

SI 549/EDUC 601 — 2017 Course Schedule

(Subject to change. Pay attention!)

Week 1 — September 11 — Introductions

Please read these articles before coming to the first class meeting:

Schneider, J. (2016, June 22). America's not-so-broken education system. *The Atlantic*. Retrieved from <https://www.theatlantic.com/education/archive/2016/06/everything-in-american-education-is-broken/488189/>

Watters, A. (2017, June 15). "The Brave Little Surveillance Bear" and other stories we tell about robots raising children. Retrieved July 5, 2017, from <http://hackeducation.com/2017/06/15/robots-raising-children>

Fishman, et al. (in progress). *Guide to being scholarly in SI549/EDUC601*.
Find it in Google Drive at <https://goo.gl/foayR9>

In Class: Have you met *Hypothes.is*? (Be sure to bring your laptop.)

DUE on Friday September 15 @ 4pm: Initial Conceptual Framework (upload to GradeCraft).

DUE on Sunday September 17 @ 12pm: First round of Hypothes.is annotation for Week 2 readings.

Week 2 — September 18 — Histories & Futures Part One

Cuban, L. (1986). *Teachers and machines: The classroom use of technology since 1920*. New York: Teachers College Press. (Available at campus bookstores and from Amazon.)

Collins, A. (2017). *What's Worth Teaching?: Rethinking Curriculum in the Age of Technology*. Teachers College Press. Read Preface and Chapter 1. (Available on Canvas)

Postman, N. (1996). Some new gods that fail. From *The End of Education*. New York: Random House. (Available on Canvas)

DUE on Monday September 18 @ 4pm: Sign up to be a Scholarly Supporter (Google Docs)

DUE on Sunday September 24 @ 12pm: First round of Hypothes.is annotation for Week 3 readings (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 3 — September 25 — Histories & Futures Part Two

Baker-Doyle, K. J. (2017). *Transformative Teachers: Teacher Leadership and Learning in a Connected World*. Cambridge, Massachusetts: Harvard Education Press. Read Chapters 2 and 3.

U.S. Department of Education. (2016). *Future ready learning: Reimagining the role of technology in education*. Washington, D.C.: U.S. Department of Education. Retrieved from <http://tech.ed.gov/netp/> (Available on Canvas; For the curious, older NETP documents are also available on Canvas.)

Bransford, J. D., Sherwood, R. D., Hasselbring, T. S., Kinzer, C. K., & Williams, S. M. (1990). Anchored instruction: Why we need it and how technology can help. In *Cognition, education, and multimedia: Exploring ideas in high technology* (pp. 115–141). Hillsdale, NJ: Erlbaum. (Available on Canvas)

DUE on Sunday October 1 @ 12pm: First round of Hypothes.is annotation for Week 4 readings (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 4 – October 2 – Theories that Drive Design (Part 1)

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32–42. [plus responses]

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge, UK: Cambridge University Press. Read Introduction and Part 1. (Campus bookstores & Amazon.)

DUE on Wednesday October 4 @ 4pm: “Have you met X?” proposals, submitted to GradeCraft.

DUE on Sunday October 8 @ 12pm: First round of Hypothes.is annotation for Week 5 readings (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 5 – October 9 – Theories that Drive Design (Part 2)

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge, UK: Cambridge University Press. Read Part 2 and Epilogue. (Available at campus bookstores and from Amazon.)

Bransford, J. D., & Schwartz, D. L. (1999). Rethinking transfer: A simple proposal with multiple implications. In A. Iran-Nejad & P. D. Pearson (Eds.), *Review of Research in Education* (Vol. 24). Washington, DC: American Educational Research Association.

DUE on Wednesday October 15 @ 4pm: Sign up for a poster session slot on Google Docs.

Week 6 – October 16 – NO CLASS MEETING – FALL STUDY BREAK

So... take a break!

DUE on Sunday October 22 @ 12pm: First round of Hypothes.is annotation for Week 7 readings. (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 7 – October 23 – Computational Thinking & Coding as a New Literacy

Papert, S. (1980). *Mindstorms*. New York: Basic Books. May be downloaded from <https://goo.gl/PtNMnG>

Grover, S., & Pea, R. D. (2013). Computational Thinking in K–12 A Review of the State of the Field. *Educational Researcher*, 42(1), 38–43. doi:10.3102/0013189X12463051

Brennan, K. (2015). Beyond technocentrism: Supporting constructionism in the classroom. *Constructivist Foundations*, 10(3), 289–296.

Guest: Karen Brennan, Harvard University

DUE on Sunday October 29 @ 12pm: First round of Hypothes.is annotation for Week 8 readings. (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 8 – October 30 – Research Methods (How do we know?)

