

ITCP 70010 - History, Theory, and Practice of Interactive Media

Instructors: Joan Greenbaum/Anthony G. Picciano

Fall 2005: Wednesday 4:15 - 6:15

Seminar Description: This is the initial core course in the Interactive Technology and Pedagogy certificate program. We will examine the economic, social and intellectual history of technological design and use, in general, and interactive media in particular. Our focus is on the mutual shaping of technology and teaching and learning; how people and ideas have shaped these interactions in the past, and how we are now shaping technological use and teaching and learning processes. By examining the use and design of technologies we are of course reflecting on what it means to be human as well.

The course also explores the history and theory of digital media, including hypertext and multimedia, highlighting the theoretical and practical possibilities for research, reading, writing and presentation in a world where new, nonlinear structures are increasingly available and popular.

Students will write two papers: an interim one focused more closely on the readings in the first part of the course (11/9) and a more complete research paper linking selected readings with teaching and learning in one's area of interest (12/21). We will provide more complete information about these papers.

We will be using a course website <http://bb.gc.cuny.edu> where we will extend discussions about the reading and post additional materials. We will also be asking each student to lead an in-class discussion and/or online discussions during the semester.

<u>Date</u>	<u>Topic/Outline/ Readings</u>
08/31	Course overview, film clips, websites and discussion of student interests
09/07	Sorting out the roots of technological determinism (JG) <i>Adas, Machines as the Measure of Men</i> , Introduction & Ch. 1 <i>Smith & Marx, Does Technology Drive History</i> , Ch. 1 & (Ch.2)
09/14	Teaching and learning/Pedagogical foundations (AP) <i>Dewey, Democracy and Education</i>
09/21	Technology classics (JG)

- McLuhan, *Understanding Media*, Chap. 1
 Haraway, *Simians, Cyborgs and Women*, Ch. 8 "The Cyborg
 Mani-
 Festo"
www.stanford.edu/dept/HPS/Haraway/CyborgManifesto.html
 Postman, *Technopoly*
- 09/28 Digital Media - Short History (AP & JG)
 Castells, *The Internet Galaxy*, Ch. 1 & 2
 Johnson & Maddux, *Technology in education*, pp 1-76
 Picciano (2006), *Education leadership and planning for
 technology*, Chap.9-13
- 10/19 Digital Media - Future (AP)
 Kurzweil, *The Age of the spiritual machine*, Prologue &
 Chap. 9-12, Timeline and Epilogue
 Birbasi, *The new science of networks*
- 10/26 Time and place (JG)
 Latour, *Pandora's Hope*, Chap. 2
 Hayden, *The Power of Place*, Chap. 2
 (Harvey, *The condition of postmodernity*, Part III)
- 11/02 Constructivism v. Instructivism (AP)
 Papert, *Mindstorms, Children, Computers, and powerful
 ideas*,
 Chap. 1-3
 Knowles, Holton, Swanson, *The Adult Learner*, Ch. 1-5 (7)
 (*selected Piaget & Vygotsky*)
- 11/09 Student Presentations and Paper I
- 11/16 Work, Labor and design (JG)
 Greenbaum, *Windows on the Workplace*
 Greenbaum & Kyng, *Design at Work*, Chap. 1
- 11/23 Learning Technologies Today (AP)
 Allen&Seaman(2004) *The Quality and extent of online
 Education*, www.sloan-c.org/resources/survey.asp
- 11/30 Online Learning Environments
 Kellner
 A. Hypermedia v. Linearity
 Picciano (1993),

B. Multimedia and Multiple Intelligences
 Hardy, Prensky,
 C. Digital Natives/Digital Immigrants
 Picciano(1998, 2002)

12/07 Implications of Online Technologies for
 Duderstadt

the Future of Higher Education

Noble

A. New Educational Entities

Hersh&Merrow

B. Technology and For-Profit Universities

Ruch

12/14 Student Presentations

12/21 Course Review

NOTE 1: No classes on October 5th and 12th.

NOTE 2: Readings in *italics and ()* are optional.

NOTE 3: Book chapter copies will be available for distribution.

