

## Awakening Dreams and Possibilities: Ushering in Education 5.0 with Generative AI

Curtis J. Bonk, Professor, Indiana University

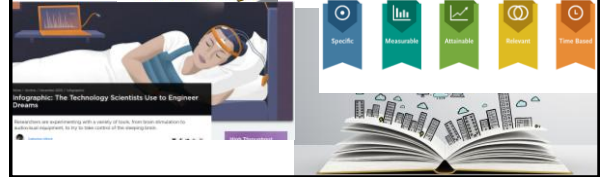
[cjbonk@indiana.edu](mailto:cjbonk@indiana.edu)  
<http://curtbonk.com/>



1

## Dreams of Smarter Learning...

It's Time To  
Wake Up



2

## As technology got smarter...

Remote learning isn't new: Radio instruction in the 1937 polio epidemic

<https://theconversation.com/remote-learning-isnt-new-radio-instruction-in-the-1937-polio-epidemic-543792>



Remote learning isn't new: Radio instruction in the 1937 polio epidemic

<https://theconversation.com/remote-learning-isnt-new-radio-instruction-in-the-1937-polio-epidemic-543792>

3

August 31, 2023

How the pocket calculator paved the way for the digital age, The Economist

<https://www.economist.com/culture/2023/08/31/how-the-pocket-calculator-paved-the-way-for-the-digital-age>



4

## And even smarter...

April 20, 2023

Learning to code isn't enough

Joy Lisi Rankin, MIT Technology Review

<https://www.technologyreview.com/2023/04/20/1073291/learn-to-code-legacy-new-projects-education/>



5

April 8, 2024

Are You Ready for the AI University  
Scott Latham, The Chronicle of Higher Education

<https://magazine.hms.harvard.edu/articles/how-generative-ai-transforming-medical-education>

<https://www.chronicle.com/article/are-you-ready-for-the-ai-university>

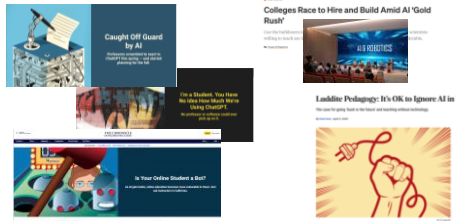
Are You Ready for the AI University?

Everything is about to change.



6

## November 2022 to May 2025: AI, AI, AI, AI... AI in Higher Education News

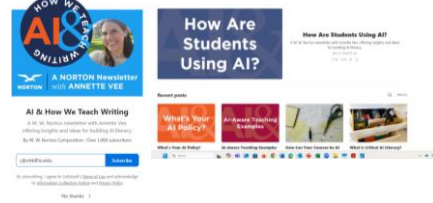


7

May 17, 2025

Annette Vee's

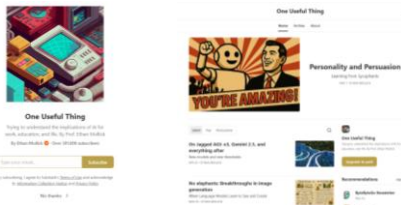
*AI and How We Teach Writing*  
<https://aiandhowweteach.substack.com/>



8

May 17, 2025

Educators are producing a growing number of free newsletters to keep you up to speed on AI:  
 Ethan Mollick's newsletter *One Useful Thing* offers insight into what new generative tools can do.  
<https://www.oneusefulthing.org/>



9

November 30, 2023

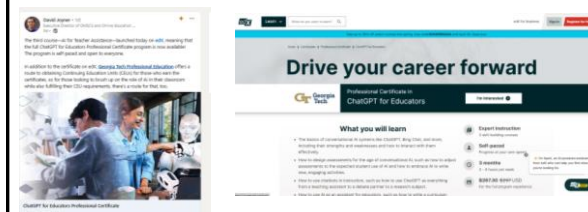
Over 1,000 Sun Devils enroll in ASU's generative AI training course  
<https://tech.asu.edu/features/ASUfacultyAIcourse>



10

April 19, 2024

Professional Certificate in ChatGPT for Educators  
 Georgia Tech  
<https://www.edx.org/certificates/professional-certificates/gtc-chatgpt-for-educators>



11

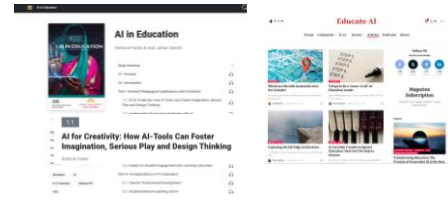
July 5, 2024

AI in Education

Stefanie Panke and Israt Jahan Ooeshi  
<https://educateai.substack.com/>

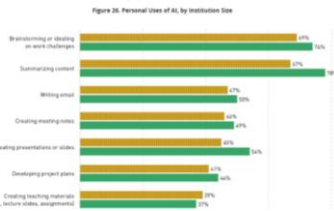
Educate AI

<https://edu-ai.org/3d-flip-book/educate-ai-magazine-volume-1-issue-2/>



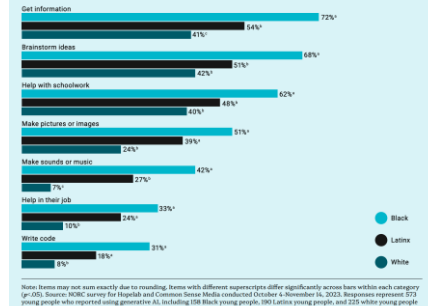
12

**February 17, 2025**  
**2025 EDUCAUSE AI Landscape Study: Into the Digital AI Divide**  
**Jenay Robert and Mark McCormack**  
<https://www.educause.edu/technology-innovation/2025/01/ai-landscape-study-into-the-digital-ai-divide>



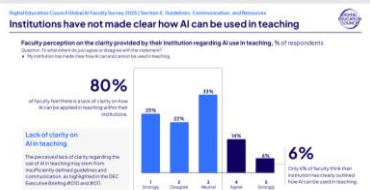
13

**% of generative AI users who have used it for the following reasons by race/ethnicity**



14

**January 30, 2024**  
**Digital Education Council Global AI Faculty Survey**  
**Digital Education Council**  
<https://www.chronicle.com/newsletter/teaching/2025-01-30>



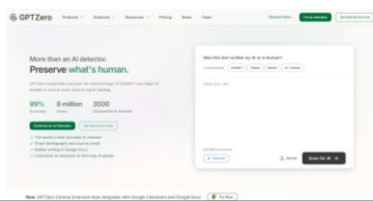
15

**June 13, 2024**  
**Professors Ask: Are We Just Grading Robots**  
**Beth McMurtrie, The Chronicle of Higher Education**  
<https://www.chronicle.com/article/professors-ask-are-we-just-grading-robots>



