

R511 Course Syllabus (revised 9/27/02)

Logistics

Room: Education 1120
Credits: 3
Section: 6131

Meeting Days: Lecture/Discussion --Thursday, 4:00 - 6:00 p.m.
Colloquium -- Friday, 11:15 a.m. - 12:45 p.m.

Instructor

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Course Description

This is a core course in the Instructional Systems Technology (IST) program. It provides an introduction to the field and profession of Instructional Technology (IT). Given that most entering IST students come from fields other than IT, R511 gives newcomers a sense of history and an explanation of how the components of the field fit together. There is a particular emphasis on the evolution of the "big ideas" of the field.

Course Objectives

1. To develop common understandings of the basic vocabulary and underlying principles of the field. For example:

- use basic terms with comprehension
- differentiate among instructional technology (IT), performance technology (PT), instructional systems development (ISD), and other related concepts.
- compare and contrast conceptual definitions and models of instructional design and performance analysis that have emerged over time
- generate one's own working definitions of IT and PT

2. To gain an initial familiarity with major issues in the field in their historical context and as they are being debated in professional circles today. For example:

- trace the evolution of major ideas over time
- where appropriate, associate key people and organizations with their connection to these ideas
- characterize the contributions of theories of learning and instruction (such as behaviorist, cognitive, constructivist, and eclectic perspectives) to the development of IT
- identify and discuss trends and issues that affect the field today.

3. To create frameworks that are foundational to career development and lifelong professional development. For example:

- identify key organizations and their roles in the IT and PT fields; begin to become involved in professional organizations
- begin to explore the variety of career paths available
- grapple with ethical challenges that characterize the IT and PT fields
- (for doctoral students) begin to do readings, writing, and thinking that will prepare for qualifying exams and continuing scholarly development.

4. (For doctoral students). In addition to the regular course objectives, doctoral students are expected to

explore some of the course topics in greater depth through additional readings and discussions. The doctoral readings will provide more scholarly and theoretical insights into the topics.

Major Assignments and Grading Criteria

The major products that must be submitted for evaluation are weekly mini-reports, two papers, and a final exam (or summary paper). In addition, each student will be expected to participate actively in class discussions and to show evidence of personal reflection and synthesis.

- Mini-Reports Your Discussion Team activities will revolve around the preparation of brief weekly reports, one per group. You will take turns being Recorder, who is responsible for submitting the mini-report.
- Paper #1 ISD/PT process (group project). You may either (a) analyze and critique a specific ISD or PT model or (b) develop an original ISD or PT model.
- Paper #2 Letter or Memo about IT or PT (individual project). You may either (a) write a letter to a friend, relative, or work supervisor explaining in their language what is instructional technology (or performance technology) as you understand it; or (b) write a memo to the head of a business unit, philanthropic foundation, or other organization explaining IT or PT from your own personal perspective.
- Reflections At several points during the semester you will be asked to write brief reports reflecting on your own responses to the ideas and processes of the course. As with the other exercises, the point is to encourage you to personalize and “own” the material.

	<u>% of grade</u>
Paper #1: ISD/PT process	15%
Paper #2: Letter or memo about Instructional Technology (or PT)	20
Final Exam or Summary Paper	20
Participation in small-group activities	20
Large-group participation and Reflections	5
Colloquium (see below)	20
	<hr/> 100%

Colloquium

Objective

The purpose of the colloquium is to help you become oriented to the IST department and aware of important ideas, people, practices, trends, and issues in the field of instructional technology. Each Friday session will feature one or more speakers who will make presentations followed by open discussion.

Major Assignments and Grading Criteria

Your colloquium grade will be based on three factors: attendance (30%), participation (30%), and journal report (40%).

Attendance. You are expected to attend all meetings of the colloquium and to be present from beginning to end of each session. A sign-in sheet will be circulated. You may still earn a participation grade of A with one unexcused absence, but after that your *attendance* grade (not your course grade) will be reduced by one-half letter grade for each unexcused absence. In case of an emergency or necessary absence, notify the instructor if you would like to have an “excused” absence.

Ethical Note: Signing in the name of another person is a serious breach of academic ethics and will result in sanctions specified by Indiana University.

