Updated September 1, 2025 (34 pages)
R622: Learning Environments Design (Fall 2025)
IST Department, IU School of Education
(Section 30252: Online Version; 15 weeks)

Syllabus: http://curtbonk.com/R622_online_syllabus_Fall_2025.htm
Zoom (Optional Synchronous Sessions): https://IU.zoom.us/j/8123222878
Course and Article Links in Dropbox and Canvas: http://canvas.iu.edu/
R622 in Canvas: https://iu.instructure.com/courses/2331181
Moderator Sign-up Form: See sign-up form: http://www.trainingshare.com/r622b.php

Instructor: Professor Curt Bonk, Indiana University, Email: cjbonk@iu.edu
Bonk Homepage: https://curtbonk.com/
Padlet Link (Fall 2025): https://padlet.com/cjbonk3/r622-fall-2025-participant-introductions-pmmgsskblsyhr1vm
Padlet Link Fall 2023: https://padlet.com/jamrscot/r622-who-are-you-sgqpxs39z462tdft
Student Info in Padlet (Fall 2022): https://padlet.com/sunseol/sx3ra0rn3tb9vvd5

Course Description
Per the Indiana University catalog, this course is about: "Principles and practice of environmental design. Study of interrelationships among environmental variables. Use of decision models in the design process. Design, construction, and testing of learning environments representing alternative profiles of variables." That sounds complex. Ok, let's simplify. This is a graduate-level research and development class focusing on the design, development, and implementation of learning environments in both formal and informal education and training settings. Students who enroll in R622 will explore the foundations of learning environments from both instructional and pedagogical perspectives, and have the opportunity to design their own learning environment for a content area, setting, and target audience of their choosing. In effect, you will have some freedom to choose what you want to do.

From a macro perspective, this course relates to trends in the field of instructional technology (my current discipline) and educational psychology (my former discipline) away from the endless debates related to different learning theories and instructional design models, toward a more eclectic understanding of the key instructional principles and practices that can garner exciting, effective, and engaging learning across all grade and age levels and sectors of education and training. In effect, this course should have relevance to any teacher or instructor, instructional designer, program manager, learning center director, training officer, educational evaluator, or anyone interested in enhancing learning and instruction anywhere on this planet. There is no secret sauce or magic formula to making this happen. However, I will provide my current understanding of what principles tend to lead to the most robust forms of learning. You will learn about my three formulas, models, or frameworks that I have found build success (i.e., R2D2, TEC-VARIETY, and Education 20/20).

This course is designed to be ground up and top down. You will learn about my models (as stated above) but you will each design your own vision, model, or framework of an effective learning environment. We will share such visions in the weekly optional synchronous sessions in Zoom as well as in the discussion forums.

Course Goals and Learning Objectives
There are many objectives for this course. And you will potentially where many hats. I list just a few below.

1. **Historian:** Develop an understanding of the history and foundations of learning environments.
2. **Consultant:** Understand critical design considerations for the development of learning

environments given a specific audience and setting.

3. **Analyzer:** Critique existing learning environments in both formal and informal settings from an instructional design perspective.
4. **Designer:** Design and develop a learning environment for a specific content area, setting, and target audience.
5. **Evaluator:** Survey the features of classroom, building, online course, school, or campus and provide input to strategic plans to create a more active and engaging learning environment.
6. **Leader:** Take ownership over your own learning as a self-directed learner and autonomous human being. Display for others your learning quests and learning decisions. And perhaps take charge of a group project or task or discussion thread.
7. **Learning Trend Spotter:** Identify and discuss trends and issues that affect the design of learning environments one or more educational sectors or grade levels. In addition, one should predict new trends and concerns on the near horizon.
8. **Networker:** Begin to grow your network of contacts in the field of learning environments design through readings, discussions, synchronous guest expert session, direct emails, and watching archived videos of such esteemed leaders.
9. **Researcher:** Read, reflect, and analyze research related to the design and develop learning environments for different purposes. Also, begin to pose appropriate research questions on learning environments and perhaps conduct initial research or pilot studies.
10. **Learning Technologist:** Learn about some of the emerging learning technologies and tools that can enhance the design of learning environments. And obtain such experience and competence in using one or more of these technologies.

15 Week Schedule (Note: Topics and Guests may change)

Note: Students can read anything in any week or on any topic.

Weekly Agenda and Guests in R622 Learning Environments Design

Date and Week	Topic	Guest
Week 1 (August 25)	Module #1: Learning Environments Foundations and History	Orientation 7 pm: Curt Bonk with prior students Emily Virga, Emily Killen, and Christi Young
Week 2 (Sept 2)	Module #2: Learning Theory and Learning Environments Design and Evaluation Models	John Curry, Idaho State University, Tuesday September 2 at 6 pm Eastern.
Week 3 (Sept. 8)	Module #3: Innovative and Inquiry-Driven K-12 Learning Environments	Jarek Janio, Santa Ana College, COACHes Network, 6 pm Eastern Monday September 8.
Week 4 (Sept 15)	Module #4: Video Examples of Innovative and Inquiry-Driven K-12 Learning Environments	Raaji Naveen and Naveen Mahesh, Beyond 8 at 11 am Eastern Monday Sept 15. 5:30 to 6:30 pm EDT Monday Sept. 15; Guests: Faisal Bin Badar (Australia) – Founder EDLS and Jon Mason, Charles Darwin University
Week 5 (Sept 22)	Module #5: Informal, Open, and	Kenzen Chen and Jill Wang,

(Task #2 & #3 due)	Massive Learning Environments	Taiwan at 8:30 pm Eastern Monday Sept 22.
Week 6 (Sept 29)	Module #6: Technology-Rich and Authentic Learning Environments in Higher Ed	Rebecca Quintana, University of Michigan Sept 29 at 7 pm Eastern.
Week 7 (Oct 6)	Module #7: Learning Environments in the Workplace	Jessi Yi, UK at noon Eastern at 2 pm Monday October 6
Week 8 (Oct. 13)	Module #8: Active Learning Spaces in Higher Ed (all IU)	Merve Basdogan, Texas Tech University at 6 pm Eastern on Tuesday October 7.
Week 9 (Oct 20)	Module #9: Measuring learner engagement and self-directed learning climates, open thinking, mindfulness, wellbeing, and belongingness	Carmen Richardson and Punya Mishra, ASU, Saturday October 18 at 1:15 pm Eastern. Belle Li, Purdue (AI-SDL-PA Scale). Will record an interview at the AECT Conference in Las Vegas.
Week 10 (Oct 27)	Module #10: Technology-Enhanced Learning and Microlearning	Raj Sankaranarayanan, UT Austin at 8 pm Eastern Monday October 27.
Week 11 (Nov 3)	Module #11: Psychology of Online Learning	Tom Reynolds, National University, 6 pm Eastern November 3.
Week 12 (Nov 10)	Module #12: Designing Effective Online Learning Environments	Meina Zhu, Wayne State University, Monday November 10 at 4 pm Eastern. Chris Foley, Indiana University, Monday November 10 at 6 pm Eastern.
Week 13 (Nov 17) **(Task #4 & Task #5 due)**	Module #13: Smart Learning Environments	**Chatbot demonstration:** Dabae Lee, Kennesaw State at 8 pm Monday November 17; Note her podcast (see Week 13 readings) longform video from the IBM Smart Talks
Week 14 (Nov 24)	Module #14: AI, Robotics, and the Metaverse	**Chatbot demonstrations:** Ron Owston, York University and Contact North at 6 pm Eastern on Monday November 24.

		Ray Schroeder, University of Illinois Springfield at 8 pm Eastern Monday November 24.
Week 15 (December 1)	Module #15: Trends and Issues	Students present final projects at 6 pm Monday December 1.

Assignments, Grading Criteria, and Due Dates

Tasks/Assignments	Points	Due Dates
1. Weekly blog postings and summary (or attend 10 synchronous meetings option)	60 points	Due each week (Reflection option due December 1)
2. Learning Environment Critique and Analysis	60 points	Sept 22 (with 2-day grace period)
3. Learning Environment Final Project Skeleton	40 points	Sept 22 (with 2-day grace period)
4. Learning Environment Final Project Design Prototype	60 points	November 17 (with 2-day grace period)
5. Course Super Summary	60 points	November 17 (with 2-day grace period)
6. Share and Discuss Final Projects and Ideas in Canvas	There may be bonus points.	December 1 to end of the course

Note Collaborative Teams: Two tasks are due September 22 (Tasks #2 and #3) and two tasks are due November 17 (Task #4 and #5). Tasks #4 and #5 should be completed with 1 (or 2) partners. They build on each other. There are exceptions to working with a partner, but it requires approved justification. You can work individually or in teams on Task #3 and Task #6. Your choice.

Total Points = 320 (Grading will be according to a 90-80-70-60 scale; see below.)

Grades:
320 or more = A+
307 = A
288 = A-
277 = B+
267 = B
256 = B-
245 = C+
236 = C
224 = C-
192 = D

Grading Guidelines:
All papers will be evaluated for such criteria as: (1) organization and clarity; (2) coherence and flow; (3) content appropriateness and relevancy; (4) apparent effort expended and completeness; (5) originality and creativity; and (6) attention to details (including the use of APA 6th or 7th edition where appropriate). I have never taught this course before; therefore, I do not have preexisting assessment measures to share at this time.

You got a case of the Mondays? Everything is due on Mondays. Most of the optional synchronous meetings are typically on Monday and typically at night. Please upload assignments to Canvas.

Lateness: I have a 48-hour lateness policy with no penalties for any assignment (i.e., a 2-day grace period). Anything submitted after that 48-hour cushion or window loses 1 point per day. So, if it says it is due Monday at midnight, you actually have until Wednesday at midnight to turn it in.

Assignment Requirements:

- Put your name on page #1 of your papers.
- Abide by page length requirements. You can go 1-2 paragraphs (one-half page) over the maximum but nothing more.
- Try to put extra pages in appendices at the end of your paper.
- Turn in papers in Canvas. If late, place paper in Canvas and send it via email to the instructor.

Incompleteness, Copyright, Plagiarism, and Original Work: I expect personally created, unique work on all assignments. Please do not try to cheat the system or this course. Please acquaint yourself with the "*IU Code of Student Rights, Responsibilities, and Conduct*" for the concept of plagiarism. If you are unsure of the rules and regulations regarding plagiarism, you can take a self-paced course on Understanding Plagiarism from Dr. Ted Frick from the IST department. This website is devoted to teaching people about plagiarism and it has tutorials and tests (Certification Tests). Any assignment containing plagiarized material will be awarded a grade of F. At the discretion of the instructor, any assignment turned in that is deemed incomplete, failing to address the task objectives, or seriously flawed in any way may be turned back to the student for revision or correction of the problem. No incompletes will be awarded unless there is an emergency or mutually agreed upon reason.

AI Use and Plagiarism Policy (initial inroads toward an AI Constitution)
In this course, you can actively use AI tools to support your research, learning, collaboration, and sharing; but only as an augmentative support tool, not as a replacement for your thinking or writing. These tools, including ChatGPT, ChatPDF, Microsoft Copilot, Groc, Perplexity, Claude, Gemini, and others, can enhance your research process by assisting with tasks such as brainstorming, summarizing, refining ideas, and general experimentation. Given that this is a course on the foundations of instructional technology, you are encouraged to do so. However, it is crucial to use these tools responsibly and ethically. Below are the guidelines for AI usage in this course:

Permitted Uses of AI Tools

- Generating ideas or outlines for research topics and questions.
- Summarizing or synthesizing academic articles or other resources.
- Refining survey questions, interview protocols, or research methods.
- Exploring connections between research studies or generating bibliographies.
- Improving the clarity or structure in your drafts (e.g., sentence rephrasing, grammar checks, and similar activities).
- Providing appropriate APA citations for AI use as a research tool, multimedia generator, text generator, or something else.
- Experimentation, Experimentation, and Experimentation.
- Engaging in "Brave people options" as explained in the syllabus.
- Collaborating with an AI tool or platform and noting it.
- When in pursuit of something new, unique, or potentially impactful to help the human race.

