and, in some institutions, *are* the institutional online course design standards. One example used at our institution is the Quality Matters (QM) course certification program (Quality Matters, 2016). The QM program is "a faculty-centered, peer review process that is designed to certify the quality of online courses and online components" (Underlying principles, para. 3). However, the QM design focus and rubrics lead to course designs that meet only the most general design practices of effective online courses. While QM is beneficial for faculty needing to move into online teaching who lack the time to transform face-to-face methods for online spaces, QM requires faculty to have a course fully designed and built before peer review, effectively separating design from delivery, dividing the design space from the temporal delivery of the course (Robinson & Wizer, 2016).

In online writing instruction, national organizations developing effective practices have made strides in combining design and delivery, setting the stage for a more user-centered design. The Conference on College Composition and Communication Committee on Best Practices in Online Writing Instruction (2013) released fifteen practices for effective online writing instruction based on seven years of research into online writing practices. Unlike systems design-based proprietary tools, such as QM, the *Position Statement* establishes the connection between design and delivery (particularly in OWI Principles 1, 3, 4, 10, and 11). Two principles in particular (Principles 3 and 4) include effective practices that bring together time and space, or design and delivery, for a user-centered experience. In Example Effective Practice 3.9, for example, online writing faculty are encouraged to take full advantage of the flexibility of electronic communications" for "discussions, collaborative work, research, invention activities, and individual and group instruction and guidance . . . using both asynchronous and synchronous modalities." Principle 2 acknowledges that LMS-centered training is necessary for online instructors, and that training should be conducted by the institution. However, the bulk of the instructional principles focus on the connections between design and delivery, encouraging dialogue between students and instructors about and around the course content (see OWI Example Effective Practices 4.2, 4.3, 4.4, 4.5 and OWI Principle 10).

However, for online writing instruction, Blackboard and other standard LMS systems work against the 25-year body of research into what works in OWI and, at times, constrains the implementation of the OWI Principles. Constraints within the LMS can stifle faculty and pose challenges for user-centered design (see Maid & D'Angelo, 2013; Tillery & Nagelhout, 2013; Ruefman, 2016; Evans & Hardy, 2003; Bradford et al., 2007; for a robust usability test of Blackboard 9.1 SP 3 for accessibility, see Rangin, 2013). Some scholars have used the OWI Principles Statement to design online writing spaces that maximize the available technologies to create rich, user-centered classrooms (Harris, Nier-Weber, & Borgman, 2016) and to improve accessibility for online writing students (Nielsen, 2016).

Others have pushed back against OWI Principle 2, "an online writing course should focus on writing and not on technology orientation or teaching students how to use learning and other technologies," because the language of the principle separates "writing" from "the tools of writing" (Instructional principles, para. 2; Friend, Morris, & Stommel, 2016). Effective online writing pedagogy, as

the *Position Statement* and subsequent work emphasize, capitalizes on what we already understand about the collaborative nature of effective writing and seeks to leverage digital technologies to design writing courses that deliver interactive, technology-rich learning experiences. The *Position Statement* provides a framework for conceptualizing courses in a way that does not separate design from pedagogy, and that integrates lessons from decades of F2F writing instruction to provide a foundation for online writing instruction as it moves into and through the 21st century. Thus, while research on dominant LMS models helps to better understand the limitations of those models, the *Position Statement* provides a set of principles that can be used to design more interactive online courses. The *Position Statement*, in other words, provides the outline of a new model for the design of online learning environments.

## Student Access and Navigation in Online Spaces

A systems-centered design approach complicates delivery for those online students, particularly online writing students, who increasingly access their courses and complete their work on mobile devices. According to a Pearson study (2013), “four in ten students have used a tablet for school work during the current academic year. Among those who have used a tablet for school work, two-thirds use the device at least a few times a week” (p. 19). A Pew Research study (2015) found that “13% of Americans with an annual household income of less than \$30,000 per year are smartphone-dependent.” A pilot study by the Conference on College Composition and Communication Committee on Online Writing Instruction Best Practices (2015) found that one-third of online writing students were frequently or very frequently accessing and completing assignments using mobile technologies. The *Principles Statement* released by CCCC in 2013 has as Effective Practice 1.6, “Teachers should consider that students may use mobile devices to access the course materials. Therefore, teachers should design the course and course materials according to best design principles that cut across these devices.” While some opponents of mobile learning (or m-learning) criticize mobile devices as “dumbing down” online learning, mobile devices have in fact made online learning more accessible in terms of students’ access to and engagement with content (for additional research on mobile learning in online writing instruction, see Hoven & Palalas, 2011; Kimme Hea, 2009; Rodrigo, 2015; McArdle, 2016).

