Slide 1

Technology Today, Technology Tomorrow: Might Learning Evolutions lead to Learning Revolutions?

Curtis J. Bonk, Professor, Indiana University
cjbonk@iu.edu
http://curtbonk.com/

1

Slide 2

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

Curtis J. Bonk, Professor, Indiana University
cjbonk@iu.edu
http://curtbonk.com/

Wake Up to Your Dreams

2

Slide 3

Dreams of Smarter Learning…

It's Time To Wake Up

S M A R T
Specific | Measurable | Attainable | Relevant | Time Based

Infographic: The Technology Scientists Use to Engineer Dreams

3

Slide 4

Talk Overview

1. Technology Yesterday
2. Technology Today (30 ways learning is changing…)
5. Technology Trends of Tomorrow

Future Now Past

4

Slide 5

As technology got smarter…

Remote learning isn't new: Radio instruction in the 1937 polio epidemic
Katherine A. Foss, The Conversation
https://theconversation.com/amp/remote-learning-isnt-new-radio-instruction-in-the-1937-polio-epidemic-143797
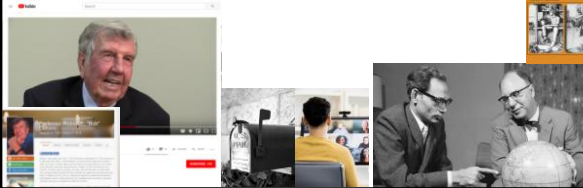

5

Slide 6

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
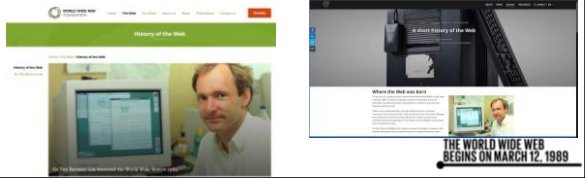

6

Correspondence Courses
Bob Clasen, University of Wisconsin
https://www.youtube.com/watch?v=kCm1_MGaqec&feature=youtu.be
February 27, 1934-March 17, 2018
https://www.cressfuneralservice.com/obituary/249139/Robert-Clasen/

7

August 6, 2021
The Web is now 30+!
http://info.cern.ch/ (First website)
http://money.cnn.com/2016/08/06/technology/world-wide-web-25-years-old/index.html?iid=hp-stack-dom
https://webfoundation.org/about/vision/history-of-the-web/
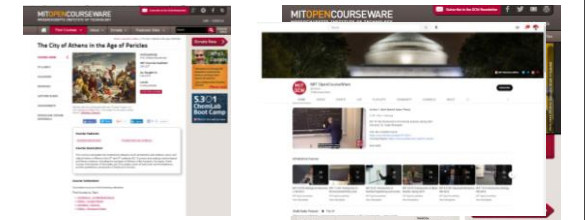https://home.cern/science/computing/birth-web/short-history-web

8

January 15, 2021
Wikipedia is now 20+!
Simon Garfield, Esquire: What We Know And Can Agree On:
Wikipedia At 20
https://en.wikipedia.org/wiki/Wikipedia:20th_anniversary
https://www.esquire.com/uk/culture/a34412278/wikipedia-at-20/

9

MIT OpenCourseWare (OCW)
MIT OpenCourseWare is now 20+!
http://ocw.mit.edu/index.htm
https://www.youtube.com/watch?v=0aAEamhJHUI
https://ocw.mit.edu/about/milestones/

10

November 14, 2024
Case Examples (MIT OCW)
Like millions of others during the global Covid-19 lockdowns, Emmanuel Kasigazi, an entrepreneur from Uganda, turned to YouTube to pass the time. But he wasn't following an influen sharing platform for educational resources. Since 20 journey through YouTube, educating himself on

11

Fast Forward to 2025…
"Anyone can now learn anything from anyone at any time."

12

November 2022 to May 2025:
AI, AI, AI, AI...
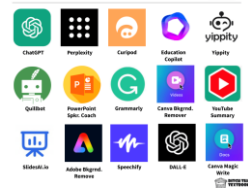**AI in Higher Education News**
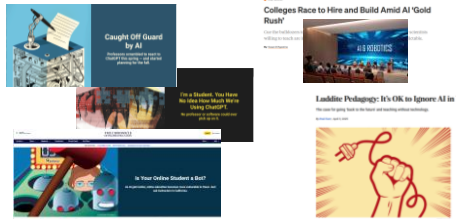
13