16

**August 6, 2024**  
**There's a Tool to Catch Students Cheating With ChatGPT.**  
**OpenAI Hasn't Released It.**  
**Deepa Seetharamon and Matt Barnum, The New York Times**  
<https://www.nytimes.com/2024/08/06/technology/chatgpt-cheating.html>  
**May 23, 2025: GPTZero;** <https://gptzero.me/>



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**August 20, 2024**  
**Critical thinking in the digital age of AI:**  
**Information literacy is key**  
**Marc Owen Jones, eCampus News**  
<https://www.ecampusnews.com/teaching-learning/2024/08/20/critical-thinking-in-the-digital-age-of-ai/>



**Critical thinking in the digital age of AI: Information literacy is key**

Dr. Marc Owen Jones, Northwestern University in Qatar

August 20, 2024

With the birth of AI, disinformation has entered a new era, rendering it critical that students possess strong information literacy skills

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**June 7, 2024**

### AI and the Death of Student Writing

Lisa Lieberman, Chronicle of Higher Education  
<https://www.chronicle.com/article/ai-and-the-death-of-student-writing>



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**January 11, 2024**

### The world's first AI powered course taught completely by AI teachers

Kevin Hogan, eCampus News  
<https://www.ecampusnews.com/innovation/insights/2024/01/11/the-worlds-first-ai-powered-course-taught-completely-by-ai-teachers/>



### The world's first AI-powered course taught completely by AI teachers?

Kevin Hogan  
 January 11, 2024  
 Otisermans Institute has taken a bold step in transforming the educational landscape as its AI-powered teachers are now teaching an entire 9-lesson course

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**March 2024**

### Student affordances to using ChatGPT

The Educational Affordances and Challenges of ChatGPT:  
 State of the Field  
 Helen Crompton and Diane Burke, TechTrends  
<https://link.springer.com/article/10.1007/s11258-024-00939-2>

- |  |  |
|--|--|
| <b>Student codes</b> <ul style="list-style-type: none"> <li>24/7 support and accessibility               <ul style="list-style-type: none"> <li>Unlimited access</li> <li>Variety of subjects/platforms</li> <li>Increased opportunities</li> </ul> </li> <li>Explain difficult concepts               <ul style="list-style-type: none"> <li>Seminarize</li> <li>Provide rationale</li> </ul> </li> <li>Conversation partner               <ul style="list-style-type: none"> <li>Diverse contexts</li> <li>Customized conversations</li> <li>Argument practice</li> </ul> </li> <li>Personalized feedback and materials               <ul style="list-style-type: none"> <li>Feedback</li> <li>Tailored activities</li> <li>Personalized pacing</li> <li>Personalized materials</li> <li>Recommendations</li> <li>Language assistance</li> </ul> </li> </ul> | <b>Writing Support</b> <ul style="list-style-type: none"> <li>Writing steps</li> <li>Ideas</li> </ul> <b>Editing</b> <ul style="list-style-type: none"> <li>Generate outlines</li> <li>Study guides</li> <li>Questions</li> <li>Diagnostic reasoning</li> <li>Detailed responses</li> </ul> <b>Engagement</b> <ul style="list-style-type: none"> <li>Facilitate discussions</li> <li>Collaboration</li> <li>Interactive learning</li> </ul> <b>Facilitate self-determination</b> <ul style="list-style-type: none"> <li>Sense of control</li> <li>Autonomy over learning</li> <li>Increase efficacy</li> </ul> |
|--|--|

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**May 17, 2023**

### Workplace AI: How artificial intelligence will transform the workday

Casey Noenickx, BBC  
<https://www.bbc.com/worklife/article/2023/05-how-ai-will-transform-the-workday>

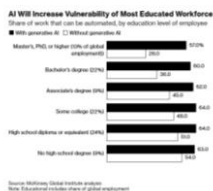


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**March 28, 2023**

### Workplace AI could replace equivalent of 300 million jobs – report

Chris Vallance, BBC  
<https://www.bbc.com/news/technology-65102150>



### Biggest Losers of AI Boom Are Knowledge Workers, McKinsey Says

- Could add the equivalent of \$2.6 to \$4.4 trillion annually
- May add 0.6% in annual labor productivity growth for 20 years

By Alessandro Tosti  
 June 14, 2023 at 12:04 AM EDT

The worldwide boom in generative artificial intelligence has accelerated productivity and growth, but it has also brought disruption for others, primarily in knowledge work, according to a new report by consultants McKinsey.



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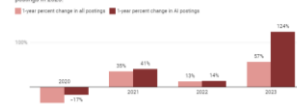
**February 26, 2024**

### AI Will Shake Up Higher Ed. Are Colleges Ready?

Taylor Swaak, The Chronicle of Higher Education  
<https://www.chronicle.com/article/ai-will-shake-up-higher-ed-are-colleges-ready>

#### Job Postings at Colleges

The number of AI-related postings on The Chronicle's job site soared in comparison with all job postings in 2023.



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**January 11, 2025**

By Auzinea Bacon, CNN

The top two jobs were **artificial intelligence engineer** and **artificial intelligence consultant**, respectively. Artificial intelligence has become the **latest Silicon Valley buzzword** as companies like OpenAI have released chatbots that can do everything from hold **conversations** to suggest recipes to remixing images — albeit with some occasional **high-profile mistakes**. (Artificial intelligence researcher also nabbed the No. 12 spot.)