Participation. The quality of your participation is also relevant. You will receive credit for good questions asked in class, and especially for good **questions submitted in advance of presentations**. Each week, prior to class you are encouraged to prepare questions for the upcoming speaker. You should submit your questions by e-mail to Richard Dabrowski <rdabrow@indiana.edu> no later than midnight on Tuesday. **On the Subject line, write: Coll. Ques.** [For further details see the box below.]

Submitting Questions in Advance. As stated in the syllabus, the Participation part of the grade (30% of colloquium grade) is based primarily on questions submitted in advance of each session. Each semester I ask the grad assistant to keep count of the questions asked as well as the quality of the questions (Are they more than trivial? Do they show some thought?). At the end of the semester I tabulate these and create a "curve" based on norms for that semester. To give you an idea of the norms, here are the Question-Submission grade distributions for Fall 2001:

Questions submitted, 10 weeks =	A+
"	8-9 " A
"	6-7 " A-
"	4-5 " B+
"	2-3 " B
"	1 " B-
"	0 " C

Then I add a bonus of one-half letter grade if the person's questions tended to be of higher quality or if the person made some other contributions, such as assisting with logistics or raising interesting questions or comments in class.

Journal Report. You should keep a journal of the ideas or insights you gain from each of the sessions. (Previous students recommend keeping a separate notebook devoted to this course.) This does not mean transcribing everything said by each presenter, but taking notes on concepts that are most relevant to you. After the session you may want to review your rough notes and refine or extend them for future reference, making note of any interpretations or insights triggered by the session.

At the end of the semester you will be asked to submit a brief report on several sessions. The report should be approximately three pages long and should include some summary of the content of the sessions and some discussion of your insights and their personal relevance to you--for example, how these ideas helped you understand material covered in other courses, broadened your understanding of the field, provoked questions or challenges, enhanced your career planning, etc. Your report will be graded for clarity, depth of insight, and the logical relationship of the insights to your personal context (i.e., through what sort of lenses are you viewing these speakers?).

Absences

You will want to make journal notes on all sessions, including those for which you had excused or unexcused absences. To do this you may check out the recording of the session from the Education Library. The colloquium graduate assistant can assist you with this.

Textbooks

Required

Department of Instructional Systems Technology (2001). *EDUC R511, Instructional Technology Foundations I*. Course Packet. Bloomington, IN: Indiana University, ClassPak Publishing at IMU.

Van Tiem, Mosely, & Dessinger (2000). *Fundamentals of Performance Technology*. Washington DC: ISPI. ISBN 1-890289-08-6.

Recommended

Heinich, Molenda, Russell & Smaldino (2002). *Instructional Media and Technologies for Learning*, 7th ed. Columbus, OH: Merrill/Prentice Hall. ISBN 0-13-030536-7.

Grading Guidelines

The following definitions of letter grades are an indication to students as to what level of performance earns a given grade. These definitions have been endorsed by the School of Education Policy Council and are published in the *Bulletin of the School of Education Graduate Program*.

<u>Grade</u>	<u>value</u>	<u>Description</u>
A or A+	4.0	Outstanding achievement. Unusually complete command of the course content; exceptionally high level of scholarship.
A-	3.7	Excellent achievement. Very thorough command of the course content; very high level of scholarship.
B+	3.3	Very good achievement. Thorough command of course material.
B	3.0	Good achievement. Solid, acceptable performance.
B-	2.7	Fair achievement. Acceptable performance on most, but not all, aspects of the course.
C+	2.3	Not wholly satisfactory achievement. Marginal performance on some aspects of the course.
C	2.0	Marginal achievement. Minimally acceptable performance on most aspects of the course.
C-	1.7	Unsatisfactory achievement. Inadequate performance on most aspects of the course.
F	0.0	Wholly unacceptable. Little or no command of the course objectives.

Note: Students in master's degree programs are expected to maintain a GPA of 3.30 or higher in graduate course work. Specialist and doctoral degree students are expected to maintain a GPA of 3.50 or higher. Master's students whose graduate GPA falls below 3.00 are subject to probation and dismissal. Specialist and doctoral students whose GPA falls below 3.30 are subject to probation and dismissal.