The disadvantages of Blackboard are nowhere more evident than its limited capabilities with mobile devices. While Blackboard has an app for Android and iOS users, the app restricts users to a limited number of tasks, mostly accessing instructor content, reinforcing a systems design approach to learning. In addition, for the mobile app to work, Blackboard administrators at a school or university need to download a building block, furthering the top-down model of education. While Blackboard seems to offer a range of choices for faculty-student and student-student collaboration, those choices are constrained, largely, to function within the Blackboard LMS as it operates on a desktop or laptop computer. Blogs and wikis can only be accessed and seen by students and faculty within the LMS. Messages within the system do not push notifications outside the LMS, and text editors in everything but the discussion board prevent users from creating hyperlinks to information outside the LMS. None of these collaborative tools can be accessed through the Blackboard App, when and if that App is enabled.

The CCCC OWI *Principles Statement* invokes space in several of the Example Effective Practices. In several OWI Principles, faculty are encouraged to “migrate” from the face-to-face (F2F) space to the virtual one. Some effective pedagogies convert seamlessly to the virtual space of the online classroom, such as in Example Effective Practice 4.5 where, “teachers should engage learner-centered and writing-intensive pedagogies via electronic means (e.g., collaborative invention and writing, online research, and teacher and peer review of work in progress).” However, Effective Practice 10.1 shows the difference between the physical space of the F2F classroom and the virtual space of the online classroom through encouraging faculty introduce students “to the writing-course specific uses of the LMS” including “where to access their assignments and readings, where to post and retrieve formal writing, where to meet and write publicly with peers, and where to communicate privately with the teacher and peers.” This effective practice highlights the need for intentional, user-based design that helps students navigate the unfamiliar space of online classrooms.

## GOING OVER, UNDER, OR THROUGH THE LMS TO DESIGN SOUND ONLINE WRITING COURSES

Students enter and exit an online course many times and in different places. Course design can help structure that experience. An effective course design builds a rhythm or sequence in time that helps students learn. We argue for reuniting people in space and time around the act of both course design and delivery for a user-centered design experience. In doing so, we encourage new ways of thinking about and practicing design so that students can effectively access online courses through mobile devices that may or may not work best with web browsers.

Before we begin to elaborate on these points, we must acknowledge that most LMS platforms can be manipulated in such a way that most of these learning goals can be accomplished using only the LMS. For faculty whose institutions mandate that all instructional materials be kept solely in the LMS, these systems can meet quite a number of the components of effective design. However at its most basic level, LMS systems such as Blackboard, as demonstrated by some of the research discussed above, cater to the lowest common denominator in online design; LMS is a space intended to level the playing field and exempt faculty from the need to understand web design or coding. We will demonstrate how, for each of these areas, faculty can begin in the LMS and then make decisions about how to go beyond the LMS to design effective spaces for online writing instruction.

Where Blackboard and other desktop-based LMS platforms focus instructors on designing larger learning modules and units (akin to chapters in printed textbooks), a mobile, user-centered design approach shifts toward a sequence based on a series of short interventions and activities. A student may choose to log in and complete course tasks in short bursts of time and energy, and a course design can either support or thwart her in doing so. The OWI *Principles and Example Effective Practices Statement* points to the importance of time in providing student feedback (Example Effective Practice 3.12) and in designing online activities in smaller units, or chunks that “increase opportunities for interaction between teacher and student and among students using both asynchronous and synchronous modalities” (Example Effective Practice 4.1). More research is needed in the area of time and the experience

of temporal design from a student perspective. In our experience, frequent, brief student activities and learning experiences help to build a more vibrant sense of community for students. Frequent brief and low-stakes projects enable students to experience an online course as a living community rather than a static website. In this way, an instructor can design a series of events in time in such a way as to begin to complicate the binary divide between synchronous and asynchronous modes. That is, a course may technically be asynchronous, but students begin to experience it as a real-time, living environment. To students, the course “feels” synchronous.