May 15, 2025
Categorized AI Tools for Teaching and Learning
https://docs.google.com/document/d/11Ar-wODtzmdxDZ8aVuf6CpUd8FZcs6soIJlDbwE40p0/edit?tab=t.0

14

July 5, 2024
AI in Education
Stefanie Panke and Israt Jahan Oeeshi
https://edtechbooks.org/ai_in_education
Educate AI
https://edu-ai.org/3d-flip-book/educate-ai-magazine-volume-1-issue-2/
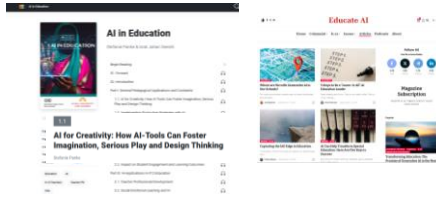
15

May 17, 2025
Annette Vee's
AI and How We Teach Writing
https://aiandhowweteach.substack.com/
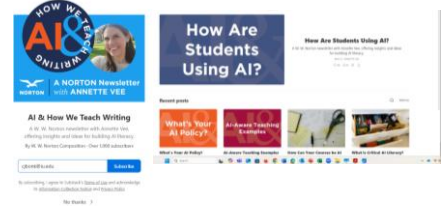
16

AI Tutor Pro and AI Teaching
Assistant Pro, Contact North
https://www.aiteachingassistantpro.ca/
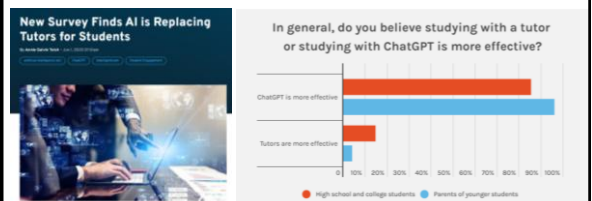**https://www.aitutorpro.ca/**

17

June 1, 2023
Learning is More Personalized
New survey Finds AI is Replacing Tutors for Students
Annie Galvin Telch, Fierce Education
https://www.fierceeducation.com/technology/new-survey-finds-ai-replacing-tutors-students /

18

3

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/

19

November 30, 2023
Over 1,000 Sun Devils enroll in ASU's generative AI training course
https://tech.asu.edu/features/ASUFacultyAICourse

20

April 19, 2024
Professional Certificate in ChatGPT for Educators
Georgia Tech
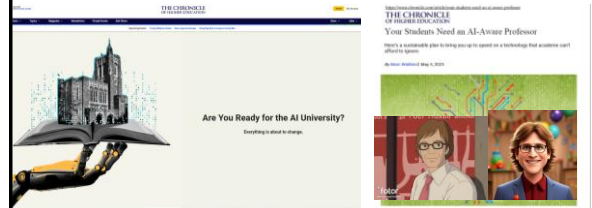https://www.edx.org/certificates/professional-certificate/gtx-chatgpt-for-educators
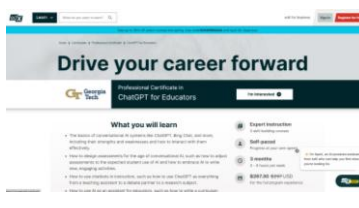
21

April 8, 2025
Are You Ready for the AI University?
Scott Latham, The Chronicle of Higher Education
https://www.chronicle.com/article/are-you-ready-for-the-ai-university

22

August 10, 2023
Teachers are surprise AI champions
Laura Ascione, eSchool News
https://www.eschoolnews.com/digital-learning/2023/08/10/teachers-are-surprise-ai-champions/

- **62 percent** of all respondents have **used AI technologies.**
- **Teachers** use AI for:
  - **Research (44 percent).**
  - **Generating lesson plans (38 percent).**
  - **Summarizing or synthesizing information (38 percent).**
  - **Generating classroom materials like tests and assignments (37 percent).**
- **Students** agree that:
  - **AI technologies help them better understand material (73 percent).**
  - **AI helps them study faster or more efficiently (67 percent).**
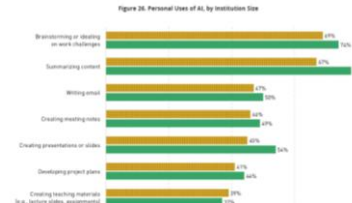

