# Learning Environment Needs Analysis Project (2015)
## Reading List: "Next Gen" Learning Environment & Connected Learning

The following reading list was prepared by the Office of Learning and Information Technology as part of the Learning Environment Needs Analysis Project, sponsored by the Learn@UW Executive Committee. The audience for this resource is UW System administrators, instructors, and staff. Students interested in the shifting landscape of higher education operations may also find this resource useful. The readings included below are intended to elevate the understanding of the changing environment of higher education, with particular emphasis on technology and renewed approaches to teaching that are shaping the learning environment.

## 1. EDUCAUSE Research/Articles on Next Generation Digital Learning Environment

Over the past two years, EDUCAUSE has sponsored a series of research efforts from the EDUCAUSE Center for Applied Research (ECAR) and articles in the *EDUCAUSE Review*, focusing on the emerging dimensions of next generation digital learning environments (NGDLE). The first three 2015 citations below reflect the most recent efforts, especially two from the July/August edition of *EDUCAUSE Review.* These articles provide a coherent vision of the next gen learning environment and the sorts of outcomes and new practices they will enable.

The citation from On-line Learning Insights provides several alternative perspectives on NGDLE. These include the concluding chapter from the Siemens, Gasavic and Dawson book, which is listed as a separate citation and the Straumscheim article from *Inside Higher Education* whic*h* describes how the EDUCAUSE vision was publicly received.

Finally, the 2014 article by Brad Wheeler provides an insightful perspective on how cost pressures and the increasing digitization of research and education are necessitating a genuine shift from campus strategies of independence to dependence and interdependence. In Wheeler's view, these imperatives are shaping the anticipated expectations that NGDLE can be utilized both to improve learning outcomes and student success and to reduce costs and achieve the interdependence and scalability necessary for financial sustainability.

Brown, M. 2015. Trajectories for Digital Technology in Higher Education. *EDUCAUSE Review,* July/August, 16-28. http://www.educause.edu/ero/article/six-trajectories-digital-technology-higher-education.

Brown, M., J. Dehoney and N. Millichamp. 2015. What's Next for the LMS? *EDUCAUSE Review,* July/August, 40-51. http://www.educause.edu/ero/article/whats-next-lms.

Brown, M., J. Dehoney and N. Millichamp. 2015*. The Next Generation Digital Learning Environment: A Report on Research. ELI Paper,* April. http://www.educause.edu/library/resources/next-generation-digital-learning-environment-report-research.

On-line Learning Insights Blog. (2015) Need to Know-News: What Will Next Generation Learning Environments Look Like? Two Reports Share Different Views. May 16. https://onlinelearninginsights.wordpress.com/2015/05/16/need-to-know-news-what-will-next-generation-learning-environments-look-like-two-reports-share-different-views-mooc-sans-lecture-videos/.

Siemens, G., D. Gasavic & S. Dawson. 2015. Future Technologies Infrastructure for Learning, (P. 199-130). *Preparing for the Digital University: A Review of the History and Current State of Distance, Blended, and Online Learning.* http://linkresearchlab.org/PreparingDigitalUniversity.pdf.

Straumscheim, C. 2015. Brick by Brick: Educause Releases Blueprint for Next-Generation Learning Management Systems, *Inside Higher Ed,* May 11. https://www.insidehighered.com/news/2015/05/11/educause-releases-blueprint-next-generation-learning-management-systems.

Wheeler, B. 2014. Speeding Up on Curves, *EDUCAUSE Review Online,* Monday, January 27. http://www.educause.edu/ero/article/speeding-curves.

## 2. IMS Global Learning Consortium Perspective on Learning Analytics

A key element of the NGDLE is its capacity to embed advanced learning analytics and address personalized, adaptive, and competence-based learning. To achieve this imperative, next gen learning environments require analytics standards and interoperability as described in the IMS White Paper on Learning Measurement and Analytics. Even readers not highly interested in this topic should scan this article to appreciate the key issues, standards, and actions needed to establish a capacity to foster emerging models of measuring learning activities.