These are the fastest-growing job titles, according to LinkedIn users



**April 29, 2025**

**Jibin Joseph, MSN**  
[artificial-intelligence/dual-ai-adoption-first-steps]  
[AAIDPGm](#)

Former Google CEO predicts AI will replace most programmers in a year  
Video (0:33): <https://curtbond.com/doulingo2025.html>




## Education 3.0...Education 20/20



**"In Education 3.0, classrooms would move away from lectures, such as this one, to having class time be spent on discussions and projects, using digital technology."**  
(Per Wikipedia: [https://en.wikipedia.org/wiki/Education\\_3.0](https://en.wikipedia.org/wiki/Education_3.0))

## Education 3.0

First Monday, by Derek Keats and J. Philipp Schmidt, March 200  
<http://firstmonday.org/issue/index.nhn/fm/article/view/1625/1540>

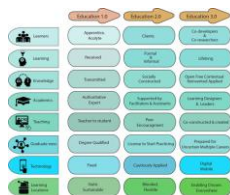
 <b>Edu 3.0</b>			
<b>Table 1: Educational generations in higher education</b>			
Characteristics	Education 1.0	Education 2.0	Education 3.0
Primary role of professor	Source of knowledge	Guide and source of knowledge	Co-creator of collaborative knowledge
Content arrangements	Traditional copyright materials	Copyright and freeware for students within discipline, sometimes across institutions	Freeware educational resources created and reused by students across multiple institutions, disciplines, nations, supplemented by original materials created for them
Learning activities	Traditional, essays, assignments, tests, some groupwork within classroom	Traditional assignment approaches transferred to more open technology; increasing collaboration; learning activities; self-paced learning; institutional and classroom	Open, flexible learning activities that focus on creating rooms for students to create, network, and networked learning; traditional boundaries in discipline, institution,

**September 18, 2017**

## Education 1.0 to 3.0

**Gilly Salmon, University of Liverpool, UK**

<http://www.gillysalmon.com/learningfutures.html>

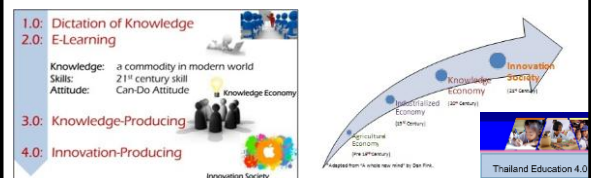


## Now What is Education 4.0?

**"Innovation-producing education. Learn more in:  
Development of Individual Agency within a Collaborative,  
Creative Learning Community"**

<http://www.igi-global.com/dictionary/education-40/41755>  
[ps://thinc.in.th/engadmission/education4.html](http://ps://thinc.in.th/engadmission/education4.html) (Chula Engineer

<https://thinc.in.th/engadmission/education4.html> (Chula Engineering)



## Is there an Education 5.0?

### Education 5.0:

Collaboration and Creativity in Improving Students' Digital Intelligence  
<https://btqur.or.id/index.php/injosedu/article/view/202>

Education 5.0 is an innovative approach to education that integrates advanced technology and the latest learning methodologies to create a student-centred learning environment. The research method conducted in this study is literature. The results showed that students' digital intelligence, creativity, and collaborative skills improved. The implementation of Education 5.0, which embraces technology and innovative learning methodologies, facilitates a more dynamic and interactive learning environment, increasing student motivation and participation in the learning process.



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## Education 5.0 (according to ChatGPT)

Education 5.0 is an evolving concept that reflects the integration of advanced technologies, digital tools, and modern pedagogical practices into the education system to prepare learners for the future of work and society. It draws inspiration from Industry 5.0 and focuses on human-centered learning, where technology supports both academic growth and the development of essential life skills.

Here are some key features of Education 5.0:

- 1. Learner-Centric:** The emphasis is on personalized learning, where students take an active role in their education, and learning pathways are tailored to individual needs, preferences, and learning styles.
- 2. Human-Technology Collaboration:** Education 5.0 harnesses the power of AI, machine learning, and other digital technologies to complement human teachers, making learning more efficient, accessible, and engaging. These technologies support, rather than replace, human educators.
- 3. Skills for the Future:** The focus is on developing critical skills such as creativity, problem-solving, emotional intelligence, and ethical reasoning. There is a strong emphasis on **soft skills** and **transversal skills** that help learners adapt to rapidly changing work environments.



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## Education 5.0 (according to ChatGPT)

- 4. Real-World Problem-Solving:** Project-based and experiential learning are central to the concept of Education 5.0, encouraging students to work on real-world challenges that require interdisciplinary knowledge and collaboration.
- 5. Global and Digital Citizenship:** In line with the globalized world, Education 5.0 promotes the idea of global citizenship and digital literacy. Learners are trained to navigate complex socio-cultural and environmental challenges while being responsible digital citizens.
- 6. Lifelong Learning:** Education 5.0 advocates for continuous learning beyond formal education, encouraging individuals to acquire new skills and knowledge throughout their lives to remain relevant in a rapidly evolving world.
- 7. Sustainability and Ethical Focus:** Education 5.0 emphasizes the importance of sustainability and ethical responsibility. It integrates learning about environmental challenges and social justice, encouraging students to become change agents for a more sustainable future.

It is seen as the next stage in the evolution of education, following previous models like Education 3.0 (digital and networked learning) and Education 4.0 (which emphasized technology-enhanced and adaptive learning).



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## Education 5.0:

<https://uquallo.com/post/education-5-0-how-new-trends-are-shaping-the-future-of-education>



Education 5.0 focuses on personalized, learner-centered education through digital technologies. It enhances engagement, improves learning outcomes, and broadens access to education. Key features include personalized learning, interactive tools like gamification and VR, and greater accessibility through online platforms.

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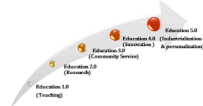
## Now What is Education 5.0?

### Education 5.0:

<https://www.sydle.com/blog/education-5-0-61e71a99edf3b9259714e25a>

Education 5.0 is the outgrowth of this idea. It doesn't discard the proposals of Education 4.0, but it adds a more human perspective to learning, including social and emotional abilities in order to promote lesser environmental impact with greater health and safety.

- Collaborative work
- Better interpersonal relations, empathy, and tolerance of diversity
- Creativity
- Conflict management
- More fluid communication



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## Now What is Education 5.0?

### Education 5.0:

<https://www.sydle.com/blog/education-5-0-61e71a99edf3b9259714e25a>

**Education Enhances Society:** Education 5.0 focuses on preparing individuals with the skills, mindset, and adaptability needed to thrive in a rapidly evolving world. By nurturing critical thinking, creativity, and interdisciplinary problem-solving abilities, Education 5.0 contributes to the overall advancement of Society 5.0's goals, such as sustainable development and technological integration.