Clark, R. E. (1983). Reconsidering Research on Learning from Media. *Review of Educational Research*, 53(4), 445–459. doi:10.3102/00346543053004445

Cobb, P., Confrey, J., diSessa, A., Lehrer, R., & Schauble, L. (2003). Design experiments in educational research. *Educational Researcher*, 32(1), 9–13.

Penuel, W. R., Fishman, B., Cheng, B. H., & Sabelli, N. (2011). Organizing research and development at the intersection of learning, implementation, and design. *Educational Researcher*, 40(7), 331–337. doi: 10.3102/0013189X11421826

DUE on Thursday November 2 @ 4pm: “What’s The Story?” expanded outlines of your “Have you met X?” assignment, submitted to GradeCraft.

DUE on Sunday November 5 @ 12pm: First round of Hypothes.is annotation for Week 9 readings. (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 9 – November 6 – “Everyday” Technologies and Universal Design

Kolb, L. (2011). Adventures with Cell Phones. *Part of a special issue: Teaching Screenagers*, 68(5), 39–43.

Kolb, L. (2016). Co-use and technology: A magic mix! *Edutopia*. Retrieved from:
<https://www.edutopia.org/blog/co-use-technology-magic-mix-liz-kolb>

Halverson, R., & Shapiro, R. B. (2012). *Technologies for education and technologies for learners: How information technologies are (and should be) changing schools* (WCER Working Paper No. 2012-6). Madison, WI: University of Wisconsin-Madison, Wisconsin Center for Education Research. Retrieved from
http://www.wcer.wisc.edu/publications/workingPapers/Working_Paper_No_2012_06.pdf

Meyer, A., Rose, D., & Gordon, D. (2014). *Universal Design for Learning: Theory and Practice*.
<http://udltheorypractice.cast.org> . Read Chapters 1 and 4 online (free registration required)

Guest: Liz Kolb, University of Michigan

DUE on Sunday November 12 @ 12pm: First round of Hypothes.is annotation for Week 10 readings. (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 10 — November 13 — It's Not All Fun & Games

Groff, J., Clarke-Midura, J., Owen, V. E., Rosencheck, L., & Beall, M. (2015). *Better learning in games: A balanced design lens for a new generation of learning games*. Cambridge, MA: Learning Games Network and MIT Education Arcade. Retrieved from <http://education.mit.edu/wp-content/uploads/2015/07/BalancedDesignGuide2015.pdf>

Gee, J. P. (2005). Learning by design: Good video games as learning machines. *E-Learning*, 2(1), 5–16.

Clark, R. E. (2007, May-June). Learning from serious games? Arguments, evidence, and research suggestions. *Educational Technology*, 56-59.

DUE on Thursday November 16 @ 4pm: “Reference Check” annotated bibliography for your “Have you met X?” assignment, submitted to GradeCraft.

DUE on Sunday November 19 @ 12pm: First round of Hypothes.is annotation for Week 11 readings. (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 11 — November 20 — Augmented and Virtual Reality

Klopfer, E. (2008). *Augmented learning: Research and design of mobile educational games*. Cambridge, MA: MIT Press. (Read Chapters 6-8)

Watters, A. (2016, July 2). Virtual Reality in Education: A History. Retrieved August 9, 2016, from <http://hackeducation.com/2016/07/02/virtual-reality>

Guest: Eric Klopfer, MIT

DUE on Sunday November 26 @ 12pm: First round of Hypothes.is annotation for Week 12 readings. (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 12 — November 27 — Making, Connected Learning, & Badges

Location note: For today's class session, we meet in the Shapiro Design Lab.

Thomas, D., & Brown, J. S. (2011). A new culture of learning: Cultivating the imagination for a world of constant change. CreateSpace. (Read chapters 1-4, available on Canvas)

Ito, M., Gutierrez, K., Livingstone, S., Penuel, W. R., Rhodes, J., Salen, K., ... Watkins, S. C. (2013). *Connected learning: An agenda for research and design*. Irvine, CA: Digital Media and Learning Research Hub.

Peppler, K., Halverson, E.R., & Kafai, Y.B. (2016). Introduction to this volume. In K. Peppler, E.R. Halverson, & Y.B. Kafai (Eds.) *Makeology: Makerspaces as learning environments* (pp. 1-11). New York: Routledge.

Joseph, B. (2012, June 25). Six ways to look at badging systems designed for learning. Retrieved from <http://www.olpglobalkids.org/content/six-ways-look-badging-systems-designed-learning>

Guests: Justin Schell, Shapiro Design Lab, & Patricia Garcia, UMSI

DUE on Sunday December 3 @ 12pm: First round of Hypothes.is annotation for Week 13 readings. (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 13 — December 4 — Learning Analytics & MOOCs

Siemens, G. (2013). Learning analytics: The emergence of a discipline. *American Behavioral Scientist*, 57(10), pp. 1380-1400. doi:10.1177/0002764213498851

Yarnall, L., Means, B., & Wetzel, T. (2016). Lessons learned from early implementations of adaptive courseware. Menlo Park, CA: SRI Education.