In the remainder of this article we demonstrate how faculty can design courses that go over, under, or through their sanctioned LMS in order to reach students who are stymied by the technical constraints of the LMS. We frame this discussion around three primary design factors: 1) practicing deliberative user-centered backward design, as opposed to top-down system design, that meets students where they are using technologies that merge form and function; 2) designing chunky, multimodal content that connects space and time for effective, collaborative learning, and 3) forefronting student choice and opportunity in both the navigation of their online spaces and the times and places they engage those spaces.

## **Backward Design for User-Centered Online Writing Classes**

Backward design begins when an instructor re-centers a course around the student instead of the LMS. Course learning outcomes assigned by institutional requirements or standards and used only to meet an institutional or accreditation requirement disassociate the class from the learner, defining what students should know or be able to do at the end of the course without considering how students learn those outcomes by the end of the course. Learning outcomes that are thoughtfully designed, however, form the foundation for backward design.

In backward design, instructors work “backward” from defined learning outcomes for a course, then identify what learning activities will assist students in meeting these outcomes. Once a series of learning activities has been defined, instructors turn to identifying tools and concepts students will need at each step of the journey toward the outcomes. Designing assessment rubrics and composing assignments and processes that attach to the learning outcomes and truly challenge students to meet them, thereby embedding students and instructors and their interaction into outcomes-driven assignments, is a revolutionary act that takes the focus away from the system (surveillance and system design) and puts it back on the learners. Backward design is not primarily technology-driven or outcome focused. It instead uses outcomes as a means to move past institutional requirements and mandated technology and back to user-centered design (also called “humanizing”; see Pacansky-Brock, n.d.).

Backward design, and a corresponding focus on learner outcomes, is a user-centered design principle for several reasons. First, it generally helps to shift from a focus on content (i.e., What am I going to cover in this unit?) to a focus on learner actions (i.e., What is the learner going to need to know and be able to do in this unit?). That shift in perspective has profound effects on the way content is designed and presented in an online course. Second, backward design prompts instructors to think in terms of observable and assessable outcomes. To be effective, learning outcomes need to

be written to emphasize active verbs and actionable outcomes that an instructor can see and assess. An outcome that asks a student to “understand the function of logic in an argument,” for example, would be far less effective than an outcome that asks a student to “define logic” and “explain its role in argument.” How would an instructor be able to observe whether or not a student “understands” something? Precise, active language (“define” and “explain”) forms a foundation for the process of backward design.

### *Backward design in and through an LMS*

If an online writing instructor is confined to the institutional LMS, s/he can still work through the backward design process. For example, a common course outcome for online writing instruction involves students giving feedback to their peers and receiving and implementing feedback from their peers (see, for example, the *Writing Program Administrator Outcomes Statement for First-Year Composition* [3.0], 2014). The *OWI Position Statement* reinforces the need to help students both learn to both practice effective writing processes and to reflect on those processes (See Effective Practices 3.9, 3.10, 3.11, 4.1, 4.2, 4.4, & 4.5). If the instructor begins with the outcome that students should give effective feedback and implement peer feedback, the next step in backward design would be to assign students to respond to their peers’ work and then incorporate their own feedback from peers into the revision process.

While this outcome and assignment seem simple enough, in online writing courses, part of the goal of giving and receiving feedback in peers writing is to help students both 1) learn the types of content that are helpful for their peers and 2) learn the process of providing content for their peers. The former goal can be met in an LMS by asking students to upload a piece of writing to a discussion forum post and ask other students to reply in the threaded discussion to give feedback to their peers. This process can also take place in an LMS group, in a blog, or in a wiki, depending on the level of anonymity and control that the instructor wishes to impose.