Readings and Useful Resources

- Adas, M. (1990). *Machines as the measure of men*. Ithaca, NY: Cornell University Press.
- Allen, I. E. & Seaman, J. (2004). *Entering the mainstream: The quality and extent of online education in the United States, 2003 and 2004*. Needham, MA: The Sloan Consortium. <http://www.sloan-c.org/resources/survey.asp>
- Allen, I. E. & Seaman, J. (2003). *Sizing the opportunity: The quality and extent of online education in the United States, 2002 and 2003*. Needham, MA: The Sloan Consortium. <http://www.sloan-c.org/resources/survey03.asp>
- Berg, G.A. (2005). *Lessons from the edge: For-profit and nontraditional higher education in America*. Westport, CT: Praeger Press.
- Yves Bertrand (2003)- *Contemporary Theories and Practices in Education 2nd Edition*. Madison, WI: Atwood Publishing
- Birabasi, A. (2003). *Linked: The new science of networks*. New York: The Penguin Group.
- Birkerts, S. (1994). *The Gutenberg elegies*. Boston: Faber and Faber.
- Chute, A.G., Sayers, P.K., & Gardner, R.P. (1997). Networked learning environments. In T.E. Cyr (Ed.) *Teaching and learning at a distance: What it takes to effectively design, deliver, and evaluate programs*. San Francisco: Jossey-Bass, Inc.
- Castells, M. (2001). *The Internet galaxy*. London: Oxford University Press.
- Castells, M., Flecha, R., Freire, P., Giroux, H., Macedo, D., & Willis, P. (1999). *Critical education in the new information age*. New York: Rowman & Littlefield Publishers, Inc.
- Clark, R. (1983). Reconsidering research on learning from media. *Review of Educational Research*, 53(4), 445-459.
- Clark, R. (1985). Evidence for confounding in computer-based instruction studies. *Educational Communications and Technology Journal*, 33(4), 249-262.
- Clark, R. (1989). Current progress and future directions for research in instructional technology. *Educational Technology Research and Development*, 37(1), 57-66.
- Connick, G. P. (1997). Issues and trends to take-us into the twenty-first century. In T.E. Cyr (Ed.), *Teaching and learning at a distance: What it takes to effectively design, deliver and evaluate programs* (pp. 7-12). San Francisco: Jossey-Bass Publishers.
- Cuban, L. (2001). *Oversold and underused*. Cambridge, MA: Harvard University Press.

Culp, K.M., Honey, M. & Mandinach, E. (2003). A retrospective on twenty years of education technology policy. U.S. Department of Education, Office of Educational technology. http://www.nationaledtechplan.org/docs_and_pdf/20yearsdo crevised.pdf

Dede, C., Nelson, B., Ketelhut, D.J., Clarke, J., & Bowman, C. (2004). Design-based research strategies for studying situated learning in a multi-user virtual environment. Paper describing NSF funded MUVE project. <http://muve.gse.harvard.edu/muvees2003/documents/dedeICLS04.pdf>

Dewey, J. (1916) *Democracy and education*. New York: Touchstone. Also available online at: <http://www.ilt.columbia.edu/publications/dewey.html>

Duderstadt, J.J. (1997). The future of the university in an age of knowledge. *Journal of Asynchronous Learning Networks*, 1(1), 78-88. http://www.aln.org/publications/jaln/vln2/vln2_duderstadt.asp

Friedman, T.L. (2005). *The world is flat: A brief history of the 21st century*. New York: Farrar, Straus & Giroux.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.

Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York: Basic Books.

Gardner, H. (2000). *Intelligence reframed: Multiple intelligences for the 21st century*. New York: Basic Books.

Giedion, S. (1948, 1975). *Mechanization takes command*. New York: Norton.

Gladieux, L.E. & Swail, W.S (1999). *The virtual university & educational opportunity*. Washington, D.C.: The College Board.

Greenbaum, J. (2004). *Windows on the workplace: Technology, jobs, and the organization of office work*. New York: Monthly Review Press.

Greenbaum, J. & Kyng, M. (1991). *Design at work*. New York: Erlbaum Press.

Haraway, D. (1991). *Simians, cyborgs and women, the reinvention of nature*. New York: Routledge.

Hardy, L. (2004). The loss of literature. *American School Board Journal*, December 2004. <http://www.asbj.com/current/coverstory.html>

Harvey, D. (1988). *The condition of postmodernity*. New York: Blackwell Publishing.

Hayden, D. (1995). *The power of place*. Cambridge: MIT Press.

Hersh, R.H. & Merrow, J. (2005). *Declining by degrees: Higher education at risk*. New York: Palgrave Macmillan.

Hiltz, R. & Goldman, R. (Eds.) (2005). *Learning together online: Research on asynchronous learning*. Lawrence Erlbaum Publishers.

Hofstetter, F. (2000). *Multimedia literacy, 3rd Edition*. New York: McGraw-Hill.

(NOTE: Get a library copy. Do not buy.)