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## 20 New Roles of the Instructor

**Captain** **Course Ambassador** **Consumer Advocate**  
**Counselor** **Curator** **Cook** **Change Catalyst**  
**Conductor** **Concierge** **Comedian**  
**Consultant** **Camping Trip Guide** **Coach**  
**Community Organizer** **Course Expedition Leader** **Collaborator**  
**Chemist** **Care Giver**  
**Cultivator** **Colleague**



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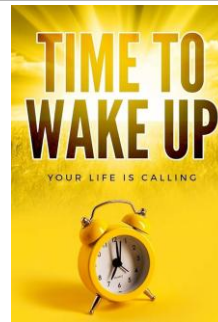
## Bonk's 20 "Last" Principles of Instruction (LAST = Learning Activation System Template)

<http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html>

**Flexibility** **Support and Feedback** **Choice and Options**  
**Convenience** **Spontaneity** **Nontraditional Learning**  
**Collegiality** **Organization** **Passion and Inspiration**  
**Cheerfulness and Optimism** **Sharing** **Relevance and Meaningfulness**  
**High Expectations** **Purpose and Vision** **Trial and Error (i.e., it is ok to fail)**  
**Empowerment and Autonomy** **Expanded Resources** **Human Connectedness** **#20 ???**  
**Cognitive Apprenticeship**



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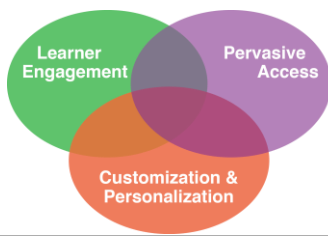


Badrul Khan's free E-Learning book in Thai.  
[https://edit.psu.ac.th/book/e-learning%20book-AW-edit%20\(final\).pdf](https://edit.psu.ac.th/book/e-learning%20book-AW-edit%20(final).pdf)



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## 30+ Ways Learning is Changing: The Mega Trends



41

## How Learning is Changing: Mega Trend #1. Learner Engagement



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**November 3, 2022**

**Still Struggling With Engagement? You're Not Alone**

Beth McMurtrie, The Chronicle of Higher Education  
<https://www.chronicle.com/newsletter/teaching/2022/11-03>

Still Struggling With Engagement? You're Not Alone.  
 By Beth McMurtrie




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**February 20, 2024**

**Learning is More Visual**

**Sora: Finally, An AI Video Generator**

Video (3:34): <https://youtu.be/lBx3xW1ua-E>






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**February 15, 2024**

**Learning is More Visual**

**AI Generated Videos Just Changed Forever**

Video (12:01): <https://youtu.be/NXpdyAWLDas>



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**February 16, 2024**

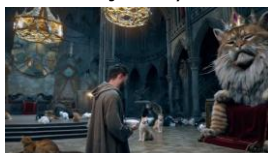
**Learning is More Visual**

**A video star is born:**

**OpenAI's Sora stuns with AI act**

<https://www.economictimes.indiatimes.com/tech/technology/a-video-star-is-born-openai-sora-stuns-with-ai-act/articleshow/107762806.cms?from=vidx-tab>

"a giant cathedral is completely filled with cats. there are cats everywhere you look. a man enters the cathedral and bows before the giant cat king sitting on a throne." Video generated by Sora.




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**February 16, 2024**

**Display 3b. OpenAI's Video Generator Sora Is Stunning and Utterly Terrifying**

Tony Ho Tron, The Daily Beast  
<https://www.thedailybeast.com/openai-video-generator-sora-is-stunning-and-utterly-terrifying>




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**February 16, 2024**

**Learning is More Visual**

**OpenAI's Video Generator Sora Is Stunning and Utterly Terrifying**

Tony Ho Tron, The Daily Beast  
<https://www.thedailybeast.com/openai-video-generator-sora-is-stunning-and-utterly-terrifying>




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**July 11, 2023**  
**Learning is More Immersive**  
**'Metaversities' Face Virtual Learning's Financial Realities**  
 Lauren Coffey, Inside Higher Ed  
<https://www.insidehighered.com/news/briefs/immersion/learning/2023/07/11/metaversities-face-virtual-learning-financial>

Anatomy and biology courses use the metaverse to immerse students in the subject matter. New Mexico State University's metaversity includes an immersive solar system.



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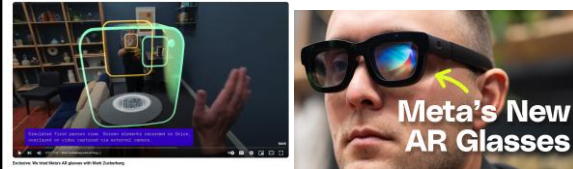
**October 31, 2023**  
**Learning is More Immersive**  
 Visible Body Courseware | Interactive 3D Science Content Meets Course Management  
 Robb Kneebone [robb.kneebone@visiblebody.com](mailto:robb.kneebone@visiblebody.com)  
<https://www.youtube.com/watch?v=hVZUABn-PRk>  
 Nick Riley [nriley@visiblebody.com](mailto:nriley@visiblebody.com)  
<https://www.visiblebody.com/>



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**September 25, 2024**  
**Learning is More Immersive**  
 We tried Meta's AR glasses with Mark Zuckerberg  
<https://www.youtube.com/watch?v=mpKKcQWnTus>

AR Glasses Orion Meta



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**August 27, 2023**  
**Learning is More Social**  
**R511 Fall 2023 in Padlet:**  
**Introductions: Getting to Know One Another**  
<https://padlet.com/mhucinar1511-fall-2023/getting-to-know-one-another-whyhgtscqkftmou>




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**February 15, 2023**  
**Learning is More Collaborative**  
**Strong Schools, Afghani Women**  
**Asian University of Women**  
<https://www.pressbooks.com/18123/downloads/Strong-Schools-1674597042.pdf>



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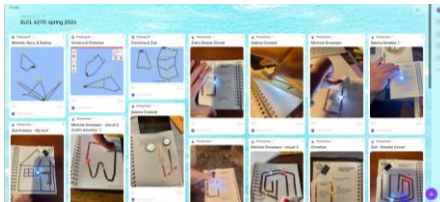
**June 15, 2022**  
**Learning is More Mobile**  
**Leaders & Legends of Online Learning,**  
**Dr. Mark Nichols' Podcast**  
<https://onlinelearninglegend.com/podcast/062-dr-george-voletislanos/>  
 In this episode, Open Polytechnic of New Zealand Executive Director Dr. Mark Nichols chats with Dr. George Voletislanos, Royal Roads University in Victoria, British Columbia. George talks about his history and research in online education, and his ongoing challenges to the false dichotomy of online and in-person learning.