Prohibited Uses of AI Tools

- Submitting AI-generated content as your own work without proper attribution.
- Using AI to generate complete assignments, proposals, or reflections or even sections or portions of an assignment.
- Being deliberately sneaky or unethical in your use of generative AI.
- Plagiarizing or misrepresenting information generated by AI tools as factual.
- Employing AI to bypass critical thinking or original contributions to discussions (except as noted in the AI augmented discussion forum in Canvas).
- Asking one or more friends in the field of computer science, engineering, information systems, etc. how to use generative AI tools or systems to complete their course activities for them.

Textbooks and Resources
No particular book is required for this course. Book chapters, books, journal articles, and technical reports are available in Dropbox.

Instructional Assistant: At this point, I do not have an instructional assistant this semester in R622.

Optional Weekly Synchronous Meetings. We will have chats with former IST students, researchers, learning environment engineers, learning architects, book and article authors, learning and education leaders, and others. I will often give short lectures at the start of these sessions (sometimes at the end). Note: these are optional to attend; however, they will be recorded. These sessions might also entail interactive group activities like debates, discussions, demonstrations, brainstorming, and question and answer sessions. I will use Zoom for **optional weekly meetings** most often on Monday nights, perhaps at 6 pm (or 7 pm) for around an hour or two. The exact times and dates depends on the location of the guest(s). See Canvas announcements for the Zoom link.

Note: This is the third time that I am teaching R622. Synchronous sessions from the Fall of 2022 and Fall of 2023 are listed below.

Note about Course Readings and Viewings: All students are asked to try to read and watch 3-4 articles and video recordings total each week (or more if they want), including any of the recordings listed below.

Recordings from 2022 and 2022 R622 Guests and Lectures

Fall 2022 R622 Learning Environments Design
Guest and Instructor Video Recordings
Curt Bonk, Instructor, Indiana University
Fall 2022 Zoom Recordings: 22 Sessions and 21 Guests
Guest Playlist: R622 Sync Sessions Fall 2022 Guest Playlist:
https://youtube.com/playlist?list=PLHcReRoW2lxMb-dVCbOaGYawbMSuSte5O

1. August 22, 2022	**Week 1:** Badrul Khan, DC, on Instructional Design	(1:37:36): https://youtu.be/YZHFPu0VV1w
2. August 29, 2022	**Week 2:** Peter Honebein, Reno, on Instructional Design	(1:15:49): https://youtu.be/iqUdTO7DT64

3. Sept. 5, 2022	**Week 3:** Monday September 5, 2022 Sunmi Seol, Stanford, Mobile Apps in K-12	(1:06:56): https://youtu.be/Juz9joX8QHw
4. Sept. 12, 2022	**Week 4. Part 1:** Tina Closser, Crane STEM Makerspace, Green County, Indiana and IU Sch of Ed Makerspace: Justin Whiting & Chaoran Wang	(1:20:03): https://youtu.be/3p9bWvxaubc
5. Sept. 12, 2022	**Week 4. Part 2:** William Kanye on Makerspace and OER Research	(53:36): https://youtu.be/aheBGiArdeA
6. Sept. 19, 2022	**Week 5. Part 1:** Curt Bonk TEC-VARIETY	(1:04): https://youtu.be/te5JAIa3RQw
7. Sept. 19, 2022	**Week 5. Part 2:** Tom Reeves Authentic Learning	(1:12): https://youtu.be/WjLBa687pQY
8. Sept. 26, 2022	**Week 6. Part 1:** Rovy Branon, Vice Provost, Continuum College, University of Washington, Topic: Alternative Credentials, Lifelong Learning, Inclusive Education, and Outreach and Extension	(1:16:21): https://youtu.be/Rk9ib-Sj2n0
9. Sept. 26, 2022	**Week 6. Part 2:** Shameem Farouk, Malaysia, Maybank, Executive Vice-President and Head of Digital Skills Development, Topic: Corporate Training, Reskilling and Upskilling, and Female Empowerment	(1:15:28): https://youtu.be/xP8wXvJuNgY
10. August 31, 2022	**Extra Recording with Shameem Farouk.** *Empowering Malaysian Women in the Future of Work: Building an Inclusive Future Ready Organizational Culture* & Workforce. Webinar of the IU School of Education's Global and International Engagement Initiative, Indiana University, (Shameem Farouk moderated by Curt Bonk)	(1:01:54): https://youtu.be/z5QRT_XTeh0
11. Oct. 3, 2022	**Week 7. Part 1**. IU Mosaic Active Learning Spaces with Merve Basdogan (and Meina Zhu & Curt Bonk)	(1:10:40): https://youtu.be/Aibb8Z1bHNo
12. Oct. 3, 2022	**Week 7. Part 2**. Self-Directed Learning with Meina Zhu and Curt Bonk.	(40:39): https://youtu.be/EopnxbHCtyo
13. Oct. 10, 2022	**Week 8.** Curt Bonk present on the R2D2 Model	(1:08:31):

		https://youtu.be/2FpvenMzYaI
14. Oct. 26, 2022	**Week 10.** Rick West and Jason McDonald on Open Textbooks	(32:28): https://youtu.be/ZWMwNfY2fHc Note: Computer audio did not work properly at AECT for this session
15. Oct. 31, 2022	**Week 11. Part 1.** Tony Bates, Canada, Online Teaching and Learning	(1:22:36): https://youtu.be/qiguN_HApyA
16. Oct. 31. 2022	**Week 11. Part 2.** Insung Jung, Japan and Korea, Open Thinking	(53:28): https://youtu.be/FtmkABhfkGY
17. Nov. 7, 2022	**Week 12. Part 1.** Stephanie Moore, Creating Learning Ecologies	(1:37:52): https://youtu.be/UZNgd7fYm84
18. Nov. 7, 2022	**Week 12. Part 2.** Curt Bonk Smarter Learning Environments	(39:25): https://youtu.be/6r_F8w0cP08
19. Nov. 14, 2022	**Week 13. Part 1.** Michael Spector, UNT on Smart Tech (and Som Naidu)	(1:35:49): https://youtu.be/VK9O8fc-x8w
20. Nov. 14, 2022	**Week 1. Part 2.** Sanjaya Mishra, Smart Tech and OER	(1:10:30): https://youtu.be/ggtKxn9BJCQ
21. Nov. 28, 2022	**Week 14. Part 1.** Ray Schroeder, Metaverse, AI, and the Future, Q&A	(1:10:35): https://youtu.be/6CLekdlKOaE
22. Nov. 28, 2022	**Week 14. Part 2.** Curt Bonk, Smarter Learning Environments Part 2 of 2	(1:19:02): https://youtu.be/DbezpfjvF_A

Fall 2022 Recordings in R622 Learning Environments Design Zoom Sync Sessions
Curtis J. Bonk, Professor
Fall 2023, 19 Sessions and 20 Guests
Guest Playlist: https://youtube.com/playlist?list=PLHcReRoW2lxOiM-LBHQRkhWJqGh_B_8DD

1. August 29, 2023	**Week 2**. Sunny Zhang, Founder TrueLeap Learning Platform, Houston, Texas	(1:33:57) https://youtu.be/r5MGgI-xXfk
2. Sept. 4, 2023	**Week 3.** Paul Kim, Stanford University, Demo on SMILE (Stanford Mobile Inquiry Learning Environment)	(1:18:36) https://youtu.be/5W7AZ0SwqeM
3. Sept. 6, 2023	**Week 3.** Susan Bridges, University of Hong Kong discusses rooms built for Synchronous Hybrid Learning	(1:34:25): https://youtu.be/awoGCUJ1plc
4. Sept. 14, 2023	**Week 4 Part 1.** Gihan Osman, The British University in Egypt on her career since graduating 15 years ago from the IST Dept. at IU and work in Cairo, Egypt (including	(1:26:04): https://youtu.be/aSROwW65yXM

	UNESCO).	
5. Sept. 14, 2023	**Week 4 Part 2.** Danielle McNamara, ASU Director of SoLET Lab, discusses the new Learning Engineering Institute at ASU.	(1:10:23) https://youtu.be/WBtLmmYOR58
6. Sept. 18, 2023	**Week 5.** Interactive Conversation about AI and Learning Technology with Chris Dede from Harvard.	(1:01:29): https://youtu.be/Yg0UcYXp86Y
7. Oct. 2, 2023	**Week 7. Part 1** The Mosaic (Active Learning Spaces) Project at IU with Tracey Birdwell and Trip Harris, IU	(1:03:33): https://youtu.be/gvm70a68JSc
8. Oct. 2, 2023	**Week 7. Part 2** Learning Environments Conversion with University of Cost Rica students of Dr. Natalia Ramirez Casalvolone.	(39:56): https://youtu.be/AjBNL55WfYA
9. Oct. 10, 2023	**Week 8.** Danah Henriksen and Natalie Gruber, ASU, Nurturing Mindfulness and Creativity	(1:20:42): https://youtu.be/lq5mYMv04mo
10. Oct. 16, 2023	**Week 9.** Claudio Muca R&D Architect, Denmark	(1 hour 20 minutes): https://youtu.be/qT4pOv4h7oQ
11. Oct. 23, 2023	**Week 10. Part 1.** Peter Shea, Univ of Albany, Community of Inquiry (CoI) model	(1:19:20): https://youtu.be/nU-S9FrFkPE
12. Oct. 23, 2023	**Week 10. Part 2** Ron Owston, York Univ & Contact North, AI Tutor and AI Teaching Assistant Demo	(1:36:40): https://youtu.be/tpbn893u9t8
13. Oct. 30, 2023	**Week 11.** Joi Moore, Professor, University of Missouri and President of AECT, on the history of the field and her career.	(1:22:17): https://youtu.be/gURpmTorUws
14. Nov. 6, 2023	**Week 12 Part 1.** Niels Floor, The Netherlands, Learning Experience Design	(1:08:37): https://youtu.be/nBpIAUDQXDs
15. Nov. 7, 2023	**Week 12 Part 2.** Christine Greenhow, Mich State, Social Media and Informal and Online Learning.	(1:18:33): https://youtu.be/hWPgLllbL30
16. Nov. 8, 2023	**Week 12 Part 3.** Jered Borup, George Mason University, Online & Blended Learning Engagement	(1:16:04): https://youtu.be/bR0cuakwwjk
17. Nov. 13, 2023	**Week 13 Part 1.** Lydia Cao, Harvard & U of Toronto, Generative AI	(1:30:43): https://youtu.be/J8vS_9twR-M
18. Nov. 13. 2023	**Week 13 Part 2.** Lydia Cao, Harvard & U of Toronto, EarthXDesign	(36:39): https://youtu.be/4iVg5KCR_DU

19. Nov. 20, 2023	**Week 14.** David Gibson, UNESCO Chair on Data Science in HE Teaching and Learning, AI, Complexity Systems, simSchool, and Learning Theories	(1:52:47): https://youtu.be/mhnyod6cqbc

R622 Learning Environments Design Instructor Presentations Fall 2023

Curtis J. Bonk, Professor
R622 Sync Sessions Fall 2023 Instructor Lectures Playlist (5 sessions):
https://youtube.com/playlist?list=PLHcReRoW2lxPvsCHUOSz5sr9kqBM-MNck

1. August 21, 2023	**Week 1.** Curt Bonk Course Orientation #1	(1 hour, 23 minutes) https://youtu.be/PtAwmMz8LDc
2. August 23, 2023	**Week 1.** Curt Bonk Course Orientation #2	(1 hour, 24 minutes) https://youtu.be/jHmE02Aju98
3. August 28, 2023	**Week 2. Part 1.** Curt Bonk Discusses Education 20/20 and Education 2.0	(55:50) https://youtu.be/aNsVHcaE6P8
4. Sept. 4, 2023	**R622 Week 3. Part 2.** Curt Bonk Education 20/20 Part 2	(35:16) https://youtu.be/Ela7dsAS8DU
5. Sept. 18, 2023	**Week 5.** Curt Bonk on Pedagogical Ideas for DEI.	(1:20:01) https://youtu.be/k_9ahE_sbGY

R622 Course Tasks for Fall 2025

Note: One Task Option that Combines Tasks 2, 3, 4, and 5: One option is to complete Tasks 2, 3, 4, and 5 in one project, such as studying a unique learning environment. This option might entail:

1. **Interview:** Interviewing the founders of a unique learning environment or teachers or students in it and submitting a 2-3 page single spaced paper summarizing that interview and discussing the effectiveness of that learning environment.
2. **Content Analysis:** Conducting a content analysis of the website associated with that learning environment and turning in a 2-3 page single spaced paper review with suggestions for improvement.
3. **Reports:** Reading 1-2 or more reports or papers related to that learning environment and writing a critique of them.
4. **Learning Environment Principles:** Writing a paper that lays out the key learning principles of that learning environment and also redesigns that learning environment (using the information, heading, and details found in Task #5 below as instructional scaffolding).