While Blackboard will allow students to create documents collaboratively in the wiki area, the focus is on the document and not on the process. Learning the process of providing content for their peers may best be facilitated by either synchronous or asynchronous technologies outside of the LMS. In this instance, students might begin in the LMS for peer review guidelines and then move through the LMS to Google Docs, for example, to work with others on the peer-review process. Students using Google Docs can draft simultaneously or sequentially (adding comments and replying to comments). Students can also access the “Revision History” tool to review the history of how they have collaborated on the document, which meets Effective Practice 3.11, “teachers should use the digital setting to encourage students to rhetorically and metacognitively analyze their own learning/writing processes and progress” (see also Kittle & Hicks, 2009).

While we do not argue that Google Docs is a viable alternative to an LMS platform for an entire course, instructors who have the ability to supplement their online writing courses and aim to practice participatory, student-centered design may opt to use Google Docs as a supplement to an institutional LMS. This does not necessarily require more time or preparation than the common approach of using LMS discussion forums as a platform for student peer review and collaborative writing. Google Docs offers a far more useful framework for student collaboration, and many students will need to use it in professional workplaces, so a writing course that helps students practice real-time collaboration in the Google apps

platform is also practically valuable to students planning to enter the professional workplace.

Similarly, a relatively new peer-feedback tool developed by writing faculty at Michigan State University called Eli Review offers a promising model for merging design and pedagogy. Eli Review extends the capabilities of collaboration software like Google Docs by allowing instructors to design and assign targeted peer feedback activities that work toward specific learning outcomes. For example, an instructor working toward a learning outcome related to the use of claims and evidence in an argument could direct students to respond to peer drafts by looking specifically for claims and supporting evidence. While we are not prepared to offer conclusions on the long-term effectiveness of Eli Review at this time, from a design standpoint, it serves as a very encouraging model of how backward design can be supported and enhanced by a technology or platform. Like Google Docs, Eli Review can be used in tandem with Blackboard rather than as a substitute.

Backward design is one stage in a course design process, and we advocate it as a starting point for any instructor seeking to design student-centered spaces into a writing course. At the same time, backward design points out an important shift: we are moving beyond a time when a single LMS will be workable for all students in all situations, toward a new, more flexible model that sees technology as an ecosystem of interlocking tools and applications rather than as a single, one-size-fits-all platform. Google Docs and Eli Review clearly point to instructional potential not available to instructors working entirely within Blackboard or a similar LMS.

## **Connecting Space and Time through Chunky, Multimodal Content for Collaborative Learning**

Modular, or “chunky” content helps students learn, whether they are reading on a mobile device or on a larger screen. Brief mini-lessons can use visual and auditory modes as well as text, creating instructional content that is multimodal as well as accessible to a wider range of students. Multimodal content makes learning more accessible and engaging for different types of learners. Using smaller “micro-lessons” followed by a variety of activities can increase the frequency of student-to-content, student-to-student, and student-to-instructor engagement in an online course. In addition, short, chunky activities can mitigate the problem many online instructors face when online students are inactive for the first few days of a week and then suddenly are overly engaged at the end of the week.

Some students have been conditioned by experience in other online courses to expect to be able to read and study quietly by themselves for a few weeks, post a minimum number of discussion board posts in a single day, and complete an exam or writing assignment at the end of a unit or module. The chunky model, with its frequent required interaction, may disappoint students who want to be able to proceed more independently. For that reason, we encourage students to reflect and comment on the process as we go along. We make design visible by asking students to engage and respond to the course content and design in real time. Inevitably, some students will express resistance, arguing that they enrolled in an online course specifically to be able to “work on my own schedule.” So it is important to take those concerns seriously and encourage students to express them. In a writing course, we argue that students can measurably benefit from breaking major writing projects into a series of steps that can be completed in short units of time.

In practice, applying the concept of chunked content in course design can work in many ways. For several years, we have been using backward design and creating course schedules in which writing activities were usually due on the same day each week. We discovered, perhaps predictably, that most students were logging on to post writing the day assignments were due. This created a rhythm where activity in the course community spiked one day each week, followed by a period of quiet in between. In our recent courses, we have moved to design schedules where short, work-in-progress tasks are due two or three times per week. While the total net amount of writing students do has not changed, breaking the writing into two or three mini-activities has helped to create a more constant flow of activity and discourse in and around the course environment.