-Indiana University Bulletin 1997-1999, School of Education Graduate Program

R511 Class Schedule – Fall 2002

<u>Week</u>	<u>Date</u>	<u>Topic</u>	<u>Advance Readings</u>
1	Sept. 5	Introduction to course. Instructional technology: the concept and some definitions	<u>Required:</u> •Gentry “ET: A Question of Meaning” •Seels & Richey “1994 Definition” <u>Optional:</u> *AECT, “Defin. of Ed Tech (1977)” •Heinich, “Is there a field of ed comm...?”
	Sept. 6	Colloquium: Ted Frick , Associate Professor, IST, “Orientation to IU/IST computing environment”	
2	Sept. 12	Instructional Technology: careers, professional development	<u>Required:</u> •Pershing & Lee, “Employment Profiles...” •Barbian, “How much are you worth?” <u>Optional:</u> • <i>Selected Professional Associations...</i> •Websites of professional associations •Encyclopedia of Associations (online)
	Sept. 13	Colloquium: Professional Organizations: AECT, ISPI, GIST *GIST general meeting after colloquium.	
3	Sept. 19	Instructional Systems Development (ISD): the concept, the process, some models	<u>Required:</u> •Schiffman, “ISD... Five Views” •Morrison, Ross, Kemp et al., ch. 1 •Molenda, Pershing, Reigeluth, pp. 267-280 <u>Optional:</u> •Dick & Carey, ch. 1 •Heinich et al., Ch. 2, “Systematic Planning” •Websites, such as: www.cudenver.edu/~mryder/itc_data/idmodels.html www.cudenver.edu/~mryder/reflect/idmodels.html *Braden “Linear ID” *Mauldin & Gustafson “Is ID for Pub. Ed.?” *Gustafson & Branch <i>Survey of ID Models</i>
	Sept. 20	Colloquium: Geoff Logan , Curtin University of Technology, Western Australia. Expected topic: “Theory and strategy for an international distance education program: blending face-to-face and online instruction.” For more information about Curtin University: www.curtin.edu.au/corporate/about/about.html	

4	Sept. 26	Performance Technology (PT): the concept, the process, some models	<u>Required:</u> <ul style="list-style-type: none"> •Wile, “Why Doers Do” •Molenda, Pershing, pp. 280 to end •Van Tiem, Ch. 1 – 3 <u>Optional:</u> <ul style="list-style-type: none"> •Rosenberg, “HPT” *Doughty & Romisz. “Org. & Perf. Engin.”
	Sept. 27	Colloquium: Ivor Davies , Professor, IST. Expected topics: “How strategic planning, reduction of human error, and value propositions have an impact on organizational success.”	
5	Oct. 3	Theories of Learning & Instruction: Part 1: basic concepts,	<u>Required:</u> <ul style="list-style-type: none"> •Seels & Glasgow, “Psych. Basis for ID” •Zemke, “Toward a Science of Training” •Heinich et al., Ch. 1, “Media & Instruction” •Dale, “Effective Learning” <u>Optional:</u> <ul style="list-style-type: none"> •Driscoll, Ch. 10 “Gagne’s Theory of Instruc.” *Reigeluth, Ch. 1 in ID Theories II *Driscoll, Ch. 1, “Theories of Learning”
	Oct. 4	Colloquium substitute: John D. Bransford , Prof. of Psychology and Education, Vanderbilt University, “How People Learn: New Developments in the Sciences” at Alumni Hall, 12 – 1:30.	
	Oct. 7 (Monday)	► Paper #1: ISD/PT Process due at 5 p.m.	
6	Oct. 10	Theories of Learning & Instruction. Part 2: Focus on the behaviorist perspective	<u>Required:</u> <ul style="list-style-type: none"> •Saettler, ch. 10, “Behaviorism and ET” •Skinner, “The Science of Learning...” •Foshay, “Is Behaviorism Dead?” <u>Optional:</u> <ul style="list-style-type: none"> •Keller, “Goodbye Teacher” •Skinner, “Why Teachers Fail” *Burton et al., in Jonassen <i>Handbook of Res.</i> *Englemann, “Direct Instruction”
	Oct. 11	Colloquium: Martin Siegel , Professor, IST and Informatics; chairman and chief learning officer of WisdomTools, Inc. “The Power of a Good Story.” See: http://wisdomtools.com	

