R622: Learning Environments Design (Fall 2022; October 19, 2022 version)

IST Department, IU School of Education

(Section 11915: Online Version; 15 week)

Syllabus: http://curtbonk.com/R622_online_syllabus_Fall_2022.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/2083042

Instructor: Professor Curt Bonk, Indiana University, Email: cjbonk@indiana.edu
Bonk Homepage: http://curtbonk.com/
Student Info in Padlet: https://padlet.com/sunseol/sx3ra0rn3tb9vvd5
Instructional Assistant: Sunmi Seol, Email: sunseol@iu.edu

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 may change depending upon circumstances)

Week 1 (August 22):	Module #1: Learning Environments Foundations and History
Week 2 (August 29):	Module #2: Learning Theory and Learning Environments
Week 3 (Sept. 5):	Module #3: Formal K-12 Learning Environments
Week 4 (Sept 12):	Module #4: Informal Learning Environments
Week 5 (Sept 19):	Module #5: Authentic Learning Environments in Higher Education
Week 6 (Sept 26):	Module #6: Learning Environments in the Workplace
Week 7 (Oct 3):	Module #7: Active Learning Spaces in HE (all IU) (Task #3 & #4 due)
Week 8 (Oct 10):	Module #8: Youth Participatory Action Research (YPAR)
Week 9 (Oct 17):	Module #9: Wellbeing and Belongingness
Week 10 (Oct 24):	Module #10: Mindfulness, Open Thinking, and Radical Creativity
Week 11 (Oct 31):	Module #11: Technology-Enhanced Learning and Microlearning
Week 12 (Nov 7):	Module #12: Designing Effective Online Learning Environments
Week 13 (Nov 14):	Module #13: Smart Learning Environments (Task #5 & Task #6 due)
Week 14 (Nov 28):	Module #14: AI, Robotics, and the Metaverse
Week 15 (Dec 5):	Module #15: Trends and Issues (Optional Final Project Task #7 due)

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

Assignments, Grading Criteria, and Due Dates

Tasks/Assignments	Points	Due Dates
1. Weekly Discussion in Canvas	60 points	Due each week
2. Discussion Moderator and Class Resource Contributor	40 points	Various times (to be assigned by Sunmi Seol)
3. Learning Environment Critique and Analysis	60 points	October 3 (with 4 day grace period)
4. Learning Environment Final Project Skeleton	40 points	October 3 (with 4 day grace period)
5. Learning Environment Final Project Design Prototype	60 points	November 14 (with 7 day grace period)
6. Course Super Summary	40 points	November 14 (with 7 day grace period)
7. Present and Share Final Projects and Ideas	2 bonus points	December 5

Note: Working in teams on Tasks #3, #4, #5, and #6 is optional, but encouraged.

Total Points = 300 (Grading will be according to a 90-80-70-60 scale; see below.)

Grades:
300 or more = A+
280 = A
270 = A-
260 = B+
250 = B
240 = B-
230 = C+
220 = C
210 = C-
200 = 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 on Monday night at 7 pm Eastern. Please upload them to Canvas.

Lateness: I have a 96-hour lateness policy with no penalties for any assignment (i.e., a 4 day grace period). Anything submitted after that 96-hour cushion or window loses 1 point per day. So, if it says it is due Monday at midnight, you actually have until Friday at midnight to turn it in.

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 (info). 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.

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: My instructional assistant, Sunmi Seol, will answer any questions or concerns that you have. She will also help me coordinate class activities and plans (sunseol@iu.edu).

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 give short lectures at the start of these sessions. 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** on Monday nights perhaps at 6 pm for around an hour or two. See Canvas announcements for the Zoom link.

R622 Course Tasks for Fall 2022

1. Weekly discussion in Canvas (60 points)

Refer to the detailed guidelines: click Link

All students will participate in Canvas online discussions every week for 15 weeks. All students will be placed in small groups of 4 students, with weekly discussion activities based on assigned roles. Roles are re-assigned weekly, and groups are re-assigned every 4 weeks. Weekly role assignment information for 15 weeks will be announced at once in the first week so that students can prepare their assignments in advance, and role assignment and group formation information will be posted as a reminder every week.

In a discussion group, students assume one of four roles: **moderator, supporter, challenger, and summarizer**. The **moderator** gives a clear direction to the discussion and motivates students to participate in the discussion actively. The **supporter** responds positively to all posts and comments, suggests new ideas, or uses theory. The **challenger** is to respond to all posts and comments from a critical point of view, come up with a new idea, or use a theory. Finally, the **summarizer** summarizes one discussion thread or the entire discussion, wraps up the whole discussion week, and leads the students to conclude each week. The summarizer also brings in new sources so students can understand the entire discussion. For role information and example posting, refer to this link.