### *Chunky, multimodal content in and over the LMS*

For instructors limited to an LMS, content and time can be chunked using tools such as Adaptive Release, where students must meet a particular learning outcome before they can access the next assignment, reading, or activity. For example, students can take a short, multiple-choice quiz to demonstrate their knowledge of the content before getting access to a discussion board or writing assignments. However, for adaptive release to work, students either need to get a particular score on a multiple-choice test (which reduces learning to memorization at best, or encourages them to use a textbook or the internet to quickly find answers at worst) or they need to access a particular area (which does nothing to guarantee they have learned the information, only that they have viewed the resource). Adaptive learning is excellent for helping students work toward mastery of concepts, but those using this feature to chunk must be careful not to reduce an online class to a collection of individual studies where students work only independently at their own pace.

For those faculty with a bit more flexibility, they can use external web tools to embed content over the standard LMS to provide more multimodal instruction than the LMS might allow. Multimodal instruction supports chunked content by providing students with multiple points of entry into each unit or module. For example, we design course units around a weekly structure, in which each weekly module opens with a text overview as well as a video preview (instructor screencast) to explain the concepts and assignments for the week. The text overview and the preview video cover roughly the same material, and students can choose which medium they prefer to use to get started each week. While we recognize that LMSs may have embedded video creation tools (such as Kaltura), we opt to create multimodal videos using tools like YouTube, Vimeo, and Embed Responsively, which allow instructors to upload videos and make them available to students on mobile devices, regardless of whether the students are logged in to their course LMS or not.

The combination of multimodality and chunked content design proves to be both challenging and powerful for instructors. Thinking in terms of 5-minute mini-lectures and tutorials instead of 50-minute class sessions challenges us to sharply define the learning goals and key concepts for a particular unit. By no means is this an easy or trivial task, and we do not want to downplay the amount of time and energy required to do so. The results, however, are very encouraging. And as increasing numbers of mobile-first students enter our classrooms, designing content and course activities in this way can only increase student engagement and involvement in online courses.

## Giving Online Writing Students Choice and Opportunity in Space and Time

We challenge faculty to design online writing spaces where students are creating the conversation and shaping online spaces. This method is akin to what F2F faculty do when they set up small circles of chairs in a classroom and then challenge students to create what happens in that space. Miller-Cochran and Rodrigo (2006) concluded that “simplifying design, directing learning, and facilitating multiple access to the course” allowed faculty and students to experience “the Web [a]s a multifaceted environment that allows students to slip in and out of the class, sometimes without even realizing it” (p. 103). This last user-centered design experience asks faculty to design online writing courses neither so students access a set of writing templates and models (which is demoralizing) nor ask students to click a simple pathway that masquerades as freedom of choice while actually leading to a predestined outcome.

Three concrete ways to provide students choice in both space and time in an online class is 1) have students choose from among different assignments, 2) have students choose between mediums of communication with peers and the instructor, or 3) allow multiple pathways to navigate content in online course design. Any of these three choices allow students to both take ownership of their learning and feel less like passive recipients in the online course.

### *Giving students content and medium choice*

When they write or create content, even a simple summary or recall prompt, students retain far more than if they were to take a multiple-choice quiz. When students have opportunity and choice, when they are asked to both write and comment, thinking meta-rhetorically, they are in effect becoming the teachers. We give them concepts they need to think about. We ask them to study rhetorical appeals and other foundational concepts of the discipline, and then they capitalize on and facilitate learning in the form of content creation. The focus of the course not faculty-driven content-creation; the core of the course is the interaction between students and faculty, which remains behind a firewall. Embed responsively (<http://embedresponsively.com/>) is a website that instructors (and students) can use to create embed codes that are “responsive” (i.e., they adapt to any size of screen or viewport). So a video uploaded to a Weebly site, for example, can “flex” to fit any screen size from large monitor to smartphone. Instructors can upload a video to YouTube or Vimeo, then copy and paste the link from that service into Embed Responsively, which in turn generates a snippet of custom code that can be pasted into a course website.