7	Oct. 17	<p>Theories of Learning & Instruction. Part 3: Contrasting the cognitive and behaviorist perspectives</p> <p>Theories of Learning & Instruction. Part 4: Focus on the constructivist perspective</p>	<p><u>Required:</u> •Silber, “Cognitive Appr. to Training Dev.”</p> <p><u>Optional:</u> •Wildman, “Cognitive Theory and Design of Instruction” *Winn & Snyder, “Cognitive Perspectives” in Jonassen <i>Handbook of Research</i></p> <p>-----</p> <p><u>Required:</u> •Duffy & Cunningham, in Jonassen <i>Handbook</i> •Driscoll, ch. 11 “Constructivism”</p> <p><u>Optional:</u> •Airasian, “Constructivist Cautions” *Brown et al. “Situated Cognition and the Culture of Learning”</p>
	Oct. 18	<p>Colloquium: Robert Appelman, Clinical Associate Professor and a team of IST doctoral students, "Creating Instruction in Virtual Space," demonstrating new tools and approaches in 3-D virtual environments.</p>	
8	Oct. 24	Theories of Learning & Instruction. Part 5: Comparing across perspectives	<p><u>Required:</u> •Ertmer & Newby, “Behaviorism, Cognitivism, Constructivism” •Heinich et al. Ch. 1, “Media and Instruction”</p> <p><u>Optional:</u> •Merrill, “First Principles of Instruction” id2.usu.edu/5Star/Index.htm *Bednar et al. “Theory into Practice...”</p>
	Oct. 25	<p>Colloquium: Meet the Professor: Charles Reigeluth, Professor, IST. Expected topic: “What systemic change is, why it is important for instructional designers, both in education and training”</p>	
9	Oct. 31	Views of and issues in the instructional technology field: Contemporary period	<p><u>Required:</u> •Molenda & Sullivan 2003 “Issues & Trends”</p> <p><u>Optional:</u> •Galvin, “Industry Report 2001,” <i>Training</i> •Rukeyser: http://www.hpcnet.org/cgi-bin/global/a_bus_card.cgi?SiteID=160389 •Cuban, Kirkpatrick & Peck, “High Access and Low use of Technologies in High School Classrooms...” •Chadwick, “Why Computers are Failing in the Education of our Children”</p>

	Nov. 1	Colloquium: Sivasailam "Thiagi" Thiagarajan, PhD , president of Workshops by Thiagi, Inc. He is also the chairman of San Francisco-based QB International, a company that provides human performance technology services. Expected topic: "Confessions of an ISD Unbeliever." See: http://www.thiagi.com/	
10	Nov. 7	Current Controversies	<p><u>Required:</u></p> <ul style="list-style-type: none"> •Zemke & Rossett, "A hard look at ISD" •<i>Performance Improvement</i>, Aug. 2002 •Clark, "Reconsidering research on learning from media" <p><u>Optional:</u></p> <ul style="list-style-type: none"> •Hodgins, "Into the Future," at: http://www.learnativity.com/into_the_future2000.html •Dick, "Better ID Theory..." •Willis, "Alternative ID Paradigms..." •Willis & Wright, "A General Set of Procedures for Constructivist ID..." •McCombs, "The ISD Model: Review..." •Clark, "Media will never influence learning" •Kozma, "Will media influence learning?"
	Nov. 8	Colloquium Elizabeth Boling , Associate Professor, IST, "IST Portfolio Process" Donald Cunningham , Professor of Education and Director, Center for Research on Learning and Technology (CRLT), "What is CRLT?" More info at: http://crlt.indiana.edu/index.html	
	Nov. 14 Nov. 15	<i>No class meeting: AECT Convention, Dallas</i> <i>No Colloquium: AECT Convention, Dallas</i>	
11	Nov. 21	Views of and issues in the instructional technology field: Modern history	<p><u>Required:</u></p> <ul style="list-style-type: none"> •Reiser, "IT: A History" •Dale, Ch. 4 "Cone of experience" •Saettler, ch. 3 "Beginnings of a Science" <p><u>Optional:</u></p> <ul style="list-style-type: none"> •Rosenberg, Coscarelli, Hutchison, "Origins and Evolution of the (PT) Field"
	Nov. 22	Colloquium Instructional Consulting at IU: Joan Middendorf , Associate Director, Campus Instructional Consulting (CIC); she directed the College of Arts & Sciences Teaching Resource Center for thirteen years before it was recently merged with CIC. Karen Hallett , Director, Instructional Consulting, School of Education. David Goodrum , director, Teaching & Learning Technologies Lab.	