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**February 20, 2024**  
**Learning is More Digitally Rich**

Heejung An, ELCT 6270: spring 2024  
 William Paterson University  
 Hands-on, Minds-on, Hearts-on, Social-on: A Collaborative-Maker Project Integrating Arts in a  
 Synchronous Online Environment for Teachers  
<https://link.springer.com/article/10.1007/s11528-023-00749-y>  
 Based on the Thinking, Making, Sharing, and Reflecting (TMSR) model  
<https://jpadell.com/emh21/feb-27-25-spring-2024-79j2xvtn3k3e7oe>



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**November 4, 2024**  
**Do 1b. NotebookLM**

Mark Brown, 'My Leukemia Story'  
 Insights into Mark's experience of responding to treatment for Acute  
 Myeloid Leukemia

<https://on.soundcloud.com/ajok6J6PXUmc2x88>

...we shouldn't dismiss how AI might in the future help to amplify our joys, losses, failures, and disappointment, too, during these moments through new and improved ways of analyzing, interpreting, and celebrating human performance. I'm sure AI is already playing a big role in helping the science behind leukemia better analyze, predict, and suggest new and improved treatment plans. The segue to AI is deliberate. I want to finish this update by sharing the conversation I generated using Google's new NotebookLM tool. As a bit of an experiment, I uploaded my 2020B-word journal to this tool to see what type of conversation it would automatically generate. The resulting discussion is a bit cringeworthy in places, but overall, it shows what's possible now and in the future through new generative AI tools—what opening a can of worms.



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**December 6, 2024**

How Faculty Can Harness Generative AI for Enhanced  
 Learning: Part 1: TEC-VARIETY and R2D2  
 Curt Bonk, Student Learning Outcomes (SLO), COACHes Hub  
 Video (104:25): <https://www.youtube.com/watch?v=MQJC7be0Y>

\*\*NotebookLM Podcast (17:44): <https://rss.com/podcasts/friday-slo-talks/1790741/>  
 SLO: <https://www.youtube.com/watch?v=3llw5FSdqQ>  
 NotebookLM Podcast (20:45): <https://www.youtube.com/watch?v=3llw5FSdqQ>  
 NotebookLM podcast (12:57): <https://youtu.be/hPr-p2Co-6I>



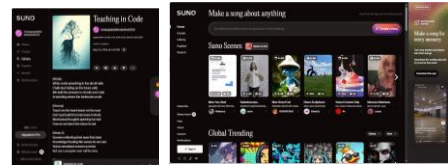
57

**May 15, 2025**  
**Learning is More Digitally Rich**

Suno: Makes a Song About Anything  
 How About: The medical educators and AI song, indie rock

<https://suno.com/>

The Future We Create: <https://suno.com/song/53436074-8bcd-4401-88ab-9a51c4469f5c>  
 Teaching in Code: <https://suno.com/song/8704d4dc-5d25-4489-95e9-37863b06e3cd>  
[https://suno.com/create/signup\\_source=splashpage&ref=5%2Fhome&redirected\\_from=signup&uid=defaut](https://suno.com/create/signup_source=splashpage&ref=5%2Fhome&redirected_from=signup&uid=defaut)



58

**February 26, 2024**

**Tinkering, Making, Sharing, and Reflecting:**  
 A Model for Online Collaborative Project-Based Learning

Heejung An and Woonhee Sung, EDUCAUSE Review  
<https://er.educause.edu/articles/2024/2/tinkering-making-sharing-and-reflecting-a-model-for-online-collaborative-project-based-learning>

EDUCAUSE  
 REVIEW

Latest Channels Multimedia Editors' Pick

Thinking, Making, Sharing, and Reflecting

Thinking, Making, Sharing, and Reflecting

Thinking, Making, Sharing, and Reflecting

Thinking, Making, Sharing, and Reflecting

Thinking, Making, Sharing, and Reflecting

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Thinking, Making, Sharing, and Reflecting

Thinking, Making, Sharing, and Reflecting



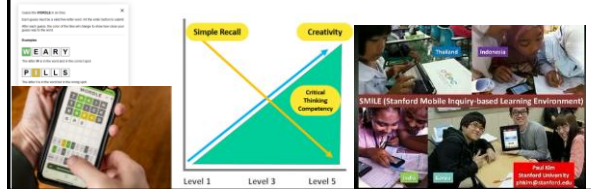
59

**June 6, 2022**  
**Learning is More Game-based**

How teachers use Wordle—and other games—for next-level  
 engagement

Laura Ascione, eSchool News

<https://www.eschoolnews.com/2022/06/06/how-teachers-use-wordle-for-next-level-engagement/>



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66

**October 14, 2022**  
**Learning is More Online**  
**A Surge in Young Undergrads, Fully Online**  
**Susan D'Agostino, Inside Higher Ed**  
<https://www.insidehighered.com/news/2022/10/14/more-traditional-age-students-enroll-fully-online-universities>




These online classes can help you earn money from home: Digital marketing, video production, coding

A Surge in Young Undergrads, Fully Online

67

**August 24, 2022**  
**Learning is More Global**  
**Online Does Not Mean Isolated**  
**Maha Bali, George Station, & Mia Zamora, Inside Higher Ed**  
<https://www.insidehighered.com/views/2022/08/24/building-community-online-conferences-events-opinion>



68

**November 4, 2022**  
**Learning is More Synchronous**  
**Synchronous hybrid English class for rural Chinese students**



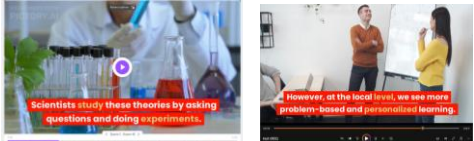
69

**November 12, 2023**  
**Learning is More Video-based...**  
**Pictory (<https://app.pictory.ai/>)**  
**Learning theory syllabus**

In higher ed, online instructors might have lecture notes that they want to change to videos. Many times, it is hard for us to create videos by ourselves and lack time and skills. We can choose background images and voices (e.g., Female or male voices, different accents, etc.).

Some students do not want to read articles, etc. Instructors can turn them into audio files or videos to listen to. We can post both formats: articles and audio/videos like audiobooks. I think younger generations seem to like listening or watching over reading.

<https://video.pictory.ai/1699816452518/00231111193620090yUha3NLYZ80p0X>



Scientists study these theories by asking questions and doing experiments.

However, at the local level, we see more problem-based and personalized learning.