The most important task in this discussion activity is to write and upload a conversational post. Create a post with the following considerations in mind.

***Considerations when writing a post*:**

- When writing a post, **write your role** at the top.
- Each post can be up to **300** words long; **100-200 words** are appropriate.
- Each post typically covers or addresses **one topic but sometimes additional ones.**
- Upload around **three or four posts** every week, sometimes more if you get highly engaged in it.
- Write posts based on your **assigned roles.**
- Try to state your views and ideas **clearly and concisely** when possible and try to avoid repetitive and verbose sentences.
- Words that disrespect/hate/slander/curse other students are prohibited.

Grades for this activity will be assigned based on the level of participation. Scores from **54-60** for high participants, **46-53** for middle participants, **38-45** for low participants, and **below that** others. Participating in discussions includes contributing to Canvas online discussions, sharing resources, responding to peers, providing feedback on tasks and resource recommendations, and more. The level of participation primarily is measured by considering the number of uploaded posts and the qualitative factors listed below.

Participation Assessment Considerations:

- Diversity (some variety in ideas posted and some breadth to exploration),
- Perspective taking (values other perspectives, ideas, cultures, etc.),
- Creativity (original, unique, and novel ideas),
- Insightful (makes interesting, astute, and sagacious observations),
- Relevancy (topics selected are connected to course content),
- Learning Depth/Growth (shows some depth to thinking and elaboration of ideas),
- Brevity (communicate clearly and without verbosity), and
- Responsibility (perform the required tasks according to the assigned roles)

My instructional assistant Sunmi Seol and I will monitor and support all group discussions every week. If you have any questions, difficulties, or concerns regarding this activity, please feel free to contact Sunmi at sunseol@iu.edu.

2. Discussion Moderator and Class Resource Contributor (40 points)

In discussion activities, students work in small groups. In addition to basic tasks, the mediator performs additional duties for effective discussion activities. The moderators of each group review the articles for the week, select, and read at least three pieces, and **upload short summaries** to their group discussions **by Monday morning of every week**. The moderators also **post some questions** related to the topic to help kick off a group discussion. The moderators may nominate resources, not in the syllabus, such as reading additional articles, technical reports, books, videos, animations, or other resources to consider the next time the course is offered.

Note: Group assignments and weekly role assignments will be announced once during the first week, allowing moderators to prepare their additional tasks. Additionally, weekly reminder of role-assignment will be posted.

Moderators or co-moderators might:

1. State reactions, questions, and suggestions for the upcoming readings.
2. Push thinking through question asking.
3. Post author pictures, quotes, figures, tables, etc., from the articles for the coming week.
4. Recap or briefly summarize key parts of the assigned articles for the week.
5. Monitor the discussion. And spark it when it goes weak.

6. Offer feedback to peers on their posts.
7. Add resources and links to resources to the discussion.
8. Connect to experts in the field.
9. Connect or synthesize comments within the week.
10. Note alternative perspectives and points of view.
11. Point to counter points and inaccuracies in the postings of students during the week.
12. Be creative or offer creative insights when needed.
13. Point out the relationship of upcoming week topic or articles to past lectures or readings.
14. Reflect on the discussion from past weeks; repost prior quotes from others.
15. Discuss the position of a researcher or pioneer in the field (or perhaps even write to him/her);
16. Discuss a recent speech or colloquium you attended related to the week or a visit to a technology center or exhibit.
17. At the end of the week, you might react and reflect on the class discussion that transpired as well as the questions and concerns raised. You might also link to the next week's readings.

3. **Option A. Learning Environment Critique and Analysis (60 points—October 3).** 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).

3. **Option B. Silver Lining for Learning (Pandemic Podcasting) Critique and Analysis (60 Points—October 3).** 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 14, 2020, now has produced 117 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 two 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. 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).

4. **Option C: Voluntary Services or Materials Analysis (60 Points—October 3).** 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 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. *Grounded Design*

Evidence of Grounded Design in the (1) Theoretical pinnings and Evidence and Artifacts.

4. **Learning Environment Final Project Skeleton (40 Points—October 3).** 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. By October 3, 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.

5. Learning Environment Final Project design prototype (60 Points—November 14)

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 and 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 the 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 you 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.*	

6. Course Super Summary (40 Points—November 14)

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 (2,500-3,000 word if with a partner or two). Here you must specifically refer to the comments of your peers from four different weeks in the semester. 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 (50 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.

7. Present and Share Final Projects and Ideas (2 bonus points—December 5)

Students have the option to present their final projects and other ideas for two bonus points on December 5. I highly encourage everyone to attend that final class session and say goodbye to everyone. I would love for each of you to join in and bring a friend, fellow student, colleague, co-worker, or family member.