Westervelt, E. (2015, October 13). Meet The Mind-Reading Robo Tutor In The Sky. Retrieved August 9, 2016, from <http://www.npr.org/sections/ed/2015/10/13/437265231/meet-the-mind-reading-robot-tutor-in-the-sky>

Feldstein, M. (2015, October 13). Yes, I did say that Knewton is “selling snake oil.” Retrieved August 9, 2016, from <http://mfeldstein.com/yes-i-did-say-that-knewton-is-selling-snake-oil/>

Watters, A. (2017, June 22). The History of the Pedometer (and the Problems with Learning Analytics). Retrieved July 5, 2017, from <http://hackeducation.com/2017/06/22/fitbit>

Guests: Stephanie Teasley, University of Michigan

DUE on Sunday December 10 @ 12pm: First round of Hypothes.is annotation for Week 14 readings. (Self-assessment should be made on GradeCraft by the end of the day on *Wednesday*).

Week 14 — December 11 — The End?

Watters, A. (2016, November 2). The best way to predict the future is to issue a press release. Retrieved November 13, 2016, from <http://hackeducation.com/2016/11/02/futures>

Debriefing on semester. Sharing of Final Conceptual Frameworks.

DUE on Mon. December 11 @ 4pm: Submit final reports from “Have You Met X?” on GradeCraft.

DUE on Wed. December 13 @ 4pm: Submit your revisited Conceptual Framework on GradeCraft.

Thank you.

*Don't forget to provide course feedback!
Your feedback is crucial to improving this class for future learners.*



SI 549/EDUC 601 — Assignment Overview

NOTE: This document is for informational purposes only! It is not the official description of assignments for SI 549/EDUC 601. The *official* description of assignments, including due dates and point values, is contained within GradeCraft. This document is intended give you an overview of the major assignments in the course without making you dig through GradeCraft.

Initial Conceptual Framework

In five pages or less, write a personal reflection that describes your formative experiences with technology in learning or education. These might be "good" or "bad" experiences. It's your life, not mine! You will next develop your personal list of criteria that you think should be used to evaluate the value or impact of technology. This is based on your experience, and I do not expect it to be rooted in theory or literature. Use your experience as your guide. There are no wrong answers (though you might have an inarticulate or poorly explained answer).

Finally, you must create a visual representation or graphical overview that summarizes your criteria. This can be a diagram, table, drawing, or anything in any medium (use your imagination) that communicates your ideas. You must also write a brief explanation of your visual representation. Keep in mind that your visual representation needs to be meaningful not only to yourself, but to others.

In this initial conceptual framework assignment, your paper need not use any formal citations or references; it is meant to get you thinking about your assumptions, values, and beliefs related to the uses of learning technologies.

Required components:

- A personal narrative that describes your "formative" experiences with technology for learning
- A list of criteria you personally would use to evaluate/assess the value or impact of technology for learning.
- A paper that is well written, with no grammar or spelling errors, and is well-formatted (I impose no particular rules on formatting for this assignment, but it should be well laid out and easy to read.)
- A well-organized paper. This is different than just grammar, spelling, and formatting. I want your paper to have a clear introduction, and clear headings. At a minimum, this paper would have these headings (you may vary them, but please follow the spirit of this):
 - Introduction
 - Personal Narrative
 - Criteria for Evaluation
 - Explanation of Representation (this last one might be with the representation, and not in the paper itself).
- A graphical or visual depiction of your criteria
- Explanation of graphical depiction

Revised Conceptual Framework

For your revised conceptual framework paper, due at the end of the term, your initial framework should be expanded to reflect the readings you've been doing in this class, your other classes, and beyond. I expect that the readings on the syllabus will help to give "formal" names to some of your "informal" understandings. It is not required that this conceptual framework be different than your initial one, but it is completely understandable if it is. What is required is that this conceptual framework be much better explained, and grounded in the literature and experiences from this course.

“Have You Met X?”

In this assignment, you will choose *one* technology product, and explore it in great detail. Your choice needs to be a *specific* product (e.g., "Minecraft" not "video games"). It is OK if the product no longer exists, so long as it once was a real thing, and you can find enough material on it to "examine" it. You will dig deeply into this product.

Important ground rule: Your examination needs to be grounded in the intellectual context of SI 549/EDUC 601. That means you *must* apply ideas (and cite them!) from readings across at least four weeks of the syllabus in a meaningful way.

“Have You Met X?” Proposal

For this assignment, you must submit a brief paper identifying the technology you intend to explore for "Have You Met X?" so that your professor may approve it.

