Technologies of Education

A 2-Credit Course 140.373 in the History of Science and Technology
Intersession 2020 [Two weeks duration]

Introduction:

This course examines the role of technology in education - from books and blackboards to architecture, computers, the internet, and more. How does technology shape learning? Can technological innovation "fix" education? We will examine historical and contemporary technologies of education and learn to work from the perspectives of technology studies and critical pedagogy.

Grading:

- Attendance (25%)
- Participation (25%)
- Two Short Assignments (25% each)

Assignments:

Each assignment will be due on the Monday following a week of class.

- Assignment 1: Make an accessibility map or textual description of a building on the Hopkins campus. Detailed instructions will be given the first week.
- Assignment 2: Analyze a technology and its role in education. Detailed instructions will be given the second week of class.

Schedule

Class 1 – Intro to Technology Studies and Critical Pedagogy

- Langdon Winner, "Do Artifacts Have Politics?", in MacKenzie ed. *The Social Shaping of Technology,* pp. 28-40.
- Paulo Freire, *Pedagogy of the Oppressed: 30th Anniversary Edition* (New York: Bloomsbury Publishing, 2014), 71-86.

Class 2 – Education and the Built Environment

- Carla Yanni. "Housing Lunatics and Students: Nineteenth-Century Asylums and Dormitories." *Change Over Time* 6, no. 2 (2016): 154-172.
- Pedro L. Moreno Martínez, "History of School Desk Development in Terms of Hygiene and Pedagogy in Spain," in *Materialities of Schooling*, eds. Martin Lawn & Ian Grosvenor (Oxford: Symposium Books, 2005), 71-96.

Class 3 – Disability and Accessibility

- "ADA Requirements: Title II," Mt. San Jacinto College Disability Programs and Services, Accessed 21 August 2019. PDF will be distributed.

- s.e. smith, "Disabled people don't need so many fancy new gadgets. We just need more ramps," *Vox* (30 April 2019) <https://www.vox.com/first-person/2019/4/30/18523006/disabled-wheelchair-access-ramps-stair-climbing>.

Class 4 – Technologies of Reading
- Lisa Gitelman, *Paper Knowledge: Toward a Media History of Documents* (Durham: Duke University Press, 2014), Chapter 4 "Near Print and Beyond Paper: Knowing by pdf," 111-135.
- Roger Chartier, "Texts, Printings, Readings," in L. Hunt (ed.), *The New Cultural History* (Berkeley and Los Angeles: University of California Press, 1989), 154–75.

Class 5 – Technologies of Display
- Willem Hackmann, "The Magic Lantern for Scientific Enlightenment and Entertainment," in *Learning by Doing: Experiments and Instruments in the History of Science Teaching*, eds. Peter Heering and Roland Wittje (Stuttgart: Steiner Verlag, 2011), 113-139
- Ingrid Ockert, "Science Television in the Sputnik Age," *Physics Today Online* (23 September 2017) <https://physicstoday.scitation.org/do/10.1063/PT.6.4.20170922a/full/>.

Class 6 – Technologies of Discipline
- Inés Dussel, "The Shaping of a Citizenship with Style: a history of uniforms and vestimentary codes in Argentinean public schools," in *Materialities of Schooling*, eds. Martin Lawn & Ian Grosvenor (Oxford: Symposium Books, 2005), 97-124.
- Christopher Phillips, "An Officer and a Scholar: West Point and the Invention of the Blackboard," *History of Education Quarterly* 55 (Feb. 2015): 82-108.

Class 7 – Students as Technology Consumers
- Mark H. Rose, *Cities of Light and Heat: Domesticating Gas and Electricity in Urban America* (University Park, Pennsylvania: The Pennsylvania State University Press, 1995), Chapter 4 "Preparation of Producers and Consumers: Public Schools, 1900-1930," 91-109.
- Maria Andrée & Lena Hansson, "Marketing the 'Broad Line': Invitations to STEM education in a Swedish recruitment campaign," *International Journal of Science Education* 35, no. 1 (2013), 147-166.

Class 8 - Gamification
- Joy Lisi Rankin, "Where in the World is Cathy Carlston?" *The New Inquiry* (14 June 2018) <https://thenewinquiry.com/blog/where-in-the-world-iscathy-carlston/>.
- Hanna Rosin, "The Touch-Screen Generation," *The Atlantic* (April 2013) <https://www.theatlantic.com/magazine/archive/2013/04/the-touch-screen-generation/309250/>.

Class 9 – Tech, Ed, and Public Health

- Adi Robertson, "OLPC's $100 Laptop was Going to Change the World – Then it All Went Wrong," *The Verge* (16 April 2018) <https://www.theverge.com/2018/4/16/17233946/olpcs-100-laptop-education-where-is-it-now>.
- Patricia Randolph Leigh, "Historical perspectives on analog and digital equity: A critical race theory approach," *Social Information Technology* (2008), 1-11.
- Michael Carrier, "English for the underserved: Closing the digital divide," *Training Language and Culture* 2, no. 4 (2018), 9-25.

Class 10 – A Digital World and the Future of Education

- Jeff Borden, "MOOCs are Dead – Long Live the MOOC," *Wired* (August 2014) <https://www.wired.com/insights/2014/08/moocs-are-dead-long-live-the-mooc/>.
- Phillip W. Simpson and Andrew Gibbons, "Filling the Mind: Cortical Knowledge Uploads, Didactic Downloads and the Problem of Learning in the Future," in *Childhood, Science Fiction, and Pedagogy*, eds. D.W. Kupferman and A. Gibbons (Singapore: Springer Nature, 2019), 155-169.