IMS Global Learning Consortium. 2013. *Learning Measurement and Analytics Whitepaper.*
http://www.imsglobal.org/IMSLearningAnalyticsWP.pdf.

## 3. Assessment of Current LMS Environments

To understand future environments, one must comprehend the current state of learning management systems, as well as their genesis and evolution. The article by Dahlstrom, Brooks and Bichsel provides an excellent snapshot of the current state of current LMS environment, circa 2014. It is worthy of a scan by readers who seek to understand the current platforms that will be superseded or extended by next gen learning environments.

Dahlstrom, E., Brooks, D.C. and Bichsel, J. 2014. *The Current Ecosystem of Learning Management Systems in Higher Education: Student, Faculty, and IT Perspectives, ECAR Whitepaper. http://www.educause.edu/library/resources/current-ecosystem-learning-management-systems-higher-education-student-faculty-and-it-perspectives.*

## 4. The Future of Connected Learning

The future world of learning will likely consist of a global network of institution-centric and "free-range" learning, interacting with each other, and supporting each other over time. The following set of readings describe the emergence of such an ecosystem. The *NMC Horizon Report, Education Edition* is a valuable, comprehensive resource that addresses: 1) key trends accelerating technology adoption in higher education, 2) significant challenges impeding technology adoption in higher education, and 3) important developments in education technology for higher education. This is a useful resource for anyone wanting to comprehend when and how these new developments will arise.

The three EDUCAUSE references provide useful representations of what the new Connected Age will look and feel like. The Weise article from *EDUCAUSE Review* contends that online, competence-based education may be an especially powerful and disruptive force in higher education. The Alexander article describes what universities will look like in 2024, under the influence of connected learning having sorted themselves into two types of institutions: 1) Fully online and 2) evolved versions of today's face-to-face institutions that are "hybrid" in their mode of operation.

New Media Consortium, 2015, *The NMC Horizon Report: Higher Education Edition,* 2015. http://www.nmc.org/publication/nmc-horizon-report-2015-higher-education-edition/.

EDUCAUSE Learning Initiative. 2013*. 7 Things You Should Know About Connected Learning.* http://www.educause.edu/library/resources/7-things-you-should-know-about-connected-learning.

EDUCAUSE. 2015. *The Connected Age: Technology Is Enabling Us to Do More, Know More, and Achieve More.* www.educause.edu/Connected-Age

EDUCAUSE Sprint. 2013. Beyond MOOCs: Is IT Creating a New, Connected Age? http://www.educause.edu/library/resources/beyond-moocs-it-creating-new-connected-age-sprint-summary.

Weise, M.R. 2014. Got Skills? Why Online Competence-Based Education Is the Disruptive Innovation for Higher Education. EDUCAUSE Review, November/December, 27-35. http://www.educause.edu/ero/article/got-skills-why-online-competency-based-education-disruptive-innovation-higher-education.

Alexander, B. (2014. Higher Education in 2014: Glimpsing the Future. (2014), *EDUCAUSE Review,* September/October, 91-98. https://net.educause.edu/ir/library/pdf/ERM1455.pdf

## 5. Wisconsin Readings

There are several articles, white papers, and reports that help frame the Wisconsin context. The *EDUCAUSE Review* article by academic leaders at the University of Wisconsin Madison describes a vision of using MOOCS to advance UW-Madison's mission beyond its borders. David Ward's article on educational innovation in difficult times addresses the promise of innovative approaches supported by new technologies such as NGDLE. The articles and plans from UW System describe current and past efforts to position the UW System technologies for the future.

Mangelsdorf, S.C., Russell, J., Jorn, L.A. and Morrill, J. 2015. MOOCs for Wisconsin and the World, *EDUCAUSE Review online*, March 2. http://www.educause.edu/ero/article/moocs-wisconsin-and-world.

Ward, D. (2013) Sustaining Strategic Transitions in Higher Education. *EDUCAUSE Review*, July/August, 13-22. http://www.educause.edu/ero/article/sustaining-strategic-transitions-higher-education.

Learn@UW Executive Committee. 2014 Academic Roadmap for the Future https://www.wisconsin.edu/systemwide-it/projects.academic-roadmap/