

# Horizon Report, OERs and Open Education

prepared by Fabián Banga, Ph.D.  
Department Chair, Modern Languages  
Distance Education Coordinator  
Berkeley City College

# Horizon Report

## 2016 Higher Education Edition

[www.facultytechnology.org/nmc/nhr2016.pdf](http://www.facultytechnology.org/nmc/nhr2016.pdf)

<http://horizon.wiki.nmc.org/Trends>

# Redesigning Learning Spaces

“Their Extension Learning Centre, a blended learning space [ ... ] facilitates team-based activities with a more dynamic layout. These redesigned spaces support what is often referred to as flexible or active learning.”

# Beyond Active Learning: Transformation of the Learning Space

[go.nmc.org/transformspace](http://go.nmc.org/transformspace) (Mark S. Valenti, EDUCAUSE Review, 22 June 2015.) “This article describes how technology is enabling colleges and universities to create flexible, multimodal, and active learning environments that allow more natural and authentic learning experiences.”

# Shift to Deeper Learning Approaches

“There is a growing emphasis in higher education on deeper learning approaches, defined by the William and Flora Hewlett Foundation as the mastery of content that engages students in critical thinking, problem-solving, collaboration, and self-directed learning. [...] Project-based learning, challenge based learning, inquiry-based learning, and similar methods are fostering more active learning experiences, both inside and outside the classroom.”

# Increasing Use of Blended Learning Designs

“Perceptions of online learning have been shifting in its favor as more learners and educators see it as a supplement to some forms of face-to-face learning.”

(Hybrid Classes)

# Significant Challenges Impeding Technology Adoption in Higher Education

- Blending Formal and Informal Learning
- Improving Digital Literacy
- Competing Models of Education
- Personalizing Learning
- Balancing Our Connected and Unconnected Lives
- Keeping Education Relevant

# **Important Developments in Educational Technology**



# Learning Technologies

- Digital Badges (validated indicator of accomplishment)
- Learning Analytics and Adaptive Learning
- Mobile Learning
- Online Learning
- Open Content
- Open Licensing
- Virtual and Remote Laboratories

# Consumer Technologies

- 3D Video
- Electronic Publishing
- Robotics
- Telepresence
- Wearable Technology

# Internet Technologies

- Bibliometrics and Citation Technologies
- Cloud Computing
- Networked Objects (IP)
- Semantic Applications (A term used to describe Web-based applications that incorporates principles or technologies of the W3C Semantic)
- Syndication Tools

# Social Media Technologies

- **Crowdsourcing** (The practice of obtaining needed services, ideas, or content by soliciting contributions from a large group of people and especially from the online community rather than from traditional employees or suppliers.)
- **Online Identity**
- **Social Networks**

# Enabling Technologies

- Flexible Displays
- Machine Learning
- Mobile Broadband
- Natural User Interfaces
- Near Field Communication
- Next-Generation Batteries
- Speech-to-Speech Translation
- Virtual Assistants
- Wireless Power

# Visualization Technologies

- Augmented and Virtual Reality
- Information Visualization
- Visual Data Analysis
- Volumetric and Holographic Displays

# **Opening Up Education, by Toru Iiyoshi and M. S. Vijay Kumar / The MIT Press**

“Today, a confluence of events is creating the perfect storm for significantly advancing education. With a growing inventory of openly available educational tools and resources, and with an increasingly engaged and connected community, transformative opportunities for education abound. We see a proliferation of new initiatives, many with the potential to radically change the ecology and the economics of education.

However, to date, many innovative educational endeavors still remain in isolated and closed domains, rarely shared across classrooms, disciplines, or institutions. Thus, educators find it difficult to advance their pedagogical practice and knowledge as a community.” p. 2

[http://mitpress.mit.edu/sites/default/files/titles/content/9780262515016\\_Open\\_Access\\_Edition.pdf](http://mitpress.mit.edu/sites/default/files/titles/content/9780262515016_Open_Access_Edition.pdf)

# OER and Open Education

Definition: “OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.”(Atkins, Seely Brown & Hammond, 2007:4)