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 22): Module #1: 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 (August 29): Module #2: Learning Theory and Learning Environments

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. Silver Lining for Learning (2021, May 1). Episode #56: 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

Week 3 (Sept. 5): Module #3: Formal K-12 Learning Environments

1. 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.

2. 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.

3. 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

4. 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/

5. 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.

6. 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.

7. 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

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

9. Silver Lining for Learning: Episode 15: 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

10. 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

11. 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

Week 4 (Sept 12): Module #4: Informal 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 #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

12. 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

13. Silver Lining for Learning. Episode #42. 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

Week 5 (Sept 19): Module #6: Authentic Learning Environments in Higher Education

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

Week 6 (Sept 26): Module #5: 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 (2021, October 9). Episode #78 | 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 #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

Week 7 (Oct 3): Module #7: Active Learning Spaces in Higher Ed (all IU) (Task #3 & #4 due)

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 (2022, September 17). Episode #121. "***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

Week 8 (Oct 10): Module #8: Youth Participatory Action Research (YPAR)

1. Ben Kirshner (2010). Productive tensions in youth participatory action research. *Teachers College Record: The Voice of Scholarship in Education*, *113*(13), 238-251, DOI: https://doi.org/10.1177/016146811011201316

2. Jay Roberts and Anna Welton (August 3, 2022). The 10 commandments of experiential learning. *Inside Higher Education*, Retrieved from https://www.insidehighered.com/advice/2022/08/03/foundational-best-practices-experiential-learning-opinion

3. Ben Kirshner, Shelley Zion, Solicia Lopez & Carlos Hipolito-Delgado (2021). A Theory of Change for Scaling Critical Civic Inquiry, *Peabody Journal of Education*, *96*(3), 294-306, DOI: 10.1080/0161956X.2021.1942708

4. Kris D. Gutiérrez et al. (2017, March). Replacing Representation with Imagination: Finding Ingenuity in Everyday Practices. Review of Research in Education, *41*, pp. 30 –60; https://doi.org/10.3102/0091732X16687523; https://journals.sagepub.com/doi/10.3102/0091732X16687523

5. UNESCO Institute for Lifelong Learning and the Commonwealth of Learning (2021). Guidelines on open and distance learning for youth and adult literacy. UNESCO Institute for Lifelong

Learning and the Commonwealth of Learning. Available: https://oasis.col.org/items/e8801be4-8255-4106-b7fa-582b26243fe9 and http://hdl.handle.net/11599/3965

6. Silver Lining for Learning, Episode 89 (2022; January 15). Learning Losses or Learning Gains: The Sky is the Limit When Youths Take Action, Available: https://silverliningforlearning.org/episode-89-learning-losses-or-learning-gains-the-sky-is-the-limit-when-youths-take-action/; Video (1:01:27) Episode 89 | Learning loses or learning gains, https://www.youtube.com/watch?v=N543LKLKWG0

7. Silver Lining for Learning (2022, April 23). Episode 103 | Don't Just be Savvy, be World Savvy! Available: https://silverliningforlearning.org/episode-103-dont-just-be-savvy-be-world-savvy/; Video (101:53) https://www.youtube.com/watch?v=MGmqYWNblgU&feature=emb_imp_woyt

Week 9 (Oct 17): Module #9: Wellbeing and Belongingness

1. 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

2. 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

3. Aslan, S., Li, Q., Bonk, C. J., & Nachman, L. (2022). An overnight educational transformation: How did the pandemic turn early childhood education upside down? *Online Learning*, 26(2), 52-77. DOI: http://dx.doi.org/10.24059/olj.v26i2.2748

4. Joyce Hwee Ling Koh and Ted Frick (2010). Implementing Autonomy Support: Insights from a Montessori Classroom. *Macrothink Institute*. DOI: https://doi.org/10.5296/ije.v2i2.511; Available: https://www.macrothink.org/journal/index.php/ije/article/view/511

5. Jessica Winter (2022, March 3). The Miseducation of Maria Montessori. *The New Yorker*. Available: https://www.newyorker.com/books/under-review/the-miseducation-of-maria-montessori

6. Sara P. Suchman (2022). National Center for Montessori in Public Sector. Letter to the New Yorker. https://www.public-montessori.org/letter-to-the-editor/

7. Cristina De Stefano (book translated by Gregory Conti) (2022). The Child Is the Teacher: A Life of Maria Montessori. https://otherpress.com/product/the-child-is-the-teacher-9781635420845/ ; https://www.amazon.com/Child-Teacher-Life-Maria-Montessori/dp/1635420849

8. Silver Lining for Learning (2022, August 20). Episode 118 | 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/

9. 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

Week 10 (Oct 24): Module #10: Mindfulness, Open Thinking, and Radical Creativity

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

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

11. Henriksen, D., Richardson, C., Gruber, N., & Mishra, P. (in press). 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.