	Nov. 28	<i>No class meeting: Thanksgiving Holiday</i>	
	Nov. 29	<i>No Colloquium: Thanksgiving Holiday</i>	
12	Dec. 5	Views of and issues in the instructional technology field: Pre-modern history ▶ <i>Paper #2: Letter or memo about IT or PT</i>	<u>Required:</u> •Saettler, ch. 2 “Early Forerunners” •Heinich et al. , pp. 70-71 “Incomp. Moravian” <u>Optional:</u> •Browse Websites for historical figures, ideas
	Dec. 6	Colloquium: To be Announced	
13	Dec. 12	Instructional Technology profession: performance standards, ethics	<u>Required:</u> •Westgaard, “Standards & Ethics ...” •AECT Code of Ethics (on AECT website and Electronic Reserve) <u>Optional:</u> •Burns et al. “Academy of HRD: Standards on Ethics and Integrity” •Dean “The relevance of standards and ethics for HPT...”
	Dec. 13	▶ <i>No Colloquium—Journal Report due</i>	
	Dec. 17 (Tuesday)	▶ <i>5-7 p.m. Final Exam or Summary Paper</i>	

Required and Optional Readings Included in *R511 Readings Packet*

- **Brown, J.S.; Collins, A.; & Duguid, P. (1989, Jan.-Feb.). Situated cognition and the culture of learning. *Educational Researcher* 18:1, 32-42.
- *Dale, E. (1946). Effective Learning. Pp. 12-23 in *Audio-Visual Methods in Teaching*. New York: Dryden Press (Holt, Rinehart, and Winston).
- *Dale, E. (1946). The Cone of Experience. Chapter 4 in *Audio-Visual Methods in Teaching*. New York: Dryden Press (Holt, Rinehart, and Winston).
- Dick, W. (1997, Sept.-Oct.). Better instructional design theory: Process improvement or reengineering? *Educational Technology* 37:5, 47-50.
- *Driscoll, M.P. (2000). Constructivism. Ch. 11 in *Psychology of Learning for Instruction*, 2nd ed. Boston: Allyn & Bacon, 373-396.
- *Driscoll, M.P. (2000). Introduction to theories of learning and instruction. Ch. 1 in *Psychology of Learning for Instruction*, 2nd ed. Boston: Allyn & Bacon, 3-28.
- *Ertmer, P.A. & Newby, T.J. (1993). Behaviorism, cognitivism, constructivism: comparing critical features from an instructional design perspective. *Performance Improvement Quarterly*, 6 (4), 50-72.
- Gentry, C.G. (1995). Educational Technology: a question of meaning. In G.J. Anglin (Ed.), *Instructional Technology: Past, Present, and Future*, 2nd ed. (pp. 1-10). Englewood, CO: Libraries Unlimited.
- *Heinich, R.; Molenda, M.; Russell, J. & Smaldino, S. (1999) Media and Instruction, Ch. 1 in *Instructional Media and Technologies for Learning*, 6th edition. Columbus: Merrill.
- *Heinich, R.; Molenda, M.; Russell, J. & Smaldino, S. (1999) Systematic Planning for Media Use, Ch. 2 in *Instructional Media and Technologies for Learning*, 6th edition. Columbus: Merrill.