23

February 17, 2025
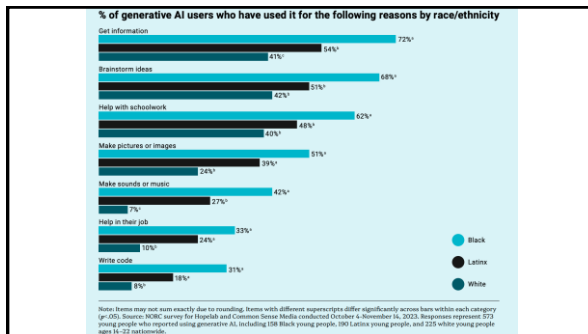**2025 EDUCAUSE AI Landscape Study: Into the Digital AI Divide**
Jenay Robert and **Mark McCormack**
https://www.educause.edu/content/2025/2025-educause-ai-landscape-study/special-focus-the-digital-ai-divide-between-institutions#figure20

24

25

26

27

28

29

30

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

31

August 6, 2024
There's a Tool to Catch Students Cheating With ChatGPT.
OpenAI Hasn't Released It.
Deepa Seetharaman and Matt Barnum, The New York Times
https://www.wsj.com/tech/ai/openai-tool-chatgpt-cheating-writing-135b755a
May 23, 2025: GPTZero: https://gptzero.me/

32

March 28, 2023
Workplace AI could replace equivalent of 300 million jobs – report
Chris Vallance, BBC
https://www.bbc.com/news/technology-65102150

33

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

34

January 11, 2025
These are the fastest-growing job titles, according to LinkedIn users,
By Auzinea Bacon, CNN
https://www.cnn.com/2025/01/11/business/ai-hospitality-growth-linkedin/index.html

35

April 29, 2025
Duolingo Adopts 'AI-First' Strategy, Will Eliminate All Contract Workers
Jibin Joseph, MSN
https://www.msn.com/en-us/technology/artificial-intelligence/duolingo-adopts-ai-first-strategy-will-eliminate-all-contract-workers/ar-AA1DP5pv
Former Google CEO predicts AI will replace most programmers in a year
Video (0:33): https://curtbonk.com/duolingo2025.html

36

Education 3.0…Education 20/20
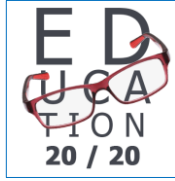
"In Education 3.0, classrooms would move away from lectures, such as this one, to having class time be spent on discussions and projects, using digital technology."
(Per Wikipedia: https://en.wikipedia.org/wiki/Education_3.0)

37

Education 3.0
The Genesis and Emergence of Education 3.0 in Higher Education and its Potential for Africa
First Monday, by Derek Keats and J. Philipp Schmidt, March 2007
http://firstmonday.org/ois/index.php/fm/article/view/1625/1540

38

September 18, 2017
Education 1.0 to 3.0
Gilly Salmon, University of Liverpool, UK
http://www.gillysalmon.com/learningfutures.html

39

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

40

Is there an Education 5.0?
Education 5.0:
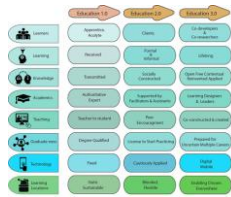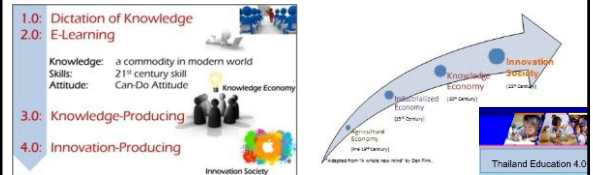**Collaboration and Creativity in Improving Students' Digital Intelligence**
https://btqur.or.id/index.php/injosedu/article/view/202

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.

41

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://uqualio.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.

44

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**

45

Now What is Education 5.0?
Education 5.0:
https://www.sydle.com/blog/education-5-0-61e71a99edf3b9259714e25a
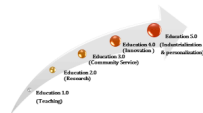
Education Enhances Society: Education 5.0 focuses on preparing individuals with the skills, mindset, and adaptability needed to thrive in a rapidly evolving world. By nurturing critical thinking, creativity, and interdisciplinary problem-solving abilities, Education 5.0 contributes to the overall advancement 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
Camping Trip Guide
Coach
Consultant
Course Expedition Leader
Collaborator
Community Organizer
Chemist
Care Giver
Cultivator
Colleague

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8

Bonk's 20 "Last" Principles of Instruction
(LAST = Learning Activation System Template)
http://travelinedman.blogspot.com/2011/05/bonks-last-principles-of-instruction.html
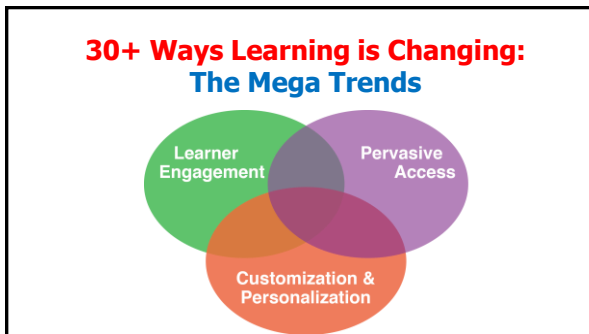
Flexibility