70

**Episode 158 - Building Design Capacity for Online and Digital Education at Scale**  
 By Curtis Bonk | July 6, 2023 | Episode 1 | 1 comment

**silverliningforlearning.org** 07/15/23 11am ET Episode #158

**Building Design Capacity for Online & Digital Education at Scale**

Margaret Korosec, Jeff Grabill, Nels Floor

**Episode 139 | Is it Time to Lead or About Time We LED?: Learning Experience Design & Personalized Learning**

**silverliningforlearning.org** 07/15/23 11am ET Episode #158

Is it Time to Lead or About Time We LED?: Learning Experience Design & Personalized Learning

Episode 138 | Learning February 11, 2023, 9:00 pm Eastern

10. Ukrainian 11. Polish 13. Bulgarian

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**June 17, 2023, YouTubers using ChatGPT**  
**Learning is Informal and Video-based**  
**Will AI change the future of language learning?**  
**ShuoshuoChinese 说说中文**  
<https://www.youtube.com/watch?v=TzFepHKfGo>



MAXIMIZE THE USE OF ChatGPT


ChatGPT Language Learning 言語学習

Explaining meaning in context  
 Correcting and explaining grammar  
 Dictionary definitions and examples  
 Text annotation and translation  
 Vocabulary quizzes


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**August 10, 2023**  
**Learning is More Immediate**  
**300,000-year-old skull found in China unlike any early human seen before**  
**Hafsa Khalil and Jack Guy, CNN**  
<https://www.cnn.com/2023/08/10/asia/ancient-skull-china-human-evolution-01/index.html>




**46,000-Year-Old Worm Possibly Revived from Siberian Permafrost**  
 An international team of scientists says a nematode found in Siberian permafrost may be 46,000 years old and revived using techniques similar to those of a zombie for zombie.



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**August 12, 2024**  
**Learning is More Open**  
**The Impact of MIT OpenCourseWare**  
**2023-2024, Academic Year**  
<https://www.ocw.mit.edu/ocw/2023-24/academic-year/>

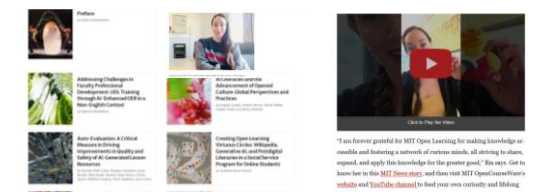


On the OCW Publication: 65 new publications on OCW this year. Total courses on OCW: 2,539. Total OCW faculty publications: 49. Peer-reviewed copies of our website: 447\*.

Tell us Your OCW Story: We'd love to hear about your experience with OCW! Please share with us how OCW has made an impact in your life.

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**February 27, 2025**  
**Making Knowledge Accessible and Fostering a Network of Curious Minds**  
**MIT OpenCourseWare**  
<https://aiopenaccessia.org/>




Addressing Challenges in Faculty Professional Development (aka, teaching through AI-enhanced L23 in a new digital context)

Academic Evaluation & Critical Resources in Shifting Imperatives in Quality and Safety of AI Generated Lesson Resources

Creating Open Learning Strategic Center: While AI, Generative AI, and Digital Learning are in the spotlight, it's important to consider the role of AI in the MIT OpenCourseWare's website and YouTube channel to find your own curiosity and lifelong learning!

75

**December 17, 2022**  
**Learning is More Open**  
**Computer Classes for Rural African Schools**  
**Nelly Cheboi, CNN Hero Award (TechLit Africa--Kenya)**  
 LinkedIn: <https://www.linkedin.com/in/nelly-cheboi>  
 Facebook: <https://www.facebook.com/kosicheboi>



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**November 17, 2023**  
**Learning is More Open**  
**Your Gateway to Open Access Journals in Asia**  
<https://openaccessia.org/>



Benefits: Open Access Journals in Asia is a comprehensive, free-of-charge, and open-access platform for researchers and students to access high-quality research articles. It provides a centralized hub for open access journals in Asia, making it easier for researchers to find and access relevant research. The platform also offers a range of services, including article submission, peer review, and publication.

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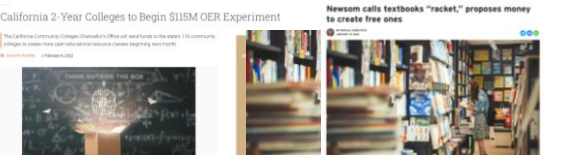
**February 4, 2022**  
**Learning is More Free and Open**  
**California 2-Year Colleges to Begin \$115M OER Experiment**  
**Suzanne Smalley, Inside Higher Ed (results in better grades, lower costs)**  
<https://www.insidehighered.com/news/2022/02/04/california-open-access-115-million-but-our-community-colleges>  
<https://www.insidehighered.com/news/2022/02/04/california-open-access-115-million-but-our-community-colleges>  
<https://www.insidehighered.com/news/2022/02/04/california-open-access-115-million-but-our-community-colleges>

The grant program concluded in 2019 and it is anticipated that the 23 community colleges produced 34 Zero Textbook Cost degrees or certificates, saving 23,373 students approximately \$42,912,828 in textbook costs resulting in an 858% ROI (return on investment) from the original \$5 million invested by the CA Community College Chancellor's Office.

California 2-Year Colleges to Begin \$115M OER Experiment

The California Community College Chancellor's Office will award funds to the areas 14 community colleges to create more open educational resource courses beginning next month.

Heurum calls textbooks "rocket," proposes money to create free ones




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### Introducing the TEC-VARIETY Model

<http://tec-variety.com/>  
<http://tec-variety.com/TEC-VARIETY-Chinese.pdf>  
 Free book available: <http://hdl.handle.net/11599/4481>

**Tone/Climate**  
**Encouragement, Feedback**  
**Curiosity**

**Variety**  
**Autonomy**  
**Relevance**  
**Interactive**  
**Engagement**  
**Tension**  
**Yields Products**



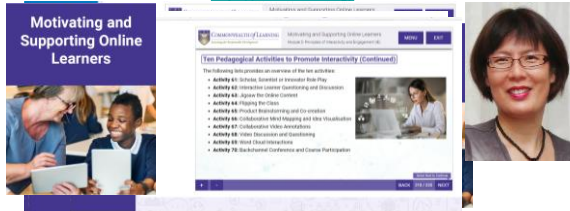
79

### September 23, 2022

Khoo, E., & Bonk, C. J. (2022). Motivating and Supporting Online Learners

free course available: <https://colcommons.org/my-course>  
<https://www.colverse.org/>

Motivating and Supporting Online Learners



80

### Special Issue on Online Learning Research

Martin, F., Dennen, V. P., & Bonk, C. J. (Eds.) (2023). Special Issue: Systematic Reviews of Research on Online Learning.