- Heinich, R.; Molenda, M.; Russell, J. & Smaldino, S. (1999) That Incomparable Moravian, pp. 70-71 in *Instructional Media and Technologies for Learning*, 6th edition. Columbus: Merrill.
- Keller, F.S. (1968). "Good-Bye, Teacher...". *Journal of applied behavior analysis* 1:79-89.
- *Molenda, M., Pershing, J.A., & Reigeluth, C.M. (1996). Designing instructional systems. In R.L. Craig (Ed.), *The ASTD Training and Development Handbook* 4th ed. (pp. 266-293). New York: McGraw-Hill.
- *Molenda, M., & Sullivan, M. (in press). Issues and trends in instructional technology: Treading water. In *Educational Media and Technology Yearbook 2003: Volume 27*. Englewood, Co: Libraries Unlimited.
- *Reigeluth, C.M. (1999). What is instructional-design theory and how is it changing? Ch. 1 in C.M. Reigeluth (ed.) *Instructional-Design Theories and Models, Volume II*. Mahway, NJ: Lawrence Erlbaum Associates, Publishers.
- *Reiser, R.A. (1987). Instructional technology: A history. In R.M. Gagne (Ed.), *Instructional Technology: Foundations*. Hillsdale, NJ: Lawrence Erlbaum Associates, pp. 11-48.
- *Rosenberg, M. (1996) Human performance technology. In Craig, R.L. (Ed.) *The ASTD Training and Development Handbook* 4th ed. New York: McGraw-Hill.
- *Rosenberg, M. J.; Coscarelli, W.C.; and Hutchison, C.S. (1999) The origins and evolution of the field. Ch. 2 in Stolovitch & Keeps (Eds) *Handbook of Human Performance Technology*, 2nd ed. San Francisco: Jossey-Bass.
- Saettler, P. (1990). Early forerunners: Before 1900. Ch. 2 in *The Evolution of American Educational Technology* (pp. 23-52). Englewood, CO: Libraries Unlimited.
- *Saettler, P. (1990). Beginnings of a science and technology of instruction: 1900 - 1950. Ch.3 in *The Evolution of American Educational Technology* (pp. 53-86). Englewood, CO: Libraries Unlimited.
- *Saettler, P. (1990). Behaviorism and educational technology: 1950 - 1980. Ch. 10 in *The Evolution of American Educational Technology* (pp. 286-317). Englewood, CO: Libraries Unlimited.
- Schiffman, S.S. (1995). Instructional Systems Design: five views of the field. In G.J. Anglin (Ed.), *Instructional Technology: Past, Present, and Future* 2nd ed. (pp. 131-142). Englewood, CO: Libraries Unlimited.
- Seels, B.B. & Glasgow, Z. (1990) Psychological basis for instructional design, Ch. 2 in *Exercises in Instructional Design*. Columbus: Merrill.
- *Seels, B.B. & Richey, R.C. (1994). The 1994 definition of the field. In *Instructional Technology: The Definition and Domains of the Field* (pp. 1-22). Washington, D.C.: Association for Educational Communications and Technology.
- Selected Professional Associations and Journals in Instructional Technology* (1999). Bloomington, IN: Indiana University, IST.
- **Silber, K.H. (1998). The cognitive approach to training development: A practitioner's assessment. *Educational Technology Research & Development* 46:4, 58-72.
- Skinner, B.F. (1954) The science of learning and the art of teaching. *Harvard Educational Review* 24:1: 86-97.
- Skinner, B.F. (1968). Why teachers fail. Chapter 5 in *The Technology of Teaching*. New York: Appleton-Century-Crofts.
- Westgaard, O. (1992) Standards and ethics for practitioners, Ch. 34 in Stolovitch & Keeps (Eds), *Handbook of Human Performance Technology*. San Francisco: Jossey-Bass.
- Wile, D. (1996). Why doers do. *Performance & Instruction*, 35:1, 30-35.
- Wildman, T.M. (1981, July). Cognitive theory and the design of instruction. *Educational Technology* 21:7, 14-20.
- Willis, J. (1998, May-June). Alternative instructional design paradigms: What's worth discussing and what isn't. *Educational Technology* 38:3, 5-16
- Willis, J. & Wright, K.E. (2000, March-April). A general set of procedures for constructivist instructional design: The new R2D2 Model. *Educational Technology* 40:2, 5-20.
- Zemke, R. (1999, July). Toward a science of training. *Training* 36:7, 32-36.