Support and Feedback

Choice and Options

Nontraditional Learning

Convenience

Spontaneity

Passion and Inspiration

Collegiality

Organization

Relevance and Meaningfulness

Sharing

Trial and Error (i.e., it is ok to fail)

Cheerfulness and Optimism

High Expectations

Purpose and Vision

Expanded Resources

Human Connectedness   #20 ???

Empowerment and Autonomy   Cognitive Apprenticeship

49

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

50

30+ Ways Learning is Changing:
The Mega Trends

Learner Engagement

Pervasive Access

Customization & Personalization

51

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

social
mobile   hands-on
touch-sensored
visual
game-based   adventurous
digital & resource rich
immersive
collaborative
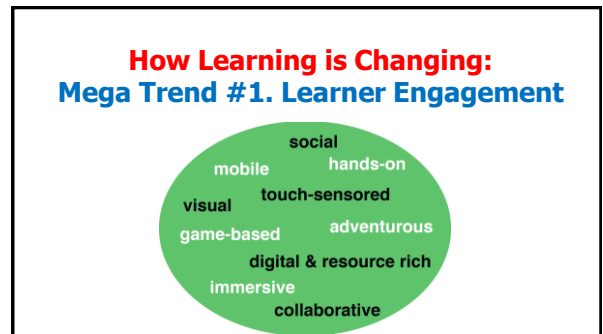
52

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

53

Cats in Cathedral

February 20, 2024
Learning is More Visual

Sora

Sora

Sora: Finally, An AI Video Generator
Video (3:34): https://youtu.be/IBx3xW1ua-E
Video (12:01): https://youtu.be/NXpdyAWLDas
https://economictimes.indiatimes.com/tech/technology/a-video-star-is-born-openais-sora-stuns-with-ai-act/articleshow/107762800.cms?from=mdr

54

9

February 16, 2024
Learning is More Visual
OpenAI's Video Generator Sora Is Stunning and Utterly Terrifying
Tony Ho Tron, The Daily Beast
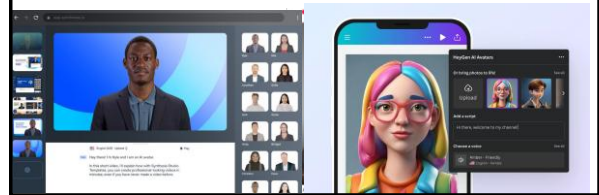

55

Enter the Age of AI video generators...
Learning is More Visual
Video (11:22): https://www.youtube.com/watch?v=4Du-ofrqaSk

56

July 11, 2023
Learning is More Immersive
'Metaversities' Face Virtual Learning's Financial Realities
Lauren Coffey, Inside Higher Ed
https://www.insidehighered.com/news/tech-innovation/teaching-learning/2023/07/11/metaversities-face-virtual-learnings-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.

57

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

58

AR Glasses Orion Meta

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

Meta's New AR Glasses
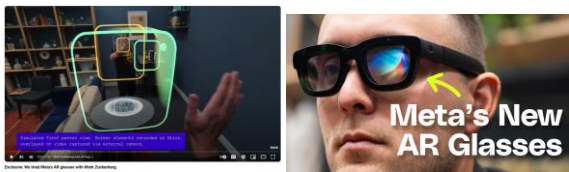
59

August 27, 2023
Learning is More Social
R511 Fall 2023 in Padlet):
Introductions: Getting to Know One Another
https://padlet.com/mlucimara/r511-fall-2023-getting-to-know-one-another-wyhbgt9xzcqkfmum
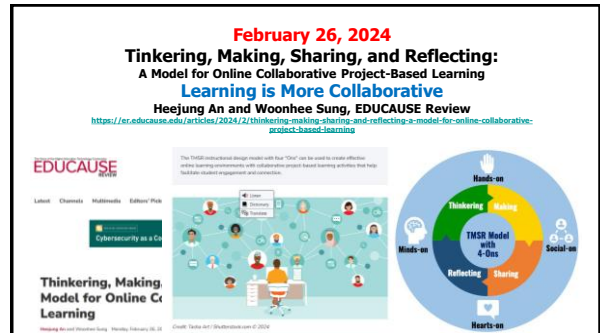