### *Giving students navigational choice*

One way to meet all three of these goals at once is to allow students to enter a course from multiple points: from an email, from their LMS, from a course schedule, or from an external website.

Again, faculty whose institutions require students enter through the LMS might at first seem limited by set navigational structures—in particular, the left navigation button or link system that is the bedrock of almost every major LMS system. However, once faculty can effectively learn to embed and hyperlink to other areas of the internet, the LMS becomes not a set of constraints but rather a portal to experience the Web as the “multi-faceted environment” that Miller-Cochran and Rodrigo describe (2006, p. 105).

One way to both work through an LMS but also allow students freedom of choice in navigating pathways that work for them is

to think of the LMS as not the container of the course experience but rather as the hub of course experience. In the hub concept, the LMS becomes a portal to 1) learning content (which can be hosted in a Google Doc, in a Weebly or other WYSIWYG site designed by the instructor, or another external content site; 2) collaborative writing and discussion spaces (such as Google Docs); and 3) the LMS itself (which houses FERPA-protected information, such as the students’ grades).

Because all websites (including the LMS and Google Docs) are just hyperlinks that are (at their heart) code, students could navigate to a course through multiple pathways through:

- An LMS-generated announcement that includes hyperlinks to content. The announcement will reside in the LMS announcements area but can also be sent to the students’ institutional email accounts. The announcement can contain hyperlinks to external content (such as a course website hosted in Weebly), or to Google Docs or other collaborative spaces where students can move directly into a learning task, asynchronously or synchronously.
- A course schedule that includes hyperlinks to content, readings, and activities. One example might be a Google Doc that is a course schedule with hyperlinks to the course Weebly site (where content is housed, to sections of a Blackboard site (such as a course discussion board), and to videos, documents, and or learning spaces.
- An externally-hosted website, built with Weebly or a similar platform. For students who use mobile technologies primarily or mostly, the ability to begin navigation at a site like Weebly (which allows faculty to design a course that is automatically tailored to be seen on tablets, phones, or laptop/desktops) allows them to access content on the go.

Configurations that allow students to use a variety of tools for completing assignments creates learning situations where students can use their own physical time and space differently. One example from one of our classes is Amber, a student who during an online advanced nonfiction course was driving every day from one city to another during a period of transition for her family. Amber was allowed to complete discussion boards by

- Accessing the discussion board before she began driving (on her iPad)
- Opening a Google Doc and using Google Voice to speak the text of her posts
- Editing the text on her iPad once she reached her destination
- Uploading the discussion posts to Blackboard once she reached her destination.

Her posts were generally longer, more well-developed, and more related to the subject matter of the course than some of her peers who squeezed their discussion board time into a few minutes they had in the evenings or weekends around their already busy lives.

## CONCLUSION

Our final thought, appropriately, is adapted from a Tweet from user experience designer Dana Chisnell’s Twitter profile: “If you want users to love your design, fall in love with your users.” In online writing instruction, if you want students to fall in love with your course, fall in love with your students. And falling in love with

them begins by building courses they need using a design made for them to flourish. We have ample evidence now, drawn from online writing instruction specifically, as well as from the wider world of user experience design, that good learning design begins when we start asking our students what they need and how they need it. Design strategies in online writing courses begin at the level of deep structure (information architecture), based in an understanding of what students need to learn, and how they will work toward defined learning goals in our courses. Implementing this concept of learner-focused course design requires instructors to push against the boundaries of the walled space of dominant LMS platforms.