12. 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.

13. 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.

14. 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.

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

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

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

18. 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

19. What is radical creativity? http://radicalcreativity.weebly.com/what-is-radical-creativity.html

20. Community and Space: http://radicalcreativity.weebly.com/community.html
21. Autonomy and Risk: http://radicalcreativity.weebly.com/autonomy.html

22. Riikka Mäkikoskela and Tuomas Auvinen (July 22, 2022). Radical creativity is one of the three cross-cutting approaches in our living strategy. Available: https://www.aalto.fi/en/our-strategy/radical-creativity

23. 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

24. 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

Week 11 (Oct 31): Module #11: 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. 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

3. 2022 EDUCAUSE Horizon Report (2022) Teaching and Learning Edition. Kathe Pelletier, Mark McCormack, Jamie Reeves, Jenay Robert, and Nichole Arbino, with Maha Al-Freih, Camille Dickson-Deane, Carlos Guevara, Lisa Koster, Melchor Sánchez-Mendiola, Lee Skallerup Bessette, and Jake Stine, 2022 EDUCAUSE Horizon Report, Teaching and Learning Edition (Boulder, CO: EDUCAUSE, 2022).

4. 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/)**

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

6. 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

7. 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

8. Silver Lining for Learning. Episode #125 (2022, October 8). Certificates and microcredentials.

9. 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

10. 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

Week 12 (Nov 7): Module #12: Designing Effective Online Learning Environments

1. Meina Zhu & Curtis J. Bonk (in press). Guidelines and strategies for fostering and enhancing self-directed online learning. *Open Learning*.

2. 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

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

4. 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

5. 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.

6. Joi L. Moore, Dickson-Deane, C., & Galyen, K. (2011). e-Learning, online learning, and distance learning environments: Are they the same? *The Internet and Higher Education*, *14*(2), 129-135.

7. Curtis J. Bonk & Elaine Khoo (2014). *Adding Some TEC-VARIETY: 100+ Activities for Motivating and Retaining Learners Online*. OpenWorldBooks.com and Amazon CreateSpace**. (Note: Free eBook available at: http://tec-variety.com/; http://tec-variety.com/TEC-Variety_eBook_5-4.pdf);** Simplified Chinese, Publisher: Beijing Normal University, Beijing, China. Chinese version is free as an e-book. http://tec-variety.com/TEC-VARIETY-Chinese.pdf)

8. Khoo, E., & Bonk, C. J. (2022). *Motivation and Supporting Online Learners*. Burnaby, BC, Canada: Commonwealth of Learning. **Free book available:** http://hdl.handle.net/11599/4481 and **Free course available:** https://colcommons.org/welcome/coursedetails/8; https://www.colvee.org/

9. Maha Bali, George Station, & Mia Zamora, (2022, August 24). Online Does Not Mean Isolated, *Inside Higher Ed*. Available: https://www.insidehighered.com/views/2022/08/24/building-community-online-conferences-events-opinion

10. 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/

11. 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

12. 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

Week 13 (Nov 14): Module #13: 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

3. Bdiwi, R., de Runz, C., Faiz, S., & Ali-Cherif, A. (2019). Smart learning environment: Teacher's role in assessing classroom attention. *Research in Learning Technology*, *27*. DOI: https://doi.org/10.25304/rlt.v27.207

4. Peng, H., Ma, S., & Spector, J. M. (2019). Personalized adaptive learning: an emerging pedagogical approach enabled by a smart learning environment. *Smart Learning Environments*, *6*(1), 1-14.

5. Begona Gros (2016). The design of smart learning environments. *Smart Learning Environments*. *3*:15. https://doi.org/10.1186/s40561-016-0039-x. Available: https://slejournal.springeropen.com/articles/10.1186/s40561-016-0039-x

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/

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Week 14 (Nov 28): Module #14: AI, Robotics, and the Metaverse (Task #5 & Task #6 due)

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Week 15 (Dec 5): Module #15: Trends and Issues (Optional Task #7 Final Project Sharing)

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2. 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.

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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

Week 16 Extra Articles from special issue of the Educational Psychologist on Online Learning

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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

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6. Hoadley, C., Campos, F. C., Hoadley, C., & Campos, F. C. (2022). Design-based research: What it is and why it matters to studying online learning 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)**

Commentaries:

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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)**