1. Weekly reflections on the readings (60 points—December 1)

Those who attend 10 or more of the optional weekly synchronous sessions do not need to engage in the discussion forums. They will automatically receive 60 participation points. Note: One or two sessions can be made up if you miss by submitting via email a 2-3 paragraph summary of what you gained from the recording and/or readings and viewings for the week.

Those attending less than 10 synchronous sessions should do blog posts on at least 10 weeks of readings and turn in a final 2-3 page (single spaced) reflection paper or super summary of their readings and a link to their blog for their 60 points.

I value student participation and contributions; it is called participatory or contributory learning. Anyone who demonstrates something of significant value during the synchronous sessions in Zoom will receive 2 bonus points. You will be the "Cool Resource Provider" or contributor for the week.

2. **Option A. Learning Environment Critique and Analysis (60 points—September 22).** Conduct an analysis/critique of ONE learning environment of your choosing. This might be a Montessori school, new tech high school, military training setting, adventure camp, theme park, children's museum, university active learning space or innovative classroom, webinar series, online certificate program, summer institute in the mountains, learning program for retired people, online education or training program in YouTube, weekly or monthly educational podcast program, teacher training facility or professional development program, or whatever you find. You decide the environment and age level. The learning environment can be designed for a formal, informal, and/or online instructional setting. You might read about it, watch one or more videos of it, experience it via virtual or augmented reality, or directly observe and perhaps even engage in it. Use the "Learning Environment Analysis Template" available in Dropbox or create your own template (See below for items in the "Learning Environment Analysis Template" for the 3-page single spaced report not counting appendices). Feel free to utilize generative AI tools like ChatGPT or ChatPDF to generate starter text and up to three quotes in your paper as long as they are marked or you have reworded them a cited them properly.

   Option B. Silver Lining for Learning (Pandemic Podcasting) Critique and Analysis (60 Points—September 22). You can evaluate the learning environment created in my weekly podcast show, Silver Learning for Learning (SLL). When the pandemic started in March 2020, my colleagues (i.e., Chris Dede at Harvard, Punya Mishra at ASU, and Yong Zhao at the University of Kansas and University of Melbourne) and I banded together to offer a weekly webcast or podcast show on Saturdays called Silver Lining for Learning (SLL). SLL which opened on March 21, 2020, now has produced 241+ Episodes. SLL is an ongoing conversation on the future of learning with education innovators and education leaders across the globe. Typically, SLL shows are forward looking with the purpose to bring together educational thought leaders, entrepreneurs, and innovators around the world and inspire new educational models and innovations. The guests on SLL have come from all over the world—from highly impoverished settings in Africa, Central America, and Asia, where resources for education can be extremely limited, to contexts that are significantly better off, such as well-resourced educational organizations in Australia, Japan, Italy, Korea, the USA, and the UK.

Across the past 5-6 years, we find that despite the differences in educational resources, opportunities, accessibility, and overall wealth, innovators have a number of common characteristics such as passion, vision, persistence, purpose, and a deep commitment to making education better. Of course, each SLL show requires much work in contacting, coordinating, blogging, marketing, and hosting. https://silverliningforlearning.org/. You can use the "Learning Environment Analysis Template" available in Dropbox or create your own unique podcast environment template. Please watch at least five SLL episodes and glance at a few more. In addition, somewhere in your paper, you should list the SLL videos in which you watched (i.e., a reference section). (See below for items for the 3 page single spaced report not counting appendices). Feel free to utilize generative AI tools like ChatGPT, ChatPDF, or some new AI tool that summarizes videos to generate starter text and up to three quotes in your paper as long as they are marked or you have reworded them a cited them properly.

Option C: Article Readings, Research, Review, and Reflection (R^4) (60 Points—Sept. 22). In this option, you are to perhaps focus on a week or two or three of the course readings in the syllabus and read or at least 5 of them and read or skim another 10. You also have the options to canvass the research literature beyond that that is not in the syllabus. When done, you are write a 2-3 page paper summarizing what you read and perhaps offering a critique of it. Be sure to include a reference list. What are the general findings? What are the strengths and weaknesses or limitations? Where are the open issues, questions, or gaps on this topic and how might you research this area? What are future trends? Also, how will you apply some of the ideas from these article? You should turn in a 2-3 page single-spaced review. This will be evaluated for (1) logic and organization, (2) completeness/depth, (3) originality and insight, and (4) relevance and practicality.

Option D: Voluntary Services or Materials Analysis (60 Points—September 22). This option involves using the content of the course to help another person or an entire organization or entity out with the design or evaluation of their learning environment. (See below for items for the 2-3 page single spaced report not counting appendices).

You will look at and evaluate the following items:

I. *Learning Environment Description:*
(1) Type of Learning Environment; (2) Learning Environment Setting; (3) Learning Environment Target Audience(s); (4) Overview of Learning Environment Design; (5) Resources/Scaffolds Available to Learners; and (6) Norms and Expectations

II. *Task/Activity Description:*
(1) Goals/Objectives; (2) Target Audience; (3) Description of Instructional Strategy; and (4) Description of Assessment.

III. Learning Environment Critique
(1) Supports Collaboration; (2) Supports Authenticity; (3) Organized Appropriately; (4) Resources Aligned with Audience; (5) Provides Scaffolding; (6) Provides Multiple Perspectives/Representations; (6) Supports Reflection; and (7) Supports Learner in Defining Meaning:

IV. Task/Activity Critique
(1) Goals/Objectives Appropriate for Audience; (2) Appropriate Assessment (Aligned with Objectives); (3) Authenticity of Task; (4) Opportunities for Collaboration and Reflection; (5) Opportunities to Provide Diverse Perspectives; and (6) Provides Appropriate/Adequate Resources and Multiple Representations:

V. *Design is Grounded in Theory and Concepts from Instructional Technology and Educational Psychology*

3. **Learning Environment Final Project Skeleton (40 Points—September 22).** Your final project will involve your visioning of what your ideal learning environment looks like here in the third decade of the 21st Century and then your plans for designing it. Early in the course, I want you to decide on your project and any team members as well as what the tentative key principles for that environment would be. You will list and describe at least eight principles and write a 2 page single spaced draft of a visioning or mission statement, purpose, and audience or stakeholders of that environment. You might also include sample tasks, assessment philosophy, resources, scaffolds, and other relevant items. Your principles might be summarized in a third page appendix.

4. **Learning Environment Final Project design prototype (60 Points—Nov. 17)**
The focus of the final project will be approved by the instructor in early October as part of your Learning Environment Final Project Skeleton. See a set of reflection questions for this project below. Either individually or in teams of two or three, create a prototype/mockup of a learning environment for a particular audience and setting (formal, informal, nonformal, etc.), and design documents for an instructional task for that learning environment. Project artifacts (which may include a 4 page single spaced report (plus references and appendices) and/or a summative 5 to 7 minute video presentations, demonstration, or documentary) will be uploaded to a Canvas. The project should consist of the following sections.
    i. Prototype of Learning Environment
        1. Description of learning environment, including setting of learning environment
        2. Prototype or mockup of learning environment design
    ii. Design Documents
        1. Instructional goal
        2. Target audience
        3. Learning objectives
        4. Content outline/instructional strategy
        5. Supports/scaffolds for students
        6. Assessment procedure

Analysis
1. How did you come up with your lesson topic?
2. How did you begin your analysis?
3. What specific analyses did you conduct?
4. How did you conduct each of your analyses (Needs, Target Audience, Job)? What did you do first, second, third….etc.? From where did you gather your information for each? How long did it take you to complete each? What information did you gather in your analyses that you actually used within design and development of the products?

5. Which analysis did you spend the most time on? Why? What impact do you think that had on the design of you lesson?
6. What information did the analyses give you that was most important?
7. Was analysis conducted in any other phase of ADDIE? What phase or phases and how?
8. When conducting your analysis what DID NOT work and how did you work around it?

Design

1. When did you begin designing your lesson?
2. How were your ideas generated?
3. How did the input of an "ID Consultant (me)" impact your designs?
4. What was the easiest part of the design phase?
5. What was the most difficult part of the design phase?
6. How did you decide what information to include/exclude from your lesson?
7. How did you decide the sequencing or structure of your lesson?
8. How did you decide which instructional method would be the most appropriate for your lesson?
9. How did you determine whether or not your design concepts would work best for your target audience?
10. How did you determine the type and number of activities that would be appropriate for your lesson?
11. What else occurred during your design phase that is notable?

Development

1. Describe the process of developing your learning objectives.
2. What did you struggle with the most while writing your learning objectives? How did you overcome the struggles?
3. Describe the process of developing your lesson plan.
4. Why do you think your motivator will be successful in capturing the attention of your target audience?
5. Describe the process of developing your activities.
6. How do your activities reinforce learning?
7. How do your activities prepare for the assessment?
8. How much time did it take to create your objectives? Lesson plans? Activities?
9. How satisfied are you with your lesson as designed and developed?
10. What process did you/could you take to ensure that your lesson is valid?
11. What else occurred during your development phase that is notable?

Design Project Description	
List of Collaborators (if any):	
Brief Description of Learning Environment: *Description of K-12, Higher Ed, Workplace, Informal, etc., setting. Description of proposed resources, scaffolds, etc. available in learning environment.*	
Brief Description of Task/Activity: *Description of task/activity,*	

learners, assessment strategies, etc.	

5. Course Super Summary (60 Points—November 17)

Near the end of the semester, you are to write a 1,500-2,000 word (not counting appendices and references) super summary of what was important in this course, at least in terms of the class discussions in Canvas and the optional synchronous sessions (2,000-3,200 word if with a partner or two; not counting appendices). In your paper, you should point out what you learned from the course, how the design of learning environments can be used in your own job setting or educational practices, what concepts are important from this class, what would you do differently, and how you can now use course material when you leave this class? What is the single most important "big idea" from this class? What were the key concepts you grappled with this semester? How has your thinking evolved? Does this type of learning environment seem to be a good match for the kinds of learners you're interested in working with? How might the types of learning environments that you hope to design be used in your current job or in an educational setting, issue, or problem of importance to you (preferably your current or past job). What were the ideas, issues, concepts, facts, figures, diagrams, etc., that struck a chord with you? What did you learn during the semester? How did your thinking change in a particular week or over time? What inspired you? What did you find disappointing? Though not required, it would help if you included a recap table, chart, figure, or some type of summary of key themes, concepts, terms, etc., mentioned in the reflection paper.

Reflection Paper Grading Criteria (60 Points; 10 points each):
1. Relevancy to class: meaningful examples, relationships drawn, interlinkages, connecting weekly ideas.
2. Insightful, Interesting, Reflective, Emotional: honest, self-awareness, interesting observations
3. Learning Depth/Growth: takes thoughts along to new heights, exploration, breadth & depth, growth.
4. Completeness: thorough comments, detailed reflection, fulfills assignment, informative.
5. Connections: linking threads in the discussion, lectures, and readings.
6. Overall Wholistic Impression

Schedule of Weekly Course Readings and Videos

Weekly Instructional Task: Some weeks have many articles or videos listed. **You only need to read or watch 3 to 4 articles or videos each week. Your choice of which ones.** And you can substitute any book chapter, article, or video you find that you want to read at any time without penalty. You can read or watch them all if you want, but you do not have to. Alternatively, you can skim them all and then reflect or ponder under a shady tree or on your patio or deck in your backyard on why they are all in that particular week. These are all guidelines, not mandates.