60

February 15, 2023
Learning is More Collaborative
Strong Schools, Afghani Women
Asian University of Women
https://pressbooks.pub/schools/
file:///C:/Users/18123/Downloads/Strong-Schools-1674597042.pdf

61

February 26, 2024
Tinkering, Making, Sharing, and Reflecting:
A Model for Online Collaborative Project-Based Learning
Learning is More Collaborative
Heejung An and Woonhee Sung, EDUCAUSE Review
https://er.educause.edu/articles/2024/2/thinkering-making-sharing-and-reflecting-a-model-for-online-collaborative-project-based-learning
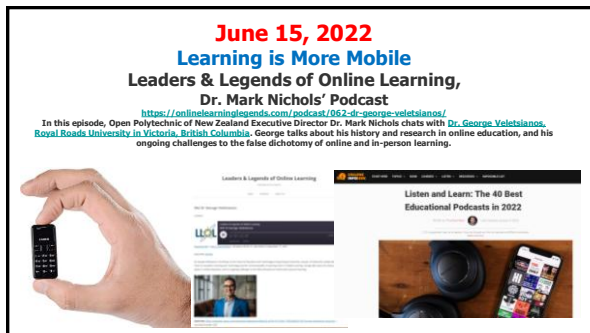
62

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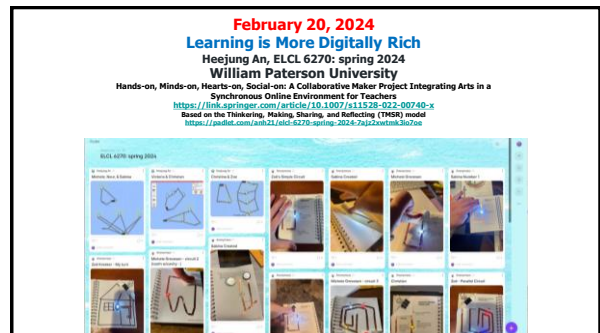https://onlinelearninglegends.com/podcast/062-dr-george-veletsianos/
In this episode, Open Polytechnic of New Zealand Executive Director Dr. Mark Nichols chats with Dr. George Veletsianos, Royal Roads University in Victoria, British Columbia. George talks about his history and research in online education,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

63

February 20, 2024
Learning is More Digitally Rich
Heejung An, ELCL 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/s11528-022-00740-x
Based on the Thinkering, Making, Sharing, and Reflecting (TMSR) model
https://padlet.com/anh21/elcl-6270-spring-2024-7ajz2xwtmk3io7oe

64

December 6, 2024
Learning is More Digitally Rich
How Faculty Can Harness Generative AI for Enhanced Learning: Part 1: TEC-VARIETY and R2D2
Curt Bonk, Student Learning Outcomes (SLO), COACHes Hub
Mark Brown, 'My Leukemia Story': https://on.soundcloud.com/ajoKdi6PXUnoC2x88
****NotebookLM Podcast (17:44): https://rss.com/podcasts/friday-slo-talks/1790741/
**SLO: https://www.youtube.com/@studentlearningoutcomes-slos
NotebookLM Podcast (20:45): https://www.youtube.com/watch?v=i3lIu5FSdsQ

65

May 15, 2025
Learning is More Digitally Rich
Suno: Makes a Song About Anything
How About: The medical educators and AI song, indie rock
**Udio: https://www.udio.com/
**Suno: https://suno.com/
**The Future We Create: https://suno.com/song/5343dd7d-8bcd-4d01-88ab-0a41c4469f5c
**Teaching in Code: https://suno.com/song/8704ddfc-5d25-4488-95e9-37863b06e3cd
https://suno.com/create/signup_source=splashpage&referral=%2Fhome&redirected_from=signup&wid=default

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Slide 67

November 5, 2024
Book Teasers and Podcasts
Learning is More Digitally Rich
(NotebookLM (AI Creator); Final Projects R546 Fall of 2024
https://notebooklm.google/
Mark Brown, 'My Leukemia Story'

Pressbook and Podcast (with NotebookLM (AI Creator)), Topic: Teaching Across Cultures: A Pedagogical Guide for Online Faculty in Higher Education; Keirsten Eberts; Link to book: https://pressbooks.palni.org/teachingacrosscultures/ and Link to AI generated podcast (bottom of this page): https://pressbooks.palni.org/teachingacrosscultures/front-matter/introduction/.
NotebookLM now lets you listen to a conversation about your sources
Our new Audio Overview feature can turn documents, slides, charts and more into engaging discussions with one click