- Johnson, D.L. & Maddux, C.D. (2003). Technology in education: A twenty year perspective. *Computers in the Schools*, 20 (1/2).
- Judge, K., Puckett, K., & Cabuk, B. (2004). Digital equity: New findings from the Early childhood longitudinal study. *Journal of Research in Technology in Education*, 36(4), 383-411.
- Kahn, R. & Kellner, D. *Virtual Seminar: Technology, Education, and Society: Conflicting Perspectives Website*,
<http://www.gseis.ucla.edu/courses/ed253a/kellner/edtech2.html>
- The Kaiser Foundation (2004). Children, the digital divide, and federal policy. Issue Brief of The Henry Kaiser Foundation, Menlo Park, CA.
<http://www.kff.org/entmedia/7090.cfm>
- Kellner, D. "Technological Transformation, Multiple Literacies, and the Re-Visioning of Education,"
<http://www.gseis.ucla.edu/faculty/kellner/papers/revisioned.htm>
- Kling, R. (Ed.) (!1996). Computerization and controversy, value conflicts and social choices, (2nd ed). New York: Academic Press.
- Knowles, M., Holton, E.F., & Swanson, R. (1998). *The adult learner*. Woburn, MA: Butterworth-Heinemann.
- Kozma, R. (1994a). Will media influence learning? Reframing the debate. *Educational Technology Research and Development*, 42(2), 7-19.
- Kozma, R. (1994b). A reply: media and methods. *Educational Technology Research and Development*, 42(3), 11-14.
- Kozma, R. (1991). Learning with media. *Review of Educational Research*, 61(2), 179-211.
- Kulik, J. A. (1984). Evaluating the effects of teaching with computers. In G. Campbell & G. Fein (Eds.), *Microcomputers in early education*. Reston, VA: Reston.
- Kulik, J. A., Bangert, R., & Williams, G. (1983). Effects of computer-based teaching on secondary students. *Journal of Educational Psychology*, 75(1), 19-26.
- Kulik, J. A., Kulik, C., & Bangert-Downs, R. (1984). Effectiveness of computer-based education in elementary schools. *Computers in Human Behavior*, 1(1), 59-74.
- Kulik, J. A., Kulik, C., & Cohen, P. (1980). Effectiveness of computer-based college teaching: A meta-analysis of findings. *Review of Educational Research*, 2(2), 525-544.
- Kulik, J. A., Kulik, C., & Schwab, B. (1986). The effectiveness of computer-based adult education: A meta-analysis. *Journal of Educational Computing*, 2(2), 235-252.
- Kurzweil, R. (1999). *The age of spiritual machines*. New York: Penguin Books.
- Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies*. Cambridge: Harvard University Press.

- Lessig, L. (2004). *Free culture*. New York: Penquin.
- Liu, L., Henderson, N., Johnson, D.L. & Maddux, C.D. (2001). Evaluation and assessment in educational information technology, Part I and II. *Computers in the Schools, 18* (2/3/4).
- Maddux, C. D., & Johnson, D. L. (1997). Logo: A retrospective. *Computers in the Schools, 14*(1/2), 1-7).
- Manovich, L. (2001). *The language of new media*. Cambridge: MIT Press.
- Marx, K. (1867). *Capital*, Vol. 1, Chapter 7, "The Labor Process" and Chapter 15, "Machinery and Modern Industry," Sections 1-5 and Section 8 (any edition; also available online at <http://www.marxists.org/archive/marx/works/1867-c1/>)
- Meyer, K.A. (2004). Evaluating online discussions: Four different frames of analysis. *Journal of Asynchronous Learning Networks, 8*(2). http://www.sloan-c.org/publications/jaln/v8n2/v8n2_meyer.asp
- McLuhan, M. (1964/1994). *Understanding media, the extensions of man*. Boston: MIT Press. (Chap. 1 - The Medium is the Message).
- Novak, T.P. & Hoffman, D.L. (2000). *Bridging the digital divide: The impact of race on computer access and Internet use*. This paper is a longer version of the article, Bridging the racial divide on the Internet, published in *Science*, April 17, 1998. (<http://www2000.ogsm.vanderbilt.edu/papers/race/science.html>).
- NUA Internet Surveys (2002). *How many online?* http://www.nua.com/surveys/how_many_online/.
- Papert, S. (1980). *Mindstorms: Children, computers, and powerful ideas*. New York: Basic Books.
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- Picciano, A.G. (2006). *Educational leadership and planning for technology (4th Ed.)*. New York: Pearson Education.
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- Picciano, A. G. (1993). The Five Points: The design of a multimedia model on teaching social history. *Journal of Educational Multimedia and Hypermedia*, 2(2), 129-147.
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- Postman, N. (1993). *Technopoly: The surrender of culture to technology*. New York: Vintage Books.
- Prensky, M. (2001). Digital natives, digital immigrants (Parts I and II). *On the Horizon*, NCB University Press, 9(1), 2001. This article is available on the World Wide Web at various sites including: <http://www.marcprensky.com/>
- Ruch, R. Higher education, Inc. *The rise of the for-profit university*. Baltimore: Johns Hopkins University Press.
- Smith, M.R. & Marx, L. (1994). Does technology drive history: The dilemma of technological determinism. Cambridge: MIT Press.
- Thorburn, D. & Jenkins, H. (2003). Rethinking media change: The aesthetics of transition. Cambridge: MIT Press.
- Ullman, E. (1997). *Close to the machine: Technophilia and its discontents*. San Francisco: City Lights Press.
- U.S. Department of Education, Office of Educational Technology, *Toward A New Golden Age in American Education: How the Internet, the Law and Today's Students Are Revolutionizing Expectations*, Washington, D.C., 2004. <http://www.NationalEdTechPlan.org>
- Viau, E. A. (1994, Autumn/Winter). The mind as channel: A paradigm for the information age. *Educational Technology*, 3, 5-10.
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Watts, D. (2004). *Six Degrees: The science of a connected age*. New York: W.W. Norton and Co.
- Waxman, H.C., Connell, M.L., & Gray, J. (2002). *A quantitative synthesis of recent research on the effects of teaching and learning with technology on student outcomes*. Naperville, IL: North Central Regional Educational Laboratory. <http://www.ncrel.org/tech/effects/>