Week 1 (August 25): Learning Environments Foundations and History

1. Jan Herrington, Ron Oliver, and Thomas C. Reeves (2014). Authentic Learning Environments. In J. M. Spector et al. (Eds.), Handbook of Research on Educational Communications and Technology, DOI 10.1007/978-1-4614-3185-5_32

2. Michael J. Hannafin, Janette R. Hill, Susan M. Land, and Eunbae Lee. (2014). Student-Centered, Open Learning Environments: Research, Theory, and Practice. In J.M. Spector et al. (Eds.), Handbook of Research on Educational Communications and Technology, DOI 10.1007/978-1-4614-3185-5_51.

3. John D. Bransford, Ann L. Brown, and Rodney R. Cocking (Eds.). (2000). How people learn (Vol. 11). Washington, DC: National Academy Press.

4. Herrington, J., & Oliver, R. (2000). An instructional design framework for authentic learning environments. *Educational Technology Research and Development*, *48*(3), 23-48.

5. Honebein, P. C. (1996). Seven goals for the design of constructivist learning environments. *Constructivist learning environments: Case studies in instructional design*, 11-24.

6. Land, S. M., Hannafin, M. J., & Oliver, K. (2012). Student-centered learning environments: Foundations, assumptions and design. *In Theoretical foundations of learning environments*, 3-25. Routledge.

7. Silver Lining for Learning Episode 08 (2020, May 8): Rethinking Education with Great Questions, https://silverliningforlearning.org/episode-08-rethinking-education-with-great-questions/; Video (1 hour, 4 minutes): https://youtu.be/beHIZ620HzY; https://www.youtube.com/watch?v=beHIZ620HzY&feature=youtu.be

Week 2 (Sept. 1): Learning Theory & Learning Environments Design and Evaluation Models

1. Belland, B. R. (2014). Scaffolding: Definition, current debates, and future directions. In *Handbook of research on educational communications and technology* (pp. 505-518). Springer, New York, NY.

2. Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, *18*(1), 32-42.

3. Lowyck, J. (2014). Bridging learning theories and technology-enhanced environments: A critical appraisal of its history. In *Handbook of research on educational communications and technology* (pp. 3-20). Springer, New York, NY.

4. Curry, John, Jackson, Sean, & Morin, Heather (2022). It's Not Just the HOW, But Also the WHO: The TCoP Model of Technology Integration. *TechTrends*, *66*, 980–987. https://doi.org/10.1007/s11528-022-00797-8

5. Janio, Jarek (2025, June 1). What Neuroscience Misses About Students (Teachers need behavior, not brain scans, to know if students are learning.). *Psychology Today*. Available: https://www.psychologytoday.com/us/blog/how-we-learn/202506/what-neuroscience-misses-why-behavior-wins-the-argument

6. Janio, Jarek (2025, June 9). How Clarifying Theory and Pedagogy Can Improve Learning (Clear definitions help align teaching methods with how learning happens.) *Psychology Today*. Available: https://www.psychologytoday.com/us/blog/how-we-learn/202506/how-clarifying-theory-and-pedagogy-can-improve-learning

7. Janio, Jarek (2025, June 25). AI Is Flipping the Classroom: Faculty Roles in a Changing Higher Education Landscape, *The Evolllution*. Available: https://evolllution.com/ai-is-flipping-the-classroom-faculty-roles-in-a-changing-higher-education-landscape

(Jarek Janio: "AI's infiltration of higher ed should prompt faculty to redefine their roles from exposing students to content to developing competencies. Artificial intelligence has entered the classroom but not through the front door. It didn't wait for curriculum committees, pedagogical approval or institutional policies. It arrived at students' fingertips, offering 24/7 access to explanations, summaries, feedback and even complete assignments. And with it something quietly revolutionary happened: The role of homework changed.")

8. Janio, Jarek (2025, May 9). How AI Reshapes What We Know About Motivation and Learning (What we call motivation is just the effect of well-designed learning conditions.). *Psychology Today*. Available: https://www.psychologytoday.com/us/blog/how-we-learn/202505/how-ai-reshapes-what-we-know-about-motivation-and-learning

9. Janio, Jarek (2025, May 23). Teaching Isn't Obsolete, but Our Assignments Might Be. (In a world of AI content, learning is what students do next.). *Psychology Today*. Available: https://www.psychologytoday.com/us/blog/how-we-learn/202505/teaching-isnt-obsolete-but-our-assignments-might-be

   (Jarek Janio: "Rather than focusing on how AI works, this piece centers what we do best: design environments that shape student behavior and support meaningful growth. Rooted in behaviorism, the post explores how we as educators can remain grounded—even when we're not watching students in real time—and why the key isn't authorship, but transformation.")

10. Janio, Jarek, & Gaff, Donald (2025, May 28). From Apprenticeship to Competency: What Anthropology Can Teach Us About Learning. *The Evolllution*. Available: https://evolllution.com/from-apprenticeship-to-competency-what-anthropology-can-teach-us-about-learning

    (Jarek Janio: "The piece explores how learning, historically and cross-culturally, has always been demonstrated through action not declared through grades or seat time. We argue that returning to behavior-based assessment can help restore credibility and relevance to higher education.")

11. Janio, Jarek (2025, August 16). Motivation Is Speculation, Behavior Is Evidence (Student learning is measured through actions and outcomes, not intentions.) *Psychology Today*. Available: https://www.psychologytoday.com/us/blog/how-we-learn/202508/motivation-is-speculation-behavior-is-evidence

    See: Janio, Jarek, **COACHes** (California Outcomes Assessment Coordinators Hub): https://coaches.institute/ "As educators and leaders committed to meaningful learning, we carry both the power and the responsibility to place students at the center of our work."
    a. LinkedIn: https://www.linkedin.com/company/california-outcomes-assessment-coordinators-hub-coaches/?viewAsMember=true
    b. Friday SLO talks: https://rss.com/podcasts/friday-slo-talks/
    c. NotebookLM Friday SLO Talks Podcast on Curt Bonk's presentation (17:44): https://rss.com/podcasts/friday-slo-talks/1790741/; Additional NotebookLM Podcast (20:45): https://www.youtube.com/watch?v=i3llu5FSdsQ
    d. Bonk, C. J. (2024, December 6). *How Faculty Can Harness Generative AI for Enhanced Learning: Part 1 A Little TEC-VARIETY and R2D2*. Featured webinar presentation for Friday Student Learning Outcomes (SLO) Talks, California Outcomes Assessment Coordinators' Hub (COACHes). Video (104:25): https://www.youtube.com/watch?v=MQtJC7be0iY.

Week 3 (Sept. 8): Innovative and Inquiry-Driven K-12 Learning Environments

1. Watterston, J., & Zhao, Y. (2023). Rethinking the time spent at school: Could flexibility improve engagement and performance for students and teachers?. *Prospects*. https://doi.org/10.1007/s11125-023-09638-9

2. Tom Brush et al. (2016). Design and Implementation of a Technology-Supported Socioscientific Inquiry Unit in High School Biology, *International Journal of Designs for Learning*, *7*(2), 1-10.

3. Scott Wallace (2017). What will keep the fish alive? Exploring Intersections of designing, making, and inquiry among middle school learners. *International Journal of Designs for Learning*, *8*(1), 11-21.

4. John W. Saye & Thomas Brush (2007) Using Technology-Enhanced Learning Environments to Support Problem-based Historical Inquiry in Secondary School Classrooms, Theory & Research in Social Education, 35:2, 196-230, DOI: 10.1080/00933104.2007.10473333

5. Fominykh, M., Kakoulli-Constantinou E., Nicolaou A., Perifanou M., Parmaxi A., Soule M.V, Shikhova E., Talmo T.M., and Zhukova D.: Language Teacher Trainer Guide on Digital Competences: Practical instructions and advice on how to organize digital competence training for language teachers (2022). DC4LT Consortium. https://www.dc4lt.eu/

6. Kennedy, K., & Archambault, L. (2012). Design and Development of Field Experiences in K-12 Online Learning Environments. *Designing with Sound to Enhance Learning: Four Recommendations from the Film Industry*, 35.

7. Marino, M. T., & Basham, J. D. (2013). Understanding STEM education and supporting students through universal design for learning. *Teaching Exceptional Children*, *45*(4), 8-15.

8. Oana Marocico of the BBC (May 27, 2022). The 22-year-old 3D-printing schools, May 27, 2022, (Video 3:35): https://www.bbc.co.uk/news/technology-61588608

9. Belinda Luscombe (2022, August 22/29). TIME Magazine. Available: https://time.com/6205084/phonics-science-of-reading-teachers/

Week 4 (Sept. 15): Video Examples of Innovative and Inquiry-Driven K-12 Learning Environments

1. Silver Lining for Learning: Episode 15 (2020, June 27). Student Voices: Beijing, Hawaii, and Sydney. Available: https://silverliningforlearning.org/episode-15-student-voice/; Video (1:02:45): https://www.youtube.com/watch?v=ZjsqGoG3TW4&feature=youtu.be \

2. Silver Lining for Learning Episode 20 (2020, August 1). Transforming Education in Australia and Beyond, With Greg Whitby, Sydney, Australia - Executive Director - Catholic Education Diocese of Parramatta, Available: https://silverliningforlearning.org/episode-20-transforming-education-in-australia-and-beyond/; Video (1:00:58): https://youtu.be/FY9h5GnhMBU

3. Silver Lining for Learning Episode 96 (March 25, 2022). Transforming Schools to Personalize Education, Available: https://silverliningforlearning.org/episode-96-transforming-schools-to-personalize-education/; Video (101:18): https://www.youtube.com/watch?v=Sqb8ljO59Bk

4. Silver Lining for Learning Episode 118 (2022, August 20). Early Childhood at Scale: Sesame Street as a Model; Available: https://silverliningforlearning.org/episode-118-early-childhood-learning-at-scale-sesame-street-as-a-model/

5. Silver Lining for Learning. Episode 161 (2023, August 5). Human Restoration Project: Reimagining Education with Future Forward Thinking. Available: Blog post: https://silverliningforlearning.org/human-restoration-project-reimagining-education-with-future-forward-thinking/ or at: Video (101:31): https://www.youtube.com/watch?v=fRVl5ZT1le4

6. Silver Lining for Learning Episode 172 (2023, October 28).The Rapid Expansion and Impact of The Digital School: https://silverliningforlearning.org/episode-172-the-rapid-expansion-and-impact-of-the-digital-school/; Video (1:02:09): https://www.youtube.com/watch?v=JVxJ1CtY-oI

7. Silver Lining for Learning Episode 179 (2024, February 3). Innovation, Creativity, and Entrepreneurship Education: Experiences of Chinese Students in Beijing and Chongqing: https://silverliningforlearning.org/episode-179-innovation-creativity-and-entrepreneurship-education-experiences-of-chinese-students-in-beijing-and-chongqing/; Video (1:01:59): https://www.youtube.com/watch?v=L5TwBsauBHQ

8. Silver Lining for Learning Episode 187 (2024, March 29). A Conversation about the U.S. Dept of Education National Educational Technology Plan; https://silverliningforlearning.org/episode-187-a-conversation-about-the-u-s-dept-of-education-national-educational-technology-plan/; Video (1:00:38): https://www.youtube.com/watch?v=1g5uRPmcqxg&t=2682s

10. Silver Lining for Learning Episode 188 (2024, April 6). The Conversation Continues: The U.S. DOE National Educational Technology Plan Part 2: The Future; https://silverliningforlearning.org/episode-188-the-conversation-continues-the-u-s-doe-national-educational-technology-plan-part-2-the-future/; Video (1:08:24): https://www.youtube.com/watch?v=GtEXiLH4Y6s

11. Silver Lining for Learning Episode 190 (2024, April 27). Digitally operated one room schoolhouses for underprivileged out-of-school children: https://silverliningforlearning.org/episode-190-digitally-operated-one-room-schoolhouses-for-underprivileged-out-of-school-children/; Video (1:01:27): https://www.youtube.com/watch?v=n9tP83dtMoE