## REFERENCES

- Allen, I. E. & Seaman, J. (2015). Grade level: Tracking online education in the United States. Retrieved from <http://www.onlinelearningsurvey.com/reports/gradelevel.pdf>
- Anderson, B. (2006). Writing power into online discussion. *Computers and Composition*, 23(1), 108–124. doi:10.1016/j.compcom.2005.12.007
- Arola, Kristin. (2010). The design of Web 2.0: The rise of the template, the fall of design. *Computers and Composition*, 27(1), 4–14. doi:10.1016/j.compcom.2009.11.004
- Beck, E., Grohowski, M., & Blair, K. (2016). Subverting virtual hierarchies: A cyberfeminist critique of course management spaces. In J. P. Purdy & D. N. DeVoss (Eds.), *Making space: Writing instruction, infrastructure, and multiliteracies*. Retrieved from <http://www.digitalrhetoriccollaborative.org/makingspace/index.html>
- Blackboard. (2016). Who we are. Retrieved from Blackboard Inc. website: <http://www.blackboard.com/about-us/who-we-are.aspx>
- Blair, K.L. (2007). Course management tools as ‘gated communities’: Expanding the potential of distance learning spaces through multimodal tools. In E. P. Bailey (Ed.), *Focus on distance education developments* (pp. 441-454). New York: Nova Science Publishers.
- Bowie, J. (2009). Beyond the universal: The universe of users approach to user-centered design. In S. Miller-Cochran & R. L. Rodrigo (Eds.), *Rhetorically rethinking usability: Theories, practices, and methodologies* (pp. 135-163). New York: Hampton Press.
- Blythe, S. (2001). Designing online courses: User-centered design. *Computers and Composition*, 18(4), 329–346. doi:10.1016/S8755-4615(01)00066-4
- Bradford, P. et al. (2007). The Blackboard learning system. *The Journal of Educational Technology Systems*, 35, 301-314. Retrieved from <http://uupinfo.org/research/working/bradford.pdf>
- Cason, J., & Jenkins, P. (2013). Adapting instructional documents to an online course environment. In K. Cargile Cook & K. Grant-Davie (Eds.), *Online education 2.0: Evolving, adapting, and reinventing online technical communication*, (pp. 213-236). London: Baywood Publishing.
- Carr-Chellman, A., & Duchaste, P. (2000). The ideal online course. *British Journal of Educational Technology*, 31(3), 229-241.
- California State University, Chico. (2016). The rubric. Retrieved from [http://www.csuchico.edu/eoi/the\\_rubric.shtml](http://www.csuchico.edu/eoi/the_rubric.shtml).
- Conference on College Composition and Communication, Committee for Best Practices in Online Writing Instruction. (2013). *Position statement of principles and example effective practices for online writing instruction (OWI)*. Retrieved from <http://www.ncte.org/cccc/resources/positions/owiprinciples>
- Council of Writing Program Administrators (2014). *WPA outcomes statement for first-year composition* (3.0). Retrieved from <http://wpaacouncil.org/positions/outcomes.html>
- Davis, E., & Hardy, S. (2003). Teaching writing in the space of Blackboard. *Computers and Composition Online*. Retrieved from [www2.bgsu.edu/departments/english/cconline/DavisHardy/](http://www2.bgsu.edu/departments/english/cconline/DavisHardy/)
- EdTech Business. Blackboard snags remote-learner UK in its ninth acquisition in a year. Retrieved from <https://www.edsurge.com/news/2015-04-13-blackboard-snags-remote-learner-uk-in-its-seventh-acquisition-in-a-year>
- Eli Review. How Eli Review works. Retrieved from Eli Review website: <http://elireview.com/learn/how/>
- Friend, C., Morris, S. M., & Stommel, J. (2016) Writing at scale: Composition MOOCs and digital writing communities. In D. Ruefman & A. G. Scheg (Eds.), *Applied pedagogies: Strategies for online writing instruction* (pp. 180-195). Logan: Utah State University Press.
- Harris, H., Nier-Weber, D, & Borgman, J. (2016) When the distance is not distant: Using minimalist design to maximize interaction in online writing course and improve faculty professional development. In D. Ruefman & A. G. Scheg (Eds.), *Applied pedagogies: Strategies for online writing instruction* (pp. 17-36). Logan: Utah State University Press.
- Hoven, D., & Palalas, A. (2011). (Re)conceptualizing design approaches for mobile language learning. *CALICO Journal*, 28(3), 699–720.
- Kimme Hea, A. C. (Ed.). (2009). *Going wireless: A critical exploration of wireless and mobile technologies for composition teachers and researchers*. New York: Hampton Press.
- Kittle, P., & Hicks, T. (2009). Transforming the group paper with collaborative online writing. *Pedagogy: Critical Approaches to Teaching Literature, Language, Composition, and Culture*, 9(3), 525-539.
- Maid, B., & D’Angelo, B. J. (2013). What do you do when the ground beneath your feet shifts? In K. Cargile Cook & K. Grant-Davie (Eds.), *Online education 2.0: Evolving, adapting, and reinventing online technical communication*, (pp. 11-24). London: Baywood Publishing.
- McArdle, C. (2016). Mobile learning just keeps on running: Renegotiating online collaborative spaces for writing students. In C. Lutkewitte (Ed.), *Mobile technologies and the writing classroom: Resources for teachers*, (pp. 117-132). Urbana, Illinois: National Council of Teachers of English.

