Goldilocks Online: How User Experience Enters the Learning Management System (LMS)

Background
Learning Management Systems (LMS) serve to accommodate the growing load of student enrollment in higher education programs: as a way to increase instructor and student connectivity, by providing a hub for learning resources, allowing a stream of data and analysis for systems learning, and increasing student engagement. Dependency on LMS for virtual delivery of learning content and use continues to increase (Allen and Seaman, 2016). Likewise, the ubiquity of Internet use, which involves frequent interface with user experience design, holds the power to shape reading habits and student perception when exploring educational content in LMS, especially in terms of readability, usability, and findability. According to recent figures from Pew Research Center (2018), “roughly nine-in-ten” adults are online in America. Furthermore, current waves in the LMS industry push for user experiences that more closely mirror the habits of those consumers and social media users (Edutechnica, 2018). User experience is not learner experience, but learners in a LMS course occupy the internet’s neighborhood. Higher educational students, accustomed to internet user experience and web design must quickly adapt reading habits to a learning management system, designed explicitly built for a higher cognitive load, and sustained intellectual engagement and activity. This project seeks to understand how dominant visual aspects of web design influence how individuals read and navigate in a LMS. In short, what is the margin of “just right” in between reading for quick reference and avoiding an unnecessary overload of working memory while learning online?

Methodology
Static images were provided from four different LMS interfaces: Blackboard (Bb), Canvas Desire2Learn (D2L), and Sakai. Seven different course home pages from five different institutions were represented in a “click test.” Each participant was shown four different images of a course and expected to complete the first task needed to begin the work for each course from the home page. Responses were measured in terms of success and the amount of time it took to complete the first step to begin a course on each page.

Findings
120 different participants completed the first test with the success rate ranging from 91% to 36%. The test was bifurcated into two groups. Only one image was shown to both A and B groups. The completion time for each test ranged from 10s to 33s. In an initial, pre-test, question about participant familiarity with LMS, responses seemed to align with the success rate ranging from 91% to 36%. The test was bifurcated into two groups. Only one image was shown to both A and B groups. The completion time for each test ranged from 10s to 33s. In an initial, pre-test, question about participant familiarity with LMS, responses seemed to align with the success rate ranging from 91% to 36%

Conclusions
No one LMS seemed to have a higher success rate than the others, which indicates that course design has a greater effect on navigation and usability than the software. The most user-friendly site from Canvas contained a large green Start button. While navigation of this site was most successful, users took the least amount of time to perform the task, which may suggest disengagement with the reading content. The A/B tested course page from D2L showed similar disengagement with the reading content. The A/B tested course page from D2L showed similar results from both test cohorts. Both of the Quality Matters Certified courses had a high level of success and the most time spent on the page. Usability is not learnability; learnability of a LMS is not learnability of course content.

References