In this paper you should:

- Identify the technology
- Give a *brief* explanation of it so your professor knows what you are talking about
- Explain why it interests you
- Write 2-3 paragraphs about how you anticipate examining this tool

In pursuing this project, I encourage you to get hold of the tool (how you do this is up to you), and examine it first hand. You should attempt to observe the product in real-world use if at all possible. You might conduct interviews with people who use or have used the product.

“Have You Met X?” Poster/Sharing

We all want to learn from you. You are (becoming) the expert with your technology. Now teach us. This will most likely take the form of a poster, a hands-on demonstration, or similar.

We will accommodate up to THREE presentations per class session, and you must sign up at least one week in advance. Time slots are first-come first-served. When they are gone, they are gone.

“Have You Met X?” What’s the Story

Prepare an expanded outline of your project, to start to shape your story. This doesn't need to be a full rough draft, but you might start trying out some ideas. Start to pull your narrative together. What story are you trying to tell? This is your chance for feedback on the structure of your paper.

“Have You Met X?” Reference Check

The "Have you met X?" assignment is essential an investigative research project. You will be making arguments, exploring ideas, and supporting claims. Though much of your investigation might be with "primary sources," (e.g., the tool itself, company materials, interviews or observations), I also expect you to root much of your paper in scholarly research related to the tool or company you are exploring.

In this assignment, you are essentially creating an annotated bibliography. A list of the sources you are going to use and why they are related to the story you are planning to tell.

“Have You Met X?” Final Report

This is the final report of your semester-long "Have you met X?" investigation. It should thus be a *substantial* work, organized in a way that will allow the curious reader to learn about the technology product you investigated and your findings. I would expect most reports to be in the 15-20 page range. Your report should include the following components.* Note that you might not have all of these headings, or choose to recombine components into headings that make more sense to you. Just be sure to clearly label things to make it easy for the reader to tell what you are doing and where:

- A description and overview of the technology
 - What is it? What does it do?
 - Who are its intended users?
 - What is its history? Are there other tools/products that are obvious precursors?
 - What is the business model behind the product? What makes it scalable or sustainable? (Or not?)
 - A description of the usual contexts where it is used to support learning
 - How/where/when is it (ideally) supposed to be used?
 - How it is usually used?
 - Are there some typical barriers or challenges to the successful use of this technology?
- Learning and/or pedagogical theory underlying this technology
 - What learning theories or pedagogical theories are useful for understanding the product and its use?
- A summary of research on the role and/or contribution of this technology
 - What research supports the value proposition of this product?
 - Direct research *on* or *with* the product
 - Research you have conducted *on* or *with* the product
 - Other research that is relevant to the product
- Your conclusions about this product and its transformative potential in education or learning

Scholarly Support

Help your classmates reach a higher level of thinking and analysis with the week's readings. Organize questions for reflection while reading. Lead classroom discussion or activity to help illuminate the readings. If there is a guest speaker, you should prepare for leading any conversation with the guest. If there is special software, you should learn about it and prepare to help demo and/or lead your classmates in using the software. You can also choose to re-arrange the classroom *physically* to facilitate a different kind of interaction. Experiment!

Success with this activity will require advance preparation - you will probably need to complete the readings for your required week by Tuesday or Wednesday of the prior week. You are also required to run your plan by the professor (this can be via email, phone, or in person as time and schedules allow). The plan must be cleared with the professor by the Friday before your class session.

Note that this is also a *group* activity, so you will need to coordinate with one or two of your classmates.

Weekly Reading Annotation

Each week our class explores a range of readings meant to expand our thinking about technology and its use(s) in learning. Using the hypothes.is tool, you will make annotations on these readings. Your goal is to help enrich our group understanding of the readings. Be sure you are making your annotations using the "549/601 2017" group in hypothes.is so that classmates can view your annotations.

YOU WILL SELF-EVALUATE YOUR ANNOTATIONS EACH WEEK. Give yourself 500 points for doing each of the following (*up to* 2000 points total):

- Make several annotations
- Respond to or build on someone else's annotation
- Make an annotation that builds bridges to other class ideas
- Make an annotation that poses question(s) for us to pursue as a group

You should *begin* making annotations by Sunday at noon! But don't self-assess yourself until Wednesday (the deadline is Wednesday at 11:59pm), assuming that you will be adding more annotations as we go. You can only self-assess once each week in *GradeCraft*. To adjust points after you self-assess, email your professor.

Attendance

Class meetings are where we discuss, process, and learn *together*. It is therefore important that you be present, both physically and mentally. Each week you can self-assess your presence in *GradeCraft*. Award yourself 2,000 points for being present, and 0 points if you needed to miss class. There's a middle ground - if you were late, had to leave early, or were not mentally with us, give yourself 1,000 points for being "Not All There."