67

Slide 68

April 30, 2025
What is smileUP & How to use it?, SMILE, Paul Kim
https://always.seedsofempowerment.org/
Ask.SMILE: https://ask.smile.seedsofempowerment.org/
SMILE.ASK: https://always.seedsofempowerment.org/
https://www.youtube.com/watch?v=pblU8sSALWo

Specifically, SMILE will be used to assess student's critical thinking and GPT 3.5 to provide constructive feedback to the questions. Students ask 50 or more questions and write a reflection report on the breadth and depth of the response of ChatGPT. **With the help of GPT, your question will be evaluated on a rubric from Level 1 to Level 5 aligned to Bloom's Taxonomy**

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Slide 69
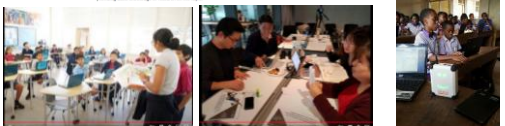
Ask SMILE
Learning is More Game-like
Example of asking a Level 1 question (i.e., remembering) and system feedback in the Ask.SMILE system

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Slide 70

It's Time to Wake Up!

70

Slide 71

How Learning is Changing:
Mega Trend #2. Pervasive Access

informal
free   global
video-based
open
synchronous   ubiquitous
direct from experts
online
immediate

71

Slide 72

March 7, 2024
UN telecomms agency chief: One third of humanity still offline
https://news.un.org/en/story/2024/03/1147377

72

August 3, 2024
Learning is More Video-based…
Preview: US History to 1865 | Study Hall
YouTube-iversity, ASU
Susan D'Agostino, Inside Higher Ed
https://www.insidehighered.com/news/2023/01/25/arizona-state-turns-youtube-reach-learners-margins
https://www.youtube.com/watch?v=YpDcStxku3s&list=PLLDS8IOp16nFcW_vD2TdcEv4_pzWeDs_A
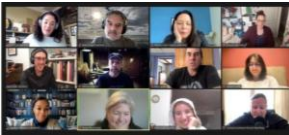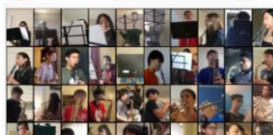
73

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

74

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
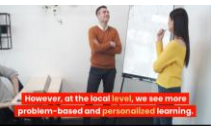
75

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

76

Learning theory syllabus

November 12, 2023
Learning is More Video-based…
Pictory (https://app.pictory.ai/)
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/1699816452918/20231112193620090yUhq3NLYZR0ppOX

77

78

5/28/2025

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=TzFepHKifGo

79
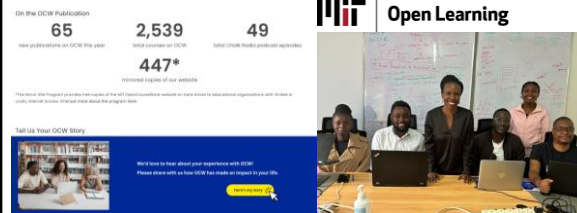
August 10, 2023
Learning is More Immediate
300,000-year-old skull found in China unlike any early human seen before
Hafsa Khalil and Jack Guy, CNN
https://www.cnn.com/2023/08/10/asia/ancient-skull-china-human-evolution-intl-scli-scn/index.html

80

August 12, 2024
Learning is More Open
The Impact of MIT OpenCourseWare
2023-2024, Academic Year
https://www.ocw-openmatters.org/give-to-ocw/2024-23-impact-of-ocw/

81

February 27, 2025
Making Knowledge Accessible and Fostering a Network of Curious Minds
MIT OpenCourseWare
https://alopeneducation.pubpub.org/

82

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

83

November 17, 2023
Learning is More Open
Your Gateway to Open Access in Asia
https://openaccessasia.org/

84

14

Slide 85

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/gavin-newsoms-115-million-bet-oer-community-colleges
https://sparcopen.org/our-work/california-governors-zero-textbook-cost-degree-budget-proposal/
https://calmatters.org/education/2021/01/newsom-fund-free-textbooks/
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

Newsom calls textbooks "racket," proposes money to create free ones

85

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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
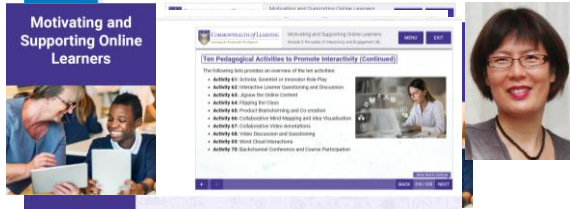
Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