Available in Education Library Electronic Reserves

- AECT (2001). A Code of Professional Ethics. Available online:
<http://www.aect.org/Intranet/Publications/ethics/index.html>
- AECT (1977). *The Definition of Educational Technology*, ch. I and II. Washington DC: AECT.
- Airasian, P. & Walsh, M.. (1997, Feb.) Constructivist cautions. *Phi Delta Kappan* 78:6, 444-449.
- Barbian, J. (2001). How much are you worth? *Training*, November 2001, 60-68.
- Bednar, A.K., Cunningham, D., Duffy, T.M., & Perry, J.D. (1991). Theory into practice: How do we link? In G. Anglin (ed.), *Instructional Technology: Past, Present and Future*. Denver, CO: Libraries Unlimited.
- **Braden, R. A. Linear instructional design and development. In C.R. Dills & A.J. Romiszowski (Eds) *Instructional Development Paradigms*. Englewood Cliffs, NJ: Educational Technology Publications, pp. 493-517.
- Brethower, D. (2001). Is Behaviorism dead? A response to Foshay. *ISPI News and Notes*, September.
- Burns et al. (1999). Academy of Human Resource Development: Standards on Ethics and Integrity. *Performance Improvement Quarterly* 12:3, 5-30.
- Butzin, S.M. (1992). Project CHILD documents.
- *Clark, R.E. (1994). Media will never influence learning. *Educational Technology Research and Development* 42:2, 21-29.
- *Clark, R.E. (1983). Reconsidering research on learning from media. *Review of Educational Research* 53:4, 445-459.
- Cuban, Kirkpatrick, & Peck (2001). High access and low use of technologies in high school classrooms: Explaining an apparent paradox. *American Educational Research Journal* 38:4, 813-834.
- Dean, P.J. (1999) The relevance of standards and ethics for the human performance technology profession. Chapter 33 in Stolovitch & Keeps (Eds.) *Handbook of Human Performance Technology*, 2nd ed. San Francisco: Jossey-Bass, pp. 698-712.
- **Doughty, P.L. & Romiszowski, A.J. Organizational and performance engineering paradigms and their relationship to instructional systems development. In C.R. Dills & A.J. Romiszowski (Eds) *Instructional Development Paradigms*. Englewood Cliffs, NJ: Educational Technology Publications, pp.179-200.
- *Driscoll, M. P. (2000). Gagne's theory of instruction. Ch. 10 in *Psychology of Learning for Instruction*, 2nd ed. Allyn & Bacon.
- **Engelmann, S. (1997) Direct Instruction. In C.R. Dills & A.J. Romiszowski (Eds) *Instructional Development Paradigms*. Englewood Cliffs, NJ: Educational Technology Publications, pp. 371-390.
- Foshay, R. (2001). Is Behaviorism Dead? Should HPT Care? *ISPI News & Notes*, July.
- Galvin, T. (2001). Industry Report 2001. *Training*, October, 40-69.
- Gentry, C.G. (1995). Educational technology: A question of meaning. In G.J. Anglin (ed.) *Instructional Technology: Past, Present, and Future*, 2nd ed. Englewood, CO: Libraries Unlimited, pp. 1-10.
- Heinich, R. (1973). Is there a field of educational communications and technology? *Audiovisual Instruction* 18:5, 44-46.
- Kozma, R. B. (1994). Will media influence learning? Reframing the debate. *Educational Technology Research and Development* 42:2, 7-19.
- McCombs, Barbara. (1986) "The ISD Model: Review of those Factors Critical to Its Successful Implementation" *ECTJ* 34:2, Summer, 67-81.
- Mauldin, M.P. & Gustafson, K.L. (1997) Is instructional development a paradigm for public education? In C.R. Dills & A.J. Romiszowski (Eds) *Instructional Development Paradigms*. Englewood Cliffs, NJ: Educational Technology Publications, pp. 129-140.
- Merrill, M.D. (2002). First principles of instruction. *Educational Technology Research and Development* 50:3, 43-59.
- Pershing, J.A. & Molenda, M. (2000, February). Letters home: the meanings of instructional technology. *TechTrends* 44:1, 31-38.
- Saettler, P. (1990). Table of contents. In *The Evolution of American Educational Technology*. (pp. vii-xx) Englewood, CO: Libraries Unlimited.
- Shrock, S.A. (1995). A brief history of instructional development. In G.J. Anglin (ed.) *Instructional*

Technology: Past, Present, and Future, 2nd ed. Englewood, CO: Libraries Unlimited, pp. 11-18.
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