12. Silver Lining for Learning Episode 192 (2024, May 11). Hypothetically Speaking: What-if the Entire World had Connected Camps in Minecraft? https://silverliningforlearning.org/episode-192-hypothetically-speaking-what-if-the-entire-world-had-connected-camps-in-minecraft/; Video (1:01:06): https://www.youtube.com/watch?v=LIX99AnvRyg

13. Silver Lining for Learning Episode 193 (2024, May 25). Champions of Robotics: https://silverliningforlearning.org/episode-193-champions-of-robotics/; Video (1:01:10): https://www.youtube.com/watch?v=eTkjhYSAUAs&t=659s

14. Silver Lining for Learning Episode 233 (2025, May 17). Mi Amigo is Khanmigo: “60 Minutes” of Fame for Hobart, Indiana Schools: https://silverliningforlearning.org/episode-233-mi-amigo-is-khanmigo-60-minutes-of-fame-for-hobart-indiana-schools/; Video: (1:02:53): https://www.youtube.com/watch?v=cvqceVLkItc

    Some links to the TV episode and post episode reflection and chat with Anderson Cooper are below. Hobart Indiana School District was on 60 Minutes with Anderson Cooper in December: Khan Academy partnership

with Hobart School District in Indiana (60 Minutes feature with Anderson Cooper; December 9, 2024): https://www.hobart.k12.in.us/our-district/scoh-khan-aacademy

1. Meet Khanmigo (60 Minutes): The student tutor AI being tested in school districts | 60 Minutes: https://www.youtube.com/watch?v=Ia3CPhVkUtg
2. How Khanmigo AI can help kids in emotional istress; https://www.youtube.com/watch?v=P6ltnjJu4NM
3. Special Episode – Creating Opportunities for Career Success with Anderson Cooper; https://www.youtube.com/watch?v=0RELN9cxB_E

15. Silver Lining for Learning Episode 236 (2025, June 21). Beyond Bricks: Hyper-Personalised Pathways for Gen Z Learners: https://silverliningforlearning.org/episode-236-beyond-bricks-hyper-personalised-pathways-for-gen-z-learners/; Video: (1:04:37): https://silverliningforlearning.org/episode-236-beyond-bricks-hyper-personalised-pathways-for-gen-z-learners/

16. School of the Future (April 14, 2023). National Geographic Asia, Indian International Global School; https://www.youtube.com/watch?v=wwZY42mtwAQ
For education, technology is the future – and the future has arrived at the Global Indian International School (GIIS). Join Host Bobby Tonelli as he spends a day in GIIS SMART Campus, Singapore to experience learning in a tech-rich environment. From fifth-grade robotics to data analytics for sports, this School of the Future pushes learning beyond boundaries. Take lessons on how educators nurture the next generation of innovative thinkers and leaders

Week 5 (Sept. 22): Informal, Open, and Massive Learning Environments

1. Seth A. Martinez and Justin Whiting. (2021). Designing Informal Learning Environments, In Jason K. McDonald, & West, Richard E. Design for Learning: Principles, Processes, and Praxis (1st ed.). EdTech Books. Available: https://edtechbooks.org/id
https://edtechbooks.org/id/designing_informal

2. Panel Discussion on Open Publishing moderated by Meina Zhu (2022, September 19). With Panelists: Royce Kimmons, Rick West, Jill Stephaniak, and Torrey Trust, Research and Theory Division of AECT. Vimeo: 1:23:00, Available: https://vimeo.com/showcase/3316648/video/751242568

3. Christine Greenhow & Cathy Lewin (2016). Social media and education: Reconceptualizing the boundaries of formal and informal learning, *Learning, Media and Technology*, *41*:1, 6-30, DOI: 10.1080/17439884.2015.1064954

4. McKay, C. S., & Glazewski, K. D. (2016). Designing maker-based instruction. In *Instructional-Design Theories and Models, Volume IV* (pp. 145-172). Routledge.

5. Marsick, V. J., & Watkins, K. E. (2001). Informal and incidental learning. *New Directions for Adult and Continuing Education*, *2001*(89), 25-34.

6. Daniela Sellmann & Franz X. Bogner (2013) Climate change education: quantitatively assessing the impact of a botanical garden as an informal learning environment, Environmental Education Research, 19:4, 415-429, DOI: 10.1080/13504622.2012.700696

7. Jeremy Stoddard, Alan Marcus, Kurt Squire, & John Martin (2015). Learning Local Immigration History In and Out of the Museum. *Museum &* Society, *13*(2). Article 10. https://scholarworks.wm.edu/articles/10

8. Lori Wade (2021). How Social Media is Reshaping Today's Education System. Georgetown University.

9. Prasert Ruannakarn1 & Archanwit Choomponpongsak (2019, October-November). Development in Enhancing Social Skills Program of Non-Formal Education Youth. *Journal of Education Mahasarakham University 13*(4). Retrieved from http://edu.msu.ac.th/journal/home/journal_file/645.pdf

10. Xiujuan Tan, Peishan Chen, & Haiqin Yu, (2022). Potential Conditions for Linking Teachers' Online Informal Learning with Innovative Teaching, *Thinking Skills and Creativity*, *45*. doi: https://doi.org/10.1016/j.tsc.2022.101022; Available: https://www.sciencedirect.com/science/article/abs/pii/S1871187122000256

11. Silver Lining for Learning Episode 04 (2020, April 2). Using COL and Cool Open Education Resources: https://silverliningforlearning.org/episode-04-using-col-and-cool-open-education-resources/; Silver Lining for Learning, Episode 4, Sanjaya Mishra, Tony Mays, and Francis Ferreira, the Commonwealth of Learning: https://www.youtube.com/watch?v=E-oNumJp84o

12. Silver Lining for Learning Episode #28 (2020, September 19). MOOCs and Open Education in Southeast Asia: New Models, Fresh Ideas, Untold Hope: https://silverliningforlearning.org/moocs-and-open-education-in-southeast-asia-new-models-fresh-ideas-untold-hope/; Video: Silver Lining for Learning: Episode 28, 1:00:59: https://youtu.be/Nd5FmPOS0W0 (**Note:** See episode guests below)

1. Tian Belawati from the Universitas Terbuka (Indonesia Open University)
2. Melinda dela Pena Bandalaria, Chancellor and Professor of Development Communication, University of the Philippines Open University
3. Professor Zoraini Wati Abas is Deputy Vice Chancellor (Academic and Educational Technology) at the Wawasan Open University in Penang, Malaysia
4. Jintavee Khlaisang is also the deputy director of Thailand Cyber University Project, Office of the Higher Education Commission in the Ministry of Education and is the Associate Professor at the Department of Educational Technology and Communication in the Faculty of Education at Chulalongkorn University, Bangkok.
5. Thapanee Thammetar is the director of Thailand Cyber University Project, Office of the Higher Education Commission in the Ministry of Education in Bangkok, Thailand and Thapanee is also an Associate Professor at the Department of Educational Technology in the Faculty of Education at Silpakorn University

13. Silver Lining for Learning Episode #56 (2021, May 1). Welcome to the Wonderful World of Openness (with David Wiley). Available: https://silverliningforlearning.org/episode-56-welcome-to-the-wonderful-world-of-openness/; Video (103:09): Silver Lining for Learning, Episode 56: Welcome to the wonderful world of Openness: https://www.youtube.com/watch?v=H6x9N-vBXp4

14. Silver Lining for Learning Episode #39 (2020, December 12). A Lucky Break or a Break in the Ice: One Person's Journey to Save the Last Ocean; Guest: Cassandra Brooks. Available: https://silverliningforlearning.org/a-lucky-break-or-a-break-in-the-ice-one-persons-journey-to-save-the-last-ocean/; Video (1:00:45): Silver Lining for Learning Episode #39: https://www.youtube.com/watch?v=8c02hYCVkSU

15. Silver Lining for Learning Episode 152 (2023, May 21). Pondering the Future of OER and Open Education: https://silverliningforlearning.org/episode-153-pondering-the-future-of-oer-and-open-education/; Video (1:03:02); https://www.youtube.com/watch?v=oFEbx1rFEgE

16. Silver Lining for Learning Episode 219 (2025, January 18). Finding a HERO in Taiwan in Open and Online Education. https://silverliningforlearning.org/episode-219-finding-a-hero-in-taiwan-in-open-and-online-education/; Video (1:04:50): https://www.youtube.com/watch?v=4OrzwZYSKQI

17. Silver Lining for Learning Episode 33 (October 31, 2020). Nepali High School Students in MOOCs: Scalable Results Lending to an Optimistic Future, October 24, 2020, Baman Kumar Ghimire and Bishwa Gautam and six Nepali students; https://silverliningforlearning.org/nepali-high-school-students-in-moocs-scalable-results-lending-to-an-optimistic-future/; Video (59:05): https://youtu.be/4k6pMe4XnP8

18. Silver Lining for Learning Episode #42 (2021, January 16). Outreach of the Penguins: Spending Time with Educator Jean Pennycook; Available: https://silverliningforlearning.org/episode-42-outreach-of-the-penguins-spending-time-with-science-educator-jean-pennycook/, Video (1:02:51): https://www.youtube.com/watch?v=FDgiK2wGBx4

19. Silver Lining for Learning Episode 206 (2024, September 7). Open Education at Scale: Stories from the Open University of China: https://silverliningforlearning.org/episode-206-open-education-at-scale-stories-from-the-open-university-of-china/; Video (1:01:36): https://www.youtube.com/watch?v=Ko_wMZZSJjQ

20. Episode 235 (2025, June 21). Blended is Best: Case Studies on Blended Learning in Higher Education: https://silverliningforlearning.org/episode-235-blended-is-best-case-studies-on-blended-learning-in-higher-education/; Video: (1:05:08): https://www.youtube.com/watch?v=cscG5T1Lg_o&t=3679s

Week 6 (Sept. 29): Technology-Rich and Authentic Learning Environments in Higher Educ. (Task #2 and Task #3 due)

1. Tony Herrington, & Jan Herrington, J. (2005). *Authentic learning environments in higher education*. IGI Global. (**Note: This is a free book. Select the chapters that you want to read.)**

2. Christiane Reilly and Thomas Reeves (2022, May 12). Refining active learning design principles through design-based research. *Active Learning in Higher Education*, https://doi.org/10.1177/14697874221096140; Available: https://journals.sagepub.com/doi/full/10.1177/14697874221096140

3. Jeffrey Selingo, Cole Clarke, David Noone, & Amy Wittmayer (2021). The Hybrid Campus: Three Major Shifts in the Post-COVID campus. Deloite Insights

4. Silver Lining for Learning Episode #49 (2021, March 6). HyFlex Course design: Conditions, Controversy & Craftsmanship. Available: https://silverliningforlearning.org/episode-49-the-pillars-of-hyflex-course-design-conditions-controversy-and-craftsmanship/; Video (1:01:15): Silver Lining for Learning Episode #49: https://youtu.be/hwy1ym6nz4A

5. James Nottingham's Learning Challenge (Learning Pit) animation (11:30) (2015, November 23): https://www.youtube.com/watch?v=3IMUAOhuO78

6. Silver Lining for Learning Episode 212 (2024, November 2). Hybrid Intelligence: Human-AI Co-Evolution & Learning in Multi-Realities: https://silverliningforlearning.org/episode-212-hybrid-intelligence-human-ai-co-evolution-learning-in-multi-literacies/; Video (1:00:56): https://silverliningforlearning.org/episode-212-hybrid-intelligence-human-ai-co-evolution-learning-in-multi-literacies/

7. Silver Lining for Learning Episode 223 (2025, February 15). The National AI Institute for Adult Learning and Online Education (AI-ALOE): Featuring Jill Watson: https://silverliningforlearning.org/episode-223-the-national-ai-institute-for-adult-learning-and-online-education-ai-aloe-featuring-jill-watson/; Video (1:04:50): https://www.youtube.com/watch?v=2aSNO-5Ha4Q&t=4s

Week 7 (October 6): Learning Environments in the Workplace

1. John Garrick (1998). Informal learning in corporate workplaces. Human Resource Development *Quarterly*, *9*(2), 129-144.