86

Slide 87

September 23, 2022
Khoo, E., & Bonk, C. J. (2022). Motivating and Supporting Online Learners
free course available: https://colcommons.org/welcome/coursedetails/8;
https://colcommons.org/my-course
https://www.colvee.org/

87

Slide 88

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.publicationshare.com/34
EdTechBooks: DOI: 10.24059/olj.v27i1.3887

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Slide 90

It's Time to Wake Up!
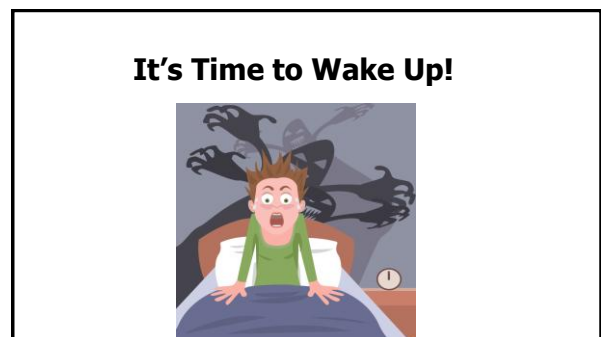
90

How Learning is Changing:
Mega Trend #3. Customization

massive

blended

self-directed

flipped

communal

personal

competency-based

on-demand

modifiable

modular

91

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.
CNN
https://www.cnn.com/2024/06/26/us/video/hologram-visits-doctors-patients-texas-hospital-affil-oko-coroo-diovid

92

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

93

Learning is More On-Demand

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July 10, 2024
Learning is More On Demand
'A Professor's Digital Mini-Me'
Alex Walters, The Chronicle of Higher Education
https://www.chronicle.com/article/a-professors-digital-mini-me
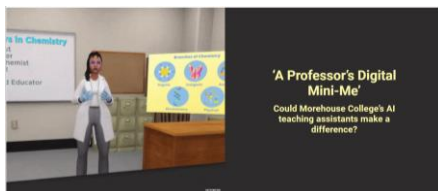
95

May 25, 2023
Learning is More On Demand
Chat with heypi; especially good for
social/emotional/burnout support
https://heypi.com/talk

96

May 25, 2023
Learning is More On Demand
Chat with any PDF
https://www.chatpdf.com/

97

June 6, 2022
Learning is More Blended
Why Notre Dame is boldly pushing ahead on blend of live and remote learning
Chris Burt, University Business
https://universitybusiness.com/why-notre-dame-is-boldly-pushing-ahead-on-blend-of-live-and-remote-learning/

98

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

99

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

100

Wanted:
Billions of Self-Directed Learners
https://www.peoplematters.in/article/training-development/the-era-of-self-directed-learning-hrs-new-role-and-strategy-24348

101

Benefits of Self-Directed Learners
https://discoverpraxis.com/reasons-not-to-go-to-college/

102

January 31, 2023
Learning is More Modifiable
Mosaic Active Learning Classrooms at IU

103

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/michaelhorn/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 those localities 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 stereotype with a daily, synchronous seminar 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.
By Andy Kessler Follow
May 21, 2023 1:13 pm ET
WSJ OPINION

104

August 20, 2019
Learning is More Personalized
ASU develops world's first adaptive-learning biology degree, ASU News
https://www.insidehighered.com/news/2020/08/27/internet-upbeat-short-term-online-credentials-will-it-be-sustained
Flipping the classroom increased performance and persistence. "Beckett Sterner and I got an ovation at 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 nonmajors' Biology 100 course called The Living World, improve by 24% and dropout rates reduce by 90%…"

105

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
https://www.technologyreview.com/2021/07/09/1028140/ai-voice-actors-sound-human/?utm_source=pocket-newtab
Voice (4:43): https://www.youtube.com/watch?v=YajBa5PO1Hk
Video downloaded: http://curtbonk.com/aivoice2.html
Audio (4 examples): http://curtbonk.com/aivoice.html
Natural Reader: https://www.naturalreaders.com/

AI Voice Generator: Emotive Voice Styles
Add emotions and effects to bring your voiceover to life

106

June 6 and 27, 2022
Learning is More Modular
Microcredentials and Certificates
Susan Manning, Ed.D, Director of Customer Education, Credly, eSchool News
https://www.ecampusnews.com/2022/06/06/the-macro-impact-of-microcredentials/
https://learn.gnowbe.com/about

The macro impact of microcredentials
Susan Manning, Ed.D, Director of Customer Education, Credly
June 6 2022
By pairing microcredentials with digital credentials, individuals