*Online Learning Journal*, 27(1). DOI: <http://dx.doi.org/10.24059/olj.v27i1.3887>  
 Entire issue with cover: <http://www.publicationsshare.com/24>  
 EdTechBooks: DOI: 10.24059/olj.v27i1.3887




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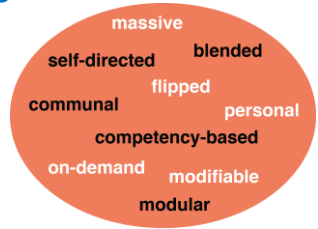
82

### It's Time to Wake Up!



83

### How Learning is Changing: Mega Trend #3. Customization




massive  
 self-directed  
 communal  
 on-demand  
 blended  
 flipped  
 competency-based  
 personal  
 modifiable  
 modular

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**June 26, 2024**  
**Learning is More On Demand**  
**Hologram in this hospital allows doctors to 'teleport' to meet patients**  
 A newly installed holographic display in Crescent Regional Hospital in Lancaster, Texas, is allowing doctors to meet with patients in real-time and helping them reduce travel time. CNN affiliate WFAA has more.  
<https://www.cnn.com/2024/06/26/us/video/hologram-visit-doctors-outfits-texas-hospital-ai/index.html>




85

**Learning is More On Demand**  
**AI Tutor Pro, Contact North**  
<https://www.aitutorpro.ca/>





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**Learning is More On-Demand**



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**June 17, 2021**  
**Learning is More Blended**  
**Free Book: Hybrid-Flexible Course Design (HyFlex Teaching)**  
<https://edtechbooks.org/hyflex>

88

**Learning is More Self-Directed**  
**Language Lessons Online**  
 e.g., BBC Learning English, Duolingo, Babbel, SpanishPod, etc.  
 (Zixi Li & Curt Bonk, 2023 published, Duolingo Research)  
<http://www.bbc.co.uk/learningenglish>



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**September 8, 2023**  
**Learning is More On-Demand**  
**ChatGPT: Your new academic mentor**  
**Niamh Ancell, Cyber News**  
<https://cybernews.com/academy/news/chatgpt-your-new-academic-mentor/>

ChatGPT: Your new academic mentor



**ChatGPT for language learning – All the Prompts you need**

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**June 13, 2022 (Khan World School)**  
**Learning is More Personalized**  
 Behind Khan Academy And Arizona State University's Khan World School Launch, Michael B. Horn, Forbes

<https://www.forbes.com/sites/michaelbhorn/2022/05/31/behind-khan-academy-and-arizona-state-universitys-khan-world-school-launch/>  
 At present, the Khan World School is drawing interest from students around the world. The school will be free for students in Arizona by taking advantage of ASU's charter school. But for these locations where it isn't a public option, Khan said that they will be able to offer the school for less than \$10,000.  
 The Khan World School is aiming to tackle that challenge with a fully, synchronous session where students debate topics that often aren't discussed in schools—things like “Will the Fed be able to control inflation?”

**Learning for everyone, everywhere**

AI's Education Revolution  
 Khan Academy is using ChatGPT to bring one-on-one teaching to scale.

WSJ OPINION



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**August 20, 2019**  
**Learning is More Personalized**  
 ASU develops world's first adaptive-learning biology degree, ASU News

<https://www.asu.edu/news/2019/08/20/asu-develops-worlds-first-adaptive-learning-biology-degree>  
 Flipping the classroom increased performance and persistence. “Beckett Stern and I got an A on the end of the junior-level major’s course, Evolution — Biology 345, and also at the end of the class on zombies... The results of the first effort were impressive.”  
 “In its first semester, we saw student pass rates, in a nonmajor Biology 100 course called The Living World, improve by 24% and dropout rates reduce by 90%...”

ASU News

ASU develops world's first adaptive-learning biology degree






92

**June 16, 2021**  
**Learning is More Personalized**  
 AI voice actors sound more human than ever—and they're ready to hire, Karen Hao, MIT Technology Review

Voice (4:43): <https://www.youtube.com/watch?v=YajBaSPQ1Hk>  
 Video downloaded: <http://curtbonk.com/aivoice2.html>  
 Audio (4 examples): <http://curtbonk.com/aivoice.html>

AI voice actors sound more human than ever—and they're ready to hire



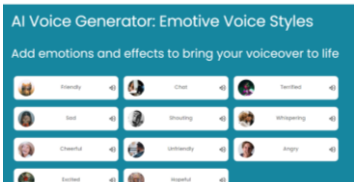
93

**September 15, 2023**  
**Learning is More Personalized**  
 AI Voice Generator For Commercial Use  
 Natural Reader

<https://www.naturalreaders.com/>

AI Voice Generator: Emotive Voice Styles

Add emotions and effects to bring your voiceover to life



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**June 6 and 27, 2022**  
**Learning is More Modular**  
 Microcredentials and Certificates  
 Susan Manning, Ed.D, Director of Customer Education, Credly, eSchool News

<https://learn.answbe.com/about>

The macro impact of microcredentials

3 reasons microcredentials are poised to go mainstream

Micro-CREDENTIALS

THE GREAT UPHEAVAL




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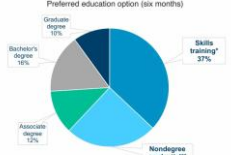
**August 3, 2023**  
**Learning is More Modular**  
 Stacking Certificates and Degrees  
 Lindsay Dougherty, Inside Higher Ed

<https://www.ecampusnews.com/2022/12/26/closing-the-skills-gap-with-microcredentials>

Stacking Certificates and Degrees

The lessons we've learned so far.

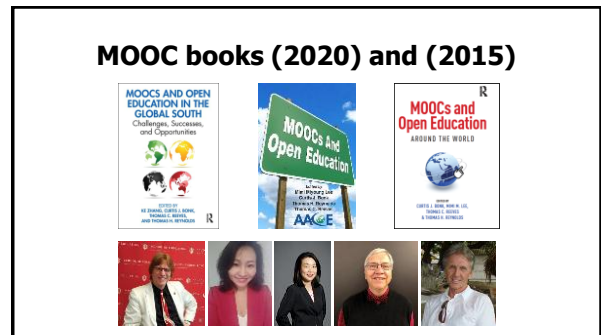
By Lindsay Dougherty



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**November 26, 2019**  
**Chapter 1. MOOCs and Open Education in the Global South: Successes and Challenges**  
**Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds**