2. John Garrick (1998). Informal learning in corporate workplaces. Unmasking human resources development. Chapter 3: Work as a learning environment: Unmasking the language of HRD. NY: Routledge.

3. Zitter, I., & A. Hoeve (2012). Hybrid Learning Environments: Merging Learning and Work Processes to Facilitate Knowledge Integration and Transitions. OECD Education Working Papers, No. 81, OECD Publishing. http://dx.doi.org/10.1787/5k97785xwdvf-en

4. Pieter De Vries and Heide Lukosch (2009). Supporting informal learning at the workplace. *International Journal of Advanced Corporate Learning (iJAC)*, *2*(3), 39-44.

5. Wang, M., Vogel, D., & Ran, W. (2011). Creating a performance-oriented e-learning environment: A design science approach. *Information & Management*, *48*(7), 260-269.

6. Ed Catmull (2008, September). How Pixar fosters collective creativity. *Harvard Business Review*. https://hbr.org/2008/09/how-pixar-fosters-collective-creativity

7. Gary P. Pisano (2019, January-February). The hard truth about innovative cultures. *Harvard Business Review*. Available: https://hbr.org/2019/01/the-hard-truth-about-innovative-cultures

8. Silver Lining for Learning Episode #78 (2021, October 9). Designing the Next Education Workforce. Available: https://silverliningforlearning.org/episode-78-designing-the-next-education-workforce/; Video (101:01): Episode #78 Silver Lining for Learning, Episode 78: Designing the Next Education Workforce: https://www.youtube.com/watch?v=cYQha0db08o

9. Silver Lining for Learning Episode 205 (2024, August 31). Democratizing & Accelerating AI: Upskilling for Workforce Digital Inclusion; https://silverliningforlearning.org/episode-205-democratizing-accelerating-ai-upskilling-for-workforce-digital-inclusion/; Video (1:02:48): https://www.youtube.com/watch?v=hQgnDsPDPzM&t=3750s

10. Silver Lining for Learning Episode 215 (2024, December 7). Goodwill and the Dignity of Work: A hybrid-era renewal for a 120-year old model: https://silverliningforlearning.org/episode-215-goodwill-and-the-dignity-of-work-a-hybrid-era-renewal-for-a-120-year-old-model/
Video (1:01:44): https://www.youtube.com/watch?v=zREutYQtcVI&t=3687s

11. Silver Lining for Learning Episode 220 (2025, January 25). Workforce Development through the Technical College System of Georgia: https://silverliningforlearning.org/episode-220-workforce-development-through-the-technical-college-system-of-georgia/; Video (1:01:39): https://www.youtube.com/watch?v=cOnjlLrVxKI

12. Silver Lining for Learning Episode 223 (February 8, 2025). The National AI Institute for Adult Learning and Online Education (AI-ALOE): Featuring Jill Watson
https://silverliningforlearning.org/episode-223-the-national-ai-institute-for-adult-learning-and-online-education-ai-aloe-featuring-jill-watson/
Video (1:04:50): https://www.youtube.com/watch?v=2aSNO-5Ha4Q&t=4s

Week 8 (Oct 13): Active Learning Spaces in Higher Ed (Note: all IU articles below)

1. Morrone, A. S. (Ed.). (2019). Introduction to special issue on physical spaces. *Journal of Teaching and Learning with Technology* (JoTLT), *8*(1). Retrieved from https://scholarworks.iu.edu/journals/index.php/jotlt/issue/view/1899/Journal%20of%20Teaching%20and%20Learning%20with%20Technology%20%282019%29

2. Basdogan, M. & Morrone, A. S. (2021). Coffeehouse as classroom: Examining a flexible and active learning space from the Pedagogy-Space-Technology-User perspective. *Journal of Learning Spaces, 10* (2). http://libjournal.uncg.edu/jls/article/view/2119

3. Zhu, M. & Basdogan, M. (2021). Examining social learning in an active learning classroom through the Pedagogy-Space-Technology framework. *Journal of Learning Spaces.* http://libjournal.uncg.edu/jls/article/viewFile/2025/1523

4. Morrone, A. S., & Roman, T. (2019). Creating a research-based ALC master plan. EDUCAUSE Review *(Data Bytes).* Retrieved from https://er.educause.edu/blogs/2019/5/creating-a-research-based-alc-master-plan

5. Morrone, A. S., Flaming, A., Birdwell, T., Russell, J., Roman, T., & Jesse, M**.** (2017). Creating active learning classrooms is not enough: Lessons from two case studies. *EDUCAUSE Review.* Retrieved from https://er.educause.edu/articles/2017/12/creating-active-learning-classrooms-is-not-enough-lessons-from-two-case-studies

6. Basdogan, M. (2021, March 30). Idea Garden: An immersive informal learning space for STEM education. *EDUCAUSE Review.* https://er.educause.edu/articles/2021/3/idea-garden-an-immersive-informal-learning-space-for-stem-education#fnr5

7. Basdogan, M. (2021, January 27). Indiana University's collaborative theatre: Perspectives on innovation in classroom design. *EDUCAUSE Review.* https://er.educause.edu/blogs/2021/1/indiana-universitys-collaborative-theatre-perspectives-on-innovation-in-classroom-design

8. Basdogan, M. (2021, July 01). Biophilic classroom design: A synthesis of the literature. *Mosaic Initiative*. https://blogs.iu.edu/mosaiciu/2021/06/

9. Basdogan, M. (2021, January 01). Collaboration Café research: How faculty teach in an active learning classroom. *Mosaic Initiative.* https://blogs.iu.edu/mosaiciu/2021/01/01/collaboration-cafe-research-project-faculty-use-of-classroom-space/

10. Lee, D., Arthur, I. T., & Morrone, A. S. (2015). Using video surveillance footage to support validity of self-reported classroom data. *International Journal of Research & Method in Education, 40*(2), 154-180. https://doi.org/10.1080/1743727X.2015.1075496

11. Lee, D., Morrone, A. S., & Siering, G. (2017). From swimming pool to collaborative learning studio: Pedagogy, space, and technology in a large active learning classroom. *Educational Technology Research and Development*, *66*, 95-127. DOI: 10.1007/s11423-017-9550-1

12. Silver Lining for Learning Episode #121 (2022, September 17). "***Active Learning…Space: The Final Frontier***" (Mosaic Project, Indiana University with Dean Stacy Morrone, Tracey Birdwell, and Mark Russell. Blog post and video: https://silverliningforlearning.org/episode-121-active-learningspace-the-final-frontier/; Video in YouTube (102:13): https://www.youtube.com/watch?v=8Xm1-AypXrY

The Mosaic Initiative supports active and collaborative learning through instructional support, research, collaborations, and classroom design. https://mosaic.iu.edu/, https://citl.indiana.edu/teaching-resources/teaching-strategies/active-learning-classrooms/index.html; https://learningspaces.iu.edu/design/mosaic-initiative.htm

13. Silver Lining for Learning Episode 184 (2024, March 9). Designing Future Ready Learning Spaces; https://silverliningforlearning.org/episode-184-designing-future-ready-learning-spaces/; Video (59:32): https://www.youtube.com/watch?v=xu9nvC_bFeY&t=2722s

Week 9 (October 20): Measuring Learner Engagement and Self-Directed Learning Climates, Open Thinking, Mindfulness, Wellbeing, and Belongingness

1. Insung Jung & Jihyun Lee (2022). Open thinking as a learning outcome of open education: Scale development and validation. *Distance Education*, *43*(1), 119-138, DOI: 10.1080/01587919.2021.2020620

2. Li, B., Zhang, Z., Lowell, V. L., Wang, C. & Bonk, C. J. (online first, 2025, in press for October 2025). Development and validation of the AI-SDL-PA Scale: Measuring personal attributes in AI-integrated self-directed language learning. *System*, *133*. https://doi.org/10.1016/j.system.2025.103793 (50 day open access link: https://authors.elsevier.com/a/1lXC5,7ttAHgit)

3. Richardson, C., & Mishra, P., (2017). Learning Environments that Support Student Creativity: Developing the SCALE. *Thinking Skills and Creativity* https://doi.org/10.1016/j.tsc.2017.11.004
    a. Richardson, C. & Mishra, P. (2017). **Support of Creativity in Learning Environment: SCALE.**
    b. Mishra, Punya (2023, May 2). Scaling up the SCALE instrument. https://punyamishra.com/2023/05/02/scaling-up-the-scale-instrument/
    c. Mishra, Punya (2018, February 18). Evaluating creative learning environments: New instrument. Avaiable: https://punyamishra.com/2018/02/18/evaluating-creative-learning-environments-new-article-and-instrument/

4. Barnard-Brak, L., Paton, V. O., & Lan, W. Y. (2010). Profiles in self-regulated learning in the online learning environment. *The International Review of Research in Open and Distributed Learning*, *11*(1), 61–80. https://doi.org/10.19173/irrodl.v11i1.769 (**Note: See OSLQ)**

5. Swan, K., Chen, C.C., & Bockmier-Sommers, D.K. (2020). Relationships between Carl Rogers' person-centered education and the community of inquiry framework: A preliminary exploration. *Online Learning*, *24*(3), 4-18. https://doi.org/10.24059/olj.v24i3.2279

6. Gruber, N., Henriksen, D., & Mishra, P. (2022). Creativity, Mindfulness and High-Quality States of Attention at Work with Dr. Erik Dane. *TechTrends*, *66*, 740-744 https://rdcu.be/cR0U3

7. Henriksen, D., Richardson, C., Gruber, N., & Mishra, P. (2022). The uncertainty of creativity: opening possibilities and reducing restrictions through mindfulness. In G. Jaeger & R. Beghetto (Eds.). *Uncertainty: A catalyst for creativity, learning and development.* Springer (pp. 103-124).

8. Richardson, C., Henriksen, D., Mehta, R., & Mishra, P. (2022). Seeing things in the here and now: Exploring mindfulness and creativity with Viviana Capurso. *TechTrends*, 1-7.

9. Henriksen, D., Heywood, W., & Gruber, N. (2022). Meditate to create: Mindfulness and creativity in an arts and design learning context. *Creativity Studies***,** *15*(1), 147-168.

10. Creely, E., Henriksen, D., Crawford, R., & Henderson, M. (2021). Exploring creative risk-taking and productive failure in classroom practice. A case study of the perceived self-efficacy and agency of teachers at one school. *Thinking Skills and Creativity***,** *42*, 100951.

11. Henriksen, D., Richardson, C., & Shack, K. (2020). Mindfulness and creativity: Implications for thinking and learning. *Thinking Skills and Creativity*, *37***,** 1-10.

12. Henriksen, D., & Gruber, N. (2022). Mindful and creative: Building educational systems for individual and community wellbeing. TechTrends**,** *65*(3), 246-252.

13. Henriksen, D., & Shack, K. (2020). Creativity-focused mindfulness for student well-being. Kappa *Delta Pi Record***,** *56*(4), 170-175.