- Miller-Cochran, S. & Rodrigo, R. (2006). Determining effective distance learning through usability testing. *Computers and Composition* 23, 91–107. doi:10.1016/j.compcom.2005.12.002
- Nguyen, L., Barton, S.M., & Nguyen, L.T. (2014). iPads in higher education—Hype and hope. *British Journal of Educational Technology*, 1-14. doi:10.1111/bjet.12137
- Nielsen, D. Can everybody read what's posted? Accessibility in the online classroom. In D. Ruefman & A. G. Scheg (Eds.), *Applied pedagogies: Strategies for online writing instruction* (pp. 90-105). Logan: Utah State University Press.
- Online Learning Consortium. (2015). 2015 Online report card: Tracking online education in the United States. Retrieved from <http://onlinelearningconsortium.org/read/online-report-card-tracking-online-education-united-states-2015/>
- Online Learning Consortium. (2015). Quality Framework. Retrieved from <http://onlinelearningconsortium.org/about/quality-framework-five-pillars/>.
- Pacansky-Brock, M. (2016). Humanizing. Retrieved September 6, 2016 from <http://brocansky.com/humanizing/>
- Pearson. (2013). Pearson mobile device survey. Retrieved from <http://www.pearsoned.com/wp-content/uploads/Pearson-Student-Mobile-Device-Survey-2013-National-Report-on-College-Students-public-release.pdf>
- Pew Research Center. (2015). U. S. smartphone use in 2015. Retrieved from <http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/>
- Quality Matters (2016). Organization information. Retrieved from <https://www.qualitymatters.org/our-mission>
- Rangin, H., et al. (2013). A comparison of learning management system accessibility. University of Illinois Disability Resources and Educational Services. Retrieved from [presentations.cita.illinois.edu/2011-03-csun-lms/](http://presentations.cita.illinois.edu/2011-03-csun-lms/)
- Reilly, C & Williams, J. J. (2006). The price of free software: Labor, ethics, and context in distance education. *Computers and Composition*, 23(1), 68–90. doi:10.1016/j.compcom.2005.12.001
- Robinson, D. & Wizer, D. (2016). Universal design for learning and the Quality Matters guidelines for the design and implementation of online learning events. *International Journal of Technology in Teaching & Learning*, 12(1), 17-32.
- Rodrigo, R. (2015) OWI on the Go. In B. L. Hewett & K. E. DePew (Eds.), *Foundational practices of online writing instruction* (pp. 493-516). Fort Collins: WAC Clearinghouse. Retrieved from <http://wac.colostate.edu/books/owi/chapter16.pdf>
- Ruefman, D. (2016) Return to your source: Aesthetic experience in online writing instruction. In D. Ruefman & A. G. Scheg (Eds.), *Applied pedagogies: Strategies for online writing instruction* (pp. 3-16). Logan: Utah State University Press.
- Selber, S. (2004). *Multiliteracies for a digital age*. Carbondale, IL: Southern Illinois University Press.
- Tillery, D., & Nagelhout, E. (2013). Theoretically grounded, practically enacted, and well behind the cutting edge: Writing course development within the constraints of a campus-wide course management system. In K. Cargile Cook & K. Grant-Davie (Eds.), *Online education 2.0: Evolving, adapting, and reinventing online technical communication*, (pp. 25-44). London: Baywood Publishing.