TABLE 8.9 List of Countries Discussed in the Book

Region	Country and Chapter	List of Authors
Africa	1. Egypt (Chapter 4, 22)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	2. Kenya (Chapter 24, 26)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	3. Rwanda (Chapter 24)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	4. South Africa (Chapter 15, 16)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	5. Tanzania (Chapter 24)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	6. Uganda (Chapter 24)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	7. Zambia (Chapter 24)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
Asia	8. Zimbabwe (Chapter 15, 24)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	1. China (Chapter 5, 16)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	2. India (Chapter 20)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	3. Indonesia (Chapter 17)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	4. Malaysia (Chapter 17, 20)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	5. Nepal (Chapter 7)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	6. North Korea (Chapter 12)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	7. Philippines (Chapter 17, 20)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	8. Sri Lanka (Chapter 7)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	9. South Korea (Chapter 12)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	10. Thailand (Chapter 15, 17)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds
	11. Vietnam (Chapter 17)	Ke Zhang, Curtis J. Bonk, Thomas C. Reeves, and Thomas H. Reynolds

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## Learning is More Massive Greetings from Nepal,

**Baman Kumar Ghimire**  
Teacher, Motherland Secondary School, Pokhara  
I held a workshop in a school about 70 students of age 13-15. I was excited to learn that in less than 8 months 78 students of age 10-15 from that school completed at least a MOOC.



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## Weirdness #8: Hundred+ MOOC Clubs

**September 11, 2019**

**250 MOOCs and Counting: One Man's Educational**

**Journey, Chronicle of Higher Education**

<https://chronicle.com/article/250-MOOCs-Counting-One/239377?cid=ar>  
If the MOOC movement has faded, nobody told Jina Nigal. Mr. Nigal, who lives in Port Harcourt, Nigeria, has completed and passed 250.



104

## May 20, 2016 Chapter 18: Changing the Tune: MOOCs for Human Development? A Case Study (agMOOCs in India)

Rajiv Venkateshram and Asha Kumar (COL)

<http://www.agmoocs.in/>



105

## Participant #1(boy, grade 10)

257 courses in the library from Coursera: A Grade 10 student from a public school where English is taught only for about 3 hours a week, he blindly jumps into any courses he finds suitable probably for learning English.

From Coursera.org

1. English For Science, Technology, Engineering and Mathematics
2. Understanding Research Methods
3. Virtual Future for Education?
4. Social Norms, Social Change?
5. Standard Introduction to Food and Health
6. Labor and the Market
7. Power Onboarding
8. eHealth: How the Internet is changing health
9. Improving your statistical inferences
10. Global Health Policy
11. English for Media Literacy
12. Code Yourself: An Introduction to Programming
13. Behavioral Finance
14. English for Accountants
15. Teach English Now! Teaching Language Online
16. Creative Thinking: Techniques and Tools For Success
17. Economic Growth and Distribution: Justice Part 1: The Role of the state
18. Transmedia Storytelling: Narrative Worlds, emerging technologies, and global audiences
19. Introduction to Cloud Identity
20. Introduction to Philosophy
21. Nanotechnology and Nanocomposites, Part I
22. Assessment For Learning
23. Big History: Connecting Knowledge
24. The Science of Beer Cols



RECT 21

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## June 6, 2023 (Code in Place) How to 'democratize education': Stanford's free online course gains 30,000 students in 3 years (30,000 students, 120+ countries, 3,000 volunteer teachers)

<https://news.stanford.edu/2023/03/22/famous-stanford-coding-course-free-online/>  
Alcino Donadel, University Business

How to 'democratize education': Stanford's free online course gains 30,000 students in 3 years

For students and teachers alike, Stanford's free online course gains 30,000 students in 3 years, according to the USA Group and College Network.

In partnership with the Center for Digital Learning, Stanford may be the first to have a free online course that is being offered for the second time since the coronavirus pandemic began. (Image credit: Andrew Brubaker)

Stanford's free online course gains 30,000 students in 3 years



(Clockwise from left) Stanford faculty Chris Piech and Mehman Sahami and senior lecturer Julie Dornier will lead "Code in Place," a free online entry to coding course that is being offered for the second time since the coronavirus pandemic began. (Image credit: Andrew Brubaker)

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## January 20, 2022 Arizona State University Announces Effort To Educate 100 Million Learners Worldwide

Michael T. Nietzel, Forbes

<https://www.forbes.com/sites/michaelnietzel/2022/01/20/arizona-state-university-100-million-learners-worldwide/>  
Video (2:07): [https://vimeo.com/667987472?embedded=true&source=video\\_player&player=13433234](https://vimeo.com/667987472?embedded=true&source=video_player&player=13433234)  
<https://thunderbird.asu.edu/lifelong-learning/100-million-learners>



- Global Leadership in the Fourth Industrial Revolution
- Customer Experience and Digital Marketing in a Global World
- Global Entrepreneurship and Sustainable Business
- Data Analytics and Digital Transformation in a Global World
- Global Financial Accounting



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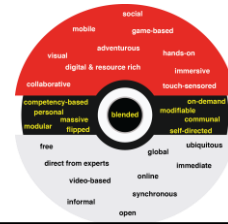


## It's Time to Wake Up!!!



109

## 30+ Ways Learning is Changing: Recapping the Three Mega Trends: Engagement, Access, and Customization



110

## The Career Curriculum Continuum

Andrew Hermalyn, Inside Higher Ed

**The 60 Year Curriculum:**  
Developing New Educational Models to Serve the  
Agile Labor Market

<https://www.insidehighered.com/digital-learning/article/2013/03/14/new-educational-models-serve-agile-labor-market>



111

## Dreams of Smarter Learning...

How will questions of **learner engagement shift** as learning becomes filled with gen AI tools and pedagogy for even more immersive, massive, open, blended, visually-based, online, and filled with gen AI?



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it's time  
to wake up.



113

## We are entering a jumping off point...

(Audience: South China Normal University)



114

Things are heating up!



115

The Learning Revolution is coming within reach!



116

**Remember...**  
**"I cannot do this alone."**

"I cannot do this alone."  
 "I cannot do this alone."  
 "I cannot do this alone."



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**Any Questions or Comments?**

Slides at: [TrainingShare.com](https://www.trainingshare.com) (go to "Archived Talks")

Papers: [PublicationShare.com](https://www.publicationshare.com)

Free book: <http://tec-variety.com/>

Free Course: <https://colcommons.org/welcome/coursedetails/8>

Curtis J. Bonk, IST Professor, Indiana University

Email: [cjbonk@indiana.edu](mailto:cjbonk@indiana.edu) <http://curtbonk.com/>

Free!

Free!

Free!

Not Free!



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