14. Henriksen, D., Creely, E., Henderson, M., & Mishra, P. (2021). Creativity and technology in teaching and learning: A literature review of the uneasy space of implementation. *Educational Technology Research & Development*. 10.1007/s11423-020-09912-z

See also: Danah Henriksen, PhD, Associate Professor of Leadership & Innovation, Arizona State University, Mary Lou Fulton Teachers College, http://www.danah-henriksen.com, Danah.Henriksen@asu.edu

15. Silver Lining for Learning Episode #10 (2020, May 18): Crisis, drift, and new paradigms for public education, Dr. Shawn Loescher, Ed.D.; https://silverliningforlearning.org/episode-10-crisis-drift-and-new-paradigms-for-public-education/; https://www.youtube.com/watch?v=MAfeQLtnY68

16. Silver Lining for Learning. Episode 63 (2021, June 10). Let children play with Pasi Sahlberg & Alex Harper. Available: https://silverliningforlearning.org/episode-63-let-children-play-with-pasi-sahlberg-alex-harper/; Video (102:08): https://www.youtube.com/watch?v=UrcwTIDmM3Q

17. Silver Lining for Learning Episode 64 (2021, June 26). Self-directed learning with Peter Gray and Bria Bloom, Available: https://silverliningforlearning.org/episode-64-self-directed-learning-with-peter-gray-and-bria-bloom/; Video (104:40): Silver Lining for Learning, Episode 64: Self-directed learning, Play & unschooling: https://www.youtube.com/watch?v=R9ju9QAl1EA

18. Silver Lining for Learning Episode 137 (2023, January 21). Mental Health, Mindfulness, and the Movement Toward Social-Emotional Learning. Available: https://silverliningforlearning.org/episode-137-mental-health-mindfulness-and-the-movement-toward-social-emotional-learning/ or at Video: 1:02:20: https://www.youtube.com/watch?v=GjVq0Q2LMYM

19. Silver Lining for Learning Episode 163 (2023, August 19). Contemporary Education and Changing Culture in Ukraine. Available: https://silverliningforlearning.org/episode-163-contemporary-education-and-changing-culture-in-ukraine/

20. Silver Lining for Learning Episode 224 (2025, February 15). Digital Caregivers: Finding Meaning with Social Robots https://silverliningforlearning.org/episode-224-digital-caregivers-finding-meaning-with-social-robots/; Video (1:00:53): https://www.youtube.com/watch?v=y3-Rf9g99gU

21. Silver Lining for Learning Episode 237 (June 28, 2025). CAREducation: Living the Standard through the Care Revolution. https://silverliningforlearning.org/episode-237-careducation-living-the-standard-through-the-care-revolution/; Video: (1:00:50): https://www.youtube.com/watch?v=wZSd3ALMqAE

Week 10 (October 27): Technology Enhanced Learning and Microlearning

1. Technology Integration Matrix (TIM): https://fcit.usf.edu/matrix/ and TIM: Goal-Directed Learning: https://fcit.usf.edu/matrix/wp-content/uploads/2019/05/2019_Goal-Directed_Descriptors-US.pdf

2. Lisa J. Anderson and Cindy Berhtram, October 20, 2022, Lessons from Teaching and Learning at Stanford During the COVID-19 Pandemic, a report from Stanford Digital Education, examines Stanford's experiences
   Stanford Pandemic Ed Review, 2020-21;
   https://issuu.com/stanforddigitaleducation/docs/stanford_pandemic_ed_review_2020-21
   a. Jeffrey Young, Stanford Report Says Emergency Remote Instruction Led to 'Shift' in University's Identity, EdSurge
      https://www.edsurge.com/news/2022-10-20-stanford-report-argues-emergency-remote-instruction-led-to-shift-in-university-s-identity

3. Diana Henderson, Daniel Jackson, David Kaiser, S. P. Kothari, & Sanjay Sharma (2022, September 27). Ideas for Designing: An Affordable New Educational Institution, MIT. Available:
   https://www.projectnei.com/_files/ugd/d859ad_d6ca8f62511b48b0a21ec6eba8e5db84.pdf

   a. Jeffrey Young (2022, September 23). MIT Professors Propose a New Kind of University for Post-COVID Era, EdSurge. Available: https://www.edsurge.com/news/2022-09-28-mit-professors-propose-a-new-kind-of-university-for-post-covid-era

4. 2024 Horizons Report: Kathe Pelletier, Mark McCormack, Nicole Muscanell, Jamie Reeves, Jenay Robert, and Nichole Arbino, *2024 EDUCAUSE Horizon Report, Teaching and Learning Edition* (Boulder, CO: EDUCAUSE, 2024). Avalable: https://library.educause.edu/resources/2024/5/2024-educause-horizon-report-teaching-and-learning-edition; 14 minute video overview:
   https://www.youtube.com/watch?v=jheZqaqgzVw

5. 2025 Horizons Report: Jenay Robert, Nicole Muscanell, Mark McCormack, Kathe Pelletier, Kim Arnold, Nichole Arbino, Keturah Young, and Jamie Reeves, 2025 EDUCAUSE Horizon Report, Teaching and Learning Edition (Boulder, CO: EDUCAUSE, 2025). Available: https://library.educause.edu/-/media/files/library/2025/5/2025hrteachinglearning.pdf

6. Tony Bates, Teaching in a Digital Age (2022) (third education; see https://pressbooks.bccampus.ca/teachinginadigitalagev3m/), Chapter 6: Building an Effective Learning Environment: https://pressbooks.bccampus.ca/teachinginadigitalagev3m/part/chapter-5-building-an-effective-learning-environment/ **(Note: this is a free book.) (2022: https://www.tonybates.ca/teaching-in-a-digital-age/)**

7. Badrul Khan (2022). New Normal Learning Framework. Available:
   Available: https://badrulkhan.com/new_normal.pdf; see also Badrul Khan: http://badrulkhan.com/

8. What We Know: How Institutions Can Best Prepare Students for What Comes Next (2022, September 2). Modern Campus, Adam Fein (University of North Texas) On How Institutions Can Best Prepare Students for What Comes Next, *Illumination* podcast, host Amrit Ahluwalia. Video (30:44):
   https://moderncampus.com/blog/what-comes-next-illumination.html

9. Bonk, C. J. (2016). What is the state of e-learning?: Reflections on 30 ways learning is changing**.** *Journal of Open, Flexible and Distance Learning*, *20*(2), 6-20. Available: http://jofdl.nz/index.php/JOFDL/article/viewFile/300/205 and http://www.jofdl.nz/index.php/JOFDL/article/view/300
    Blog post addendum: Part 1. "There's no learning in e-learning": Such was the "State of E-Learning" back in April, 2002
    Blog post addendum Part 2. Online Learning 2001 in LA: From Men on Stilts to Bill Clinton

10. Silver Lining for Learning, Episode 19 (2020, July 25). Educational Innovation for Equity and Immersive Learning in Africa with Ketcha Pertulla Ezigha, Judith Okonkwo, and Toks Bakare, https://silverliningforlearning.org/episode-19-educational-innovation-for-equity-and-immersive-learning-in-africa/; Video (102:13): https://youtu.be/dtoO_DXFUA4

11. Silver Lining for Learning Episode #44 (2021, January 30). Reflections on the 60 Year Curriculum, Creative Credentialing, and the Continuum College in a Post COVID-19 World: Tapping the Brain of Rovy Branon; Available: https://silverliningforlearning.org/reflections-of-the-60-year-curriculum-creative-credentialing-and-the-continuum-college-in-a-post-covid-19-world-tapping-the-brain-of-rovy-branon/; Video (1:01:08): Silver Lining for Learning Episode #44: https://youtu.be/Cn67RyCiUn8

12. Silver Lining for Learning. Episode 114 (2022, July 23). Free Immersive Education for All: From Greece to the World. Available: https://silverliningforlearning.org/episode-114-free-immersive-education-for-all-from-greece-to-the-world/; Video (103:00): https://www.youtube.com/watch?v=KNtdPd75qQE

13. Silver Lining for Learning. Episode 124 (2022, October 8). Microcredentials that Add Value beyond Degrees and Certifications with Katie Sievers, Brittany Storie, and Scott Van Pelt. Available: https://silverliningforlearning.org/episode-124-microcredentials-that-add-value-beyond-degrees-and-certifications/; Video (102:17): https://www.youtube.com/watch?v=0h1C5PR9iTk

14. Silver Lining for Learning. Episode 124 (2022, September). Microcredentials that Add Value beyond Degrees and Certifications with Katie Sievers, Brittany Storie, and Scott Van Pelt. Available: https://silverliningforlearning.org/episode-124-microcredentials-that-add-value-beyond-degrees-and-certifications/

15. Silver Lining for Learning. Episode 153 (2023). Micro-credentials and Specializations for the Masses: Alternatives for a Nontraditional Age. Retrieved from: https://silverliningforlearning.org/episode-153-micro-credentials-and-specializations-for-the-masses-alternatives-for-a-nontraditional-age/

Week 11 (Nov. 3): The Psychology of Online Learning

Articles from Educational Psychologist Special Issue (2022) (57): Diverse Lenses on Improving Theory, Research, and Practice, https://www.tandfonline.com/toc/hedp20/57/3

1. Greenhow, C., Graham, C. R., & Koehler, M. J. (2022). Foundations of online learning: Challenges and opportunities. *Educational Psychologist*, *57*(3), 131–147. https://doi.org/10.1080/00461520.2022.2090364

2. Shea, P., Richardson, J., & Swan, K. (2022). Building bridges to advance the Community of Inquiry framework for online learning. *Educational Psychologist*, *57*(3), 148–161. https://doi.org/10.1080/00461520.2022.2089989

3. Martin, F., & Borup, J. (2022). Online learner engagement: Conceptual definitions, research themes, and supportive practices. *Educational Psychologist*, *57*(3), 162–177.

https://doi.org/10.1080/00461520.2022.2089147

4. Archambault, L., Leary, H., & Rice, K. (2022). Pillars of online pedagogy: A framework for teaching in online learning environments. *Educational Psychologist*, *57*(3), 178–191. https://doi.org/10.1080/00461520.2022.2051513

5. Tate, T., & Warschauer, M. (2022). Equity in online learning. *Educational Psychologist*, *57*(3), 192–206. https://doi.org/10.1080/00461520.2022.2062597

6. Hoadley, C., & Campos, F. C. (2022). Design-based research: What it is and why it matters to studying online learning. *Educational Psychologist*, *57*(3), 207–219. https://doi.org/10.1080/00461520.2022.2079128 **(Open Access)**

7. Heejung An, Gerardine Mongillo, Woonhee Sung, & David Fuentes (2022). Factors Affecting Online Learning During the COVID-19 Pandemic: The Lived Experiences of Parents, Teachers, and Administrators in U.S. High-Needs K-12 Schools, *Journal of Online Learning Research*, 8(2), 203-234

8. Means, B. (2022). Making insights from educational psychology and educational technology research more useful for practice research more useful for practice. *Educational Psychologist*, *57*(3), 226–230. https://doi.org/10.1080/00461520.2022.2061974 **(Open Access)**

Week 12 (Nov. 10): Designing Effective Online Learning Environments

1. Meina Zhu & Curtis J. Bonk (2022, online first). Guidelines and strategies for fostering and enhancing self-directed online learning. *Open Learning: The Journal of Open, Distance and e-Learning*. DOI: https://doi.org/10.1080/02680513.2022.2141105

2. Dede, Chris, & Lidwell, William. (2023). Developing a Next-Generation Model for Massive Digital Learning. *Education Sciences* 13, no. 8: 845. https://doi.org/10.3390/educsci13080845 (**Note:** Discusses reports of online learning during the pandemic at MIT, Harvard, and Stanford.)

3. Jered Borup, Joan Kang Shin, Powell, M. G., Evmenova, A. S., & Kim, W. (2022). Revising and Validating the Community of Inquiry Instrument for MOOCs and other Global Online Courses. *The International Review of Research in Open and Distributed Learning*, *23*(3), 82-103. https://doi.org/10.19173/irrodl.v23i2.6034

4. Jan Herrington, Ron Oliver, & Thomas C. Reeves (2003). Patterns of engagement in authentic online learning environments. *Australasian Journal of Educational Technology*, *19*(1).

5. Stephanie L. Moore & Philip J. Piety (2022): Online learning ecosystems: comprehensive planning and support for distance learners, Distance Education, *43*(2), 179-203, https://doi.org/10.1080/01587919.2022.2064820

6. Florence Martin, Vanessa P. Dennen, & Curtis J. Bonk (2020). A synthesis of systematic review research on emerging learning environments and technologies. *Educational Technology Research and Development*, *68*(4), 1613-1633.