3 reasons microcredentials are poised to go mainstream
Randy Greff, Chief Strategy and Growth Officer, JFF
June 27, 2022
Our understanding of learning and work has started to change—our understanding of credentials must now evolve, too

MICRO-CREDENTIALS

THE GREAT UPHEAVAL
ARTHUR LEVINE SCOTT VAN PELT

107

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

August 03, 2023
Stacking Certificates and Degrees
The lessons we've learned so far.
By Lindsay Dougherty

Closing the skills gap with microcredentials

MICROCREDENTIALS

Preferred education option (six months)
Graduate degree 10%
Bachelor's degree 16%
Skills training* 37%
Associate degree 12%
Nondegree credential** 25%

108

December 14, 2021
Learning is More Massive
A Decade of MOOCs: A Review of MOOC Stats and Trends in 2021
Dhawal Shah, Class Central
https://www.classcentral.com/report/moocs-stats-and-trends-2021/

Growth of MOOCs

agMOOCs

220M Students | 950 Universities
19.4k Courses | 1670 Microcredentials | 70 MOOC-based degrees

By the Numbers: MOOCs in 2021
Statistics do not include China

cc class central

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MOOC books (2020) and (2015)

MOOCS AND OPEN EDUCATION IN THE GLOBAL SOUTH
Challenges, Successes, and Opportunities

MOOCs and Open Education

AACE

MOOCs and Open Education AROUND THE WORLD

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Learning is More Massive
Marianne Krasny at Cornell et al., 2020
Courses for a Cause:
MOOC Contributions to a "Better Place for All"

111

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.

112

Participant #1 (boy, grade 10)

(72 courses so far, mostly 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 course he finds suitable preferably for learning English.

From Coursera.org

1. English For Science, Technology , Engineering and Mathematics
2. Understanding Research Methods
3. What Future for Education?
4. Social Norms, Social Change I
5. Stanford Introduction to Food and Health
6. Luther and the West
7. Power Onboarding
8. eHealth: More than just an electric record
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 Journalism
15. Teach English Now! Teaching Language Online
16. Creative Thinking: Techniques and Tools For Success
17. Economic Growth and Distributive Justice Part I- The Role of the state
18. Transmedia Storytelling: Narrative Worlds, emerging technologies, and global audiences
19. Introduction to Cloud Identity
20. Introduction to Psychology
21. Nanotechnology and Nanosensors, Part I
22. Assessment For Learning
23. Big History: Connecting Knowledge
24. The Science of Stem Cells

AECT 21

113

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/2021/03/22/famous-stanford-coding-course-free-online/
Alcino Donadel, University Business
https://universitybusiness.com/how-to-democratize-education-stanfords-free-online-course-gains-30000-students-in-3-years/

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

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Slide 116

It's Time to Wake Up!!!

116

Slide 117

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

117

Slide 118

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/views/2019/03/13/how-universities-can-stay-center-learners-lives-opinion
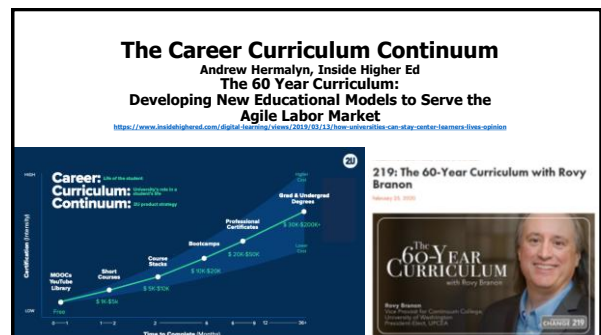

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Dreams of Smarter Learning...
How will questions of learner engagement shift as
learning becomes filled with gen AI tools and pedagogy
for even more immersive, massive, open, blended,
visually-based, online, and filled with gen AI?

119

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120

Poll:
Is this an Evolution or Revolution?

121

We are entering a jumping off point…
(Audience: South China Normal University)
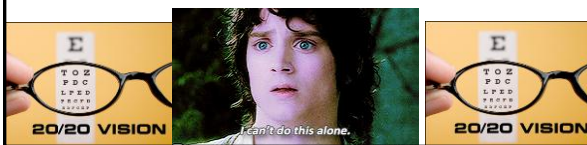

122

Things are heating up!

123

The Learning Revolution is coming within reach!

124

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

125

Any Questions or Comments?
Slides at: TrainingShare.com (go to "Archived Talks)
Papers: 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@iu.edu; http://curtbonk.com/

Free!   Free!   Free!   Not Free!

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