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12. An, H., & Chang, T-H. (in press). Setting the stage: supporting STEM teachers through online continuing professional development in a diverse and digitally connected world. In H. An & W. Sung (Eds.), *Designing online continuing professional development for STEM teacher education: models, strategies, and practices.* Routledge

13. David Wiley (2022, August 31). On the Relationship Between Adopting OER and Improving Student Outcomes. *Improving Learning* blog. Available: https://opencontent.org/blog/archives/6949
    a. Michael Moore (2022, September 2). The Future of OER. *Dr. Mike Moore* blog. Available: https://drmichaelrmoore.com/the-future-of-oer/

14. Silver Lining for Learning Episode 25 (2020, September 5). Making Contact with Contact North (Guest: Maxim Jean-Louis). Available: https://silverliningforlearning.org/episode-25-making-contact-with-contact-north/; Video (1:00:00) https://youtu.be/ulyEwS66CLU

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16. Silver Lining for Learning. Episode 106 (2022, May 14). Global Eyes on Global Ed: Transforming Learning through Cross Cultural Project-Based Learning. Available: https://silverliningforlearning.org/episode-106-global-eyes-on-global-ed/; Video (101:08): https://www.youtube.com/watch?v=9ZUP-a9E-P8

17. Silver Lining for Learning. (2022). Episode 131/ Find a Place for Stanford's Code in Place. Available: https://silverliningforlearning.org/episode-131-find-a-place-for-stanfords-code-in-place/ or Video (102:32): https://www.youtube.com/watch?v=tb4QpeqisOk

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Week 13 (Nov. 17): Smart Learning Environments

1. Spector, J. M. (2016, March). Smart learning environments: Concepts and issues. In *Society for Information Technology & teacher education international conference* (pp. 2728-2737). Association for the Advancement of Computing in Education (AACE).

2. Shafika Isaacs & Sanjaya Mishra (2022, September). Smart Education Strategies for Teaching and Learning: Critical Analytical Framework and Case Studies. UNESCO Institute for Information Technology in Education. Available: https://oasis.col.org/items/53fc7c8c-5ea4-4b44-9fce-9b829905e89f and http://hdl.handle.net/11599/4464

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6. Kim Young (August 11, 2022). How a Student-Explorer Team Took Environmental Action from Space, *National Geographic Education*. Available: https://blog.education.nationalgeographic.org/2022/08/11/how-a-student-explorer-team-took-environmental-action-from-space/

7. Silver Lining for Learning. Episode 93 (2022, February 12). Exploring Modes of Remote Learning in Palestine During the Pandemic: Opportunities and Challenges. Available: https://silverliningforlearning.org/episode-93-exploring-modes-of-remote-learning-in-palestine-during-the-pandemic-opportunities-and-challenges/; Video (1:00:42): https://www.youtube.com/watch?v=a8E_58SFvQE

8. Silver Lining for Learning (2023, June 3). Episode 154 | EdTechBooks for this EdTech Age. Available: https://silverliningforlearning.org/episode-154-edtechbooks-for-this-edtech-age/

9. Silver Lining for Learning Episode #239 (July 26, 2025) (Helen Crompton, Mike Sharples, and John Traxler) Mobile Learning & GenAI for the Less Privileged, Refugees & the Global South: https://silverliningforlearning.org/episode-239-mobile-learning-genai-for-the-less-privileged-refugees-the-global-south/; Video (1:00:45): https://www.youtube.com/watch?v=XufSFgeABrE&t=7s
Special Video Shorts for Episode #239: https://www.youtube.com/@Silverlining4learning/shorts

10. Dabae Lee and Sean English interviewed by Malcolm Gladwell (2025, May 21). Video (28:47). Deep Dive: AI's Role in Transforming Education | Smart Talks with IBM. longform video from the IBM Smart Talks; https://www.youtube.com/watch?v=92K9ffLtu-I

    (Discover how AI is transforming education. Watch Malcolm Gladwell's in-depth interview with Associate Professor Dabae Lee from Kennesaw State University and Research Assistant Sean English as they discuss how AI can help future teachers practice responsive teaching.)

Note: Dabae Lee, Ph.D. is an Associate Professor, Department of Instructional Technology and Program Coordinator, Personalized Learning Endorsement in the Bagwell College of Education at Kennesaw State

University. Email: dlee159@kennesaw.edu

Week 14 (Nov. 24): AI, Robotics, and the Metaverse (Task #4 & Task #5 due)

1. Cao, L., & Dede, C. (2023). *Navigating A World of Generative AI: Suggestions for Educators*. The Next Level Lab at Harvard Graduate School of Education. President and Fellows of Harvard College: Cambridge, MA.

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3. Kim, P., Wang, W., & Bonk, C. J. (2025). Generative AI as a coach to help students enhance proficiency in question formulation. *Journal of Educational Computing Research*, *63*(3), 565-586. https://doi.org/10.1177/07356331251314222

4. Wang, C., Li, Z., & Bonk, C. J. (2024). Understanding self-directed learning in AI-assisted writing: A mixed methods study of postsecondary learners. *Computers & Education: Artificial Intelligence*, *6*. https://doi.org/10.1016/j.caeai.2024.100247

5. Li, Z., Wang, C., & Bonk, C. J. (2024). Exploring the utility of ChatGPT for self-directed online language learning. *Online Learning*, *28*(3), 157-180. https://doi.org/10.24059/olj.v28i3.4497

6. Gibson, D., Kovanovic, V., Ifenthaler, D., Dexter, S., & Feng, S. (2023). Learning theories for artificial intelligence promoting learning processes. *British Journal of Educational Technology*, 54, 1125–1146. https://doi.org/10.1111/bjet.13341; https://bera-journals.onlinelibrary.wiley.com/doi/10.1111/bjet.13341; https://bera-journals.onlinelibrary.wiley.com/doi/epdf/10.1111/bjet.13341

7. Heejung An, Woonhee Sung, & So Yoon Yoon (2022). Implementation of learning by design in a synchronized online environment to teach educational robotics to inservice teachers, *Educational Technology Research and Development*. https://doi.org/10.1007/s11423-022-10134-8

8. Heejung An, Woonhee Sung, & So Yoon Yoon (2022, May). Hands-on, Minds-on, Hearts-on, Social-on: A Collaborative Maker Project Integrating Arts in a Synchronous Online Environment for Teachers. *TechTrends*, 66(4)**,** 590–606. https://link.springer.com/article/10.1007/s11528-022-00740-x

9. Kucuk, S., & Sisman, B. (2018). Pre-Service Teachers' Experiences in Learning Robotics Design and Programming. *Informatics in Education*, *17*(2), 301-320.

10. Hwang, G. J., & Chien, S. Y. (2022). Definition, roles, and potential research issues of the metaverse in education: An artificial intelligence perspective. *Computers and Education: Artificial Intelligence*, 100082.

11. Ray Schroeder (2022, July 25). The Metaverse and Web 3.0: Embedding Ourselves into the Internet. *The European Business Review*. Available: https://www.europeanbusinessreview.com/the-metaverse-and-web-3-0-embedding-ourselves-into-the-internet/

12. Ray Schroeder (2022, August 24). Higher Ed – Meet GPT-3: We Will Never Be the Same! *Inside Higher Ed*. Available: https://www.insidehighered.com/digital-learning/blogs/online-trending-now/higher-ed-meet-gpt-3-we-will-never-be-same

13. Ray Schroeder (2023, August 30). Supporting the Faculty Member Fearing Generative AI. *Inside Higher Ed*, https://www.insidehighered.com/opinion/blogs/online-trending-now/2023/08/30/supporting-faculty-member-fearing-generative-ai; Dr. Ray Schroeder's contributions to Inside Higher Ed: https://www.insidehighered.com/author/ray-schroeder

14. Ray Schroeder (2025, March 19). 8 Weeks Left to Prepare for the AI-Enhanced Workplace. *Inside Higher Ed*. Available: https://www.insidehighered.com/opinion/columns/online-trending-now/2025/03/19/eight-weeks-left-prepare-students-ai-enhanced

15. Ray Schroeder (2025, April 30). Urgent Need for AI Literacy. *Inside Higher Ed*. Available: https://www.insidehighered.com/opinion/columns/online-trending-now/2025/05/14/becoming-ai-literate-summer

16. Ray Schroeder (2025, May 14). Becoming AI Literate this summer. *Inside Higher Ed*. Available: https://www.insidehighered.com/opinion/columns/online-trending-now/2025/04/30/urgent-need-ai-literacy

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18. Ray Schroeder (2025, August 5). AI in the University: From Generative Assistant to Autonomous Agent. *Inside Higher Ed*. Available: https://www.insidehighered.com/opinion/columns/online-trending-now/2025/08/05/ai-university-assistant-autonomous-agent

19. Ray Schroeder (2025, August 20). AI Can Facilitate Mastery Learning in Higher Education. *Inside Higher Ed*. Available: https://www.insidehighered.com/opinion/columns/online-trending-now

    More from Ray Schroeder (2025): https://sites.google.com/view/raysspace/ (***All Online: Trending Now*** articles from Ray Schroeder are at: Meta-site on AI in Education: https://sites.google.com/view/ai-highered); find his articles at: https://www.insidehighered.com/opinion/columns/online-trending-now

20. Silver Lining for Learning Episode 82 (2021, November 6). Life and Learning in the Metaverse; Available: https://silverliningforlearning.org/episode-82-life-and-learning-in-the-metaverse/; Video (1:00:22) Episode 82 | Life and Learning in the Metaverse: https://www.youtube.com/watch?v=wbSJH1dhnX4

21. Garry Kasparov TED Talk (15:12). Don't fear intelligent machines. Work with them. https://www.ted.com/talks/garry_kasparov_don_t_fear_intelligent_machines_work_with_them

Week 15 (December 1): Trends and Issues (Optional Task #6 Final Project Sharing)

1. Grotzer, T., & Cao, L. Y. (2023). EarthXDesign for a sustainable world: Moving from human-centered to Earth-centered design. The Next Level Lab at Harvard Graduate School of Education. President and Fellows of Harvard College: Cambridge, MA.

2. COL Newsletter published July 2022, *27*(2). Commonwealth of Learning (COL), Learning for Sustainable Development, Resilience; Available: http://oasis.col.org:8080/colserver/api/core/bitstreams/cc42f822-5182-4c38-9506-af7204701c6c/content; http://hdl.handle.net/11599/4071; Click here to download the full issue.

3. Kamble, A., Gauba, R., Desai, S., & Golhar, D. (2021). Learners' perception of the transition to instructor-led online learning environments: Facilitators and barriers during the COVID-19 pandemic. *International Review of Research in Open and Distributed Learning*, *22*(1), 199-215.

4. McGrath, C., Palmgren, P. J., & Liljedahl, M. (2021). Beyond brick and mortar: Staying connected in post-pandemic blended learning environments. *Medical Education*.

5. Ray Schroeder (2022, August 10). Online Learning Impacting the Carbon Footprint. *Inside Higher Ed*. Available: https://www.insidehighered.com/digital-learning/blogs/online-trending-now/online-learning-impacting-carbon-footprint

6. Stephen Downes, September 21, 2022, (Video (1:03:35); Slides: "The Future of Learning Technology: 10 Key Tools and Methods." Hosted by Contact North Webinars on Teaching Online. Available: https://teachonline.ca/webinars; https://teachonline.ca/sites/default/files/webinar-series/slides/2022_09_21_-_the_future_of_learning_technology.pdf

7. Silver Lining for Learning Episode 74 (September 11, 2021). The Push for Equitable Learning in Inequitable Learning Spaces: Taking a Journey to Bhutan, Papua New Guinea, and Nepal; Available: https://silverliningforlearning.org/episode-74-the-push-for-equitable-learning-in-inequitable-learning-spaces-taking-a-journey-to-bhutan-papua-new-guinea-and-nepal/; Video (1:00:44): Episode 74: https://www.youtube.com/watch?v=Sx8kFV3Q4kc

8. Silver Lining for Learning Episode 231 (2025, April 19). Stepping Up: Refugees in Need of Higher Educ. and So Much More: https://silverliningforlearning.org/episode-231-stepping-up-refugees-in-need-of-higher-education-and-so-much-more/; Video (58:19): https://www.youtube.com/watch?v=6fUHdwXxWbs&t=7s

9. Silver Lining for Learning Episode 234 (2025, May 24). App Inventor: Transforming Tech Consumers into Community Innovators: https://silverliningforlearning.org/app-inventor-transforming-tech-consumers-into-community-innovators/; Video: (1:00:11): https://www.youtube.com/watch?v=gF84Sb4YEsQ&t=3594s