



Professor Emeritus: Theodore W. Frick

School of Education, Indiana University Bloomington

Curriculum Vita



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- Departmental: Instructional Systems Technology
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Background

ADDRESS, PHONE AND E-MAIL

Campus Address: Theodore Frick
Department of Instructional Systems Technology
School of Education
Indiana University
Bloomington, Indiana 47405-1006

Campus Phone: Retired--no IU phone. Call IST Dept. (812) 856-8450

E-Mail: [Send me e-mail](#)

Website: <https://www.indiana.edu/~tedfrick>

CURRENT POSITION

Professor Emeritus, School of Education, Indiana University
Bloomington

EDUCATION

B.M.E., Indiana University, 1972. Major: Music Education
Ph.D., Indiana University, 1984. Major: Educational Inquiry
Methodology; Minor: Special Education

PROFESSIONAL EXPERIENCE

2013 Jan. - present Professor Emeritus, School of Education, Indiana University Bloomington

2010 July - Chairman, Department of Instructional Systems

- 2012 June Technology
- 2010 - Dec. 2012 Professor, Department of Instructional Systems Technology
- 2009 Interim Department Chairperson, Instructional Systems Technology
- 1991 - 2010 Associate Professor, Department of Instructional Systems Technology
- 1998 - 2005 Web Director, School of Education, Indiana University Bloomington
- 1984 - 1991 Assistant Professor, Department of Instructional Systems Technology
- 1983 Instructor (fall semester only), Department of Instructional Systems Technology
- 1976 - 1983 Research Associate, Center for Innovation in Teaching the Handicapped, School of Education, Indiana University.
- 1975 - 1976 Coordinator, Project PRIME Data Analysis Unit, Indiana University, Bloomington, for Nero and Associates, Rosslyn, Virginia.
- 1974 - 1975 Research Associate, Center for Innovation in Teaching the Handicapped.

AWARDS, HONORS, DISTINCTION

- 2010 Trustees' Teaching Award, School of Education, Indiana University Bloomington
- 2003 Dean's Medallion for Outstanding Service to the School of Education, Indiana University Bloomington
- 1996 Invited Keynote Address: **Criteria for Evaluating use of Information Technology in K-12 Education**, to the International Symposium on New Technologies of Instruction, Taipei, Taiwan
- 1992 Summer Faculty Fellowship, Dean of Faculties, Indiana University Bloomington
- 1991 Invited by the Phi Delta Kappa Educational Foundation to write a Fastback (small book) as part of a series commemorating their 25th Anniversary. My contribution is entitled: **Restructuring Education Through Technology**.

PROFESSIONAL AFFILIATIONS

- Member, Association for Supervision and Curriculum Development (ASCD), 1999- 2004
- Member, Software Technology Committee, Indiana Business Modernization and Technology Corporation, 1991 - 1996.
- Full Member, Indiana University Graduate School, 1989 - present
- Faculty Affiliate, Indiana University Cognitive Science Program, 1989 - present
- Member, Association for the Development of Computer- Based Instructional Systems (ADCIS), 1989 - 1991.
- Member, Association for Educational Communications and Technology (AECT), 1989 - present.
- Member, Artificial Intelligence Committee, Corporation for Science and Technology, State of Indiana, 1985 - 1991.
- Member, American Educational Research Association (AERA), 1974 - 1992; 2006 - 2012.

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Research and Creative Activities

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PUBLICATIONS

Note: to view copyrighted publications below may require entry of a valid IU username and passphrase. Others may require journal subscriptions.

Key:

* indicates a refereed publication with blind peer review.

R = Research, T = Teaching, S = Service, R&T = Research & Teaching, T&S = Teaching & Service, etc.

Journal Publications

*Frick, T. & Dagli, C. (2016). [MOOCs for Research: The Case of the Indiana University Plagiarism Tutorials and Tests](#). *Technology, Knowledge and Learning*, 21(2), 255-276, DOI 10.1007/s10758-016-92 88-6. [R&T]

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*Kwon, S., Lara, M., Enfield, J. & Frick, T. (2013). **Design and evaluation of a prompting instrument to support learning within the Diffusion Simulation Game**. *Journal of Educational Technology Systems*, 41(3), 231-253. [R]

*Gray, C., Jung, J., Watson, C., Jia, X., & Frick, T. (2012). **Models and design judgment: Conflicting perspectives on redesigning a doctoral readings course**. *International Journal of Designs for Learning*, 3(1), 27-38. IJDL online. [R&T]

*Enfield, J., Myers, R., Lara, M., & Frick, T. (2012). **Innovation diffusion: Assessment of strategies within the DIFFUSION SIMULATION GAME**. *Journal of Simulation and Gaming*, 43(2) 188–214. [R]

*Kim, K.-J. & Frick, T. (2011). **Changes in student motivation during online learning**. *Journal of Educational Computing Research*, 44(1), 1-24. [R&T]

*Koh, J. & Frick, T. (2010). **Implementing autonomy support: Insights from a Montessori classroom**. *International Journal of Education*, 2(2:E3), 1-15. [R&T]

*Lara, M., Myers, R., Frick, T., Aslan, S., & Michaelidou, T. (2010). **A design case: Developing an enhanced version of the diffusion simulation game**. *International Journal of Designs for Learning*, 1(1). IJDL online. [R&T]

*Howard C. D., Barrett A. F., and Frick, T. W. (2010). **Anonymity to promote peer feedback: Pre-service teachers' comments in asynchronous computer-mediated communication**. *Journal of Educational Computing Research*, 43(1), 89-112. [R&T]

*Frick, T., Chadha, R., Watson and Zlatkovska, E. (2010). **Improving Course Evaluations to Improve Instruction and Complex Learning in Higher Education**. *Educational Technology Research and Development*, 58(2), 115-136. [R&T]

*Koh, J., & Frick, T. (2009). **Instructor and student classroom interactions during technology skills instruction for facilitating preservice teachers' computer self-efficacy**. *Journal of Educational Computing Research*, 40(2), 207-224. [R&T]

*Frick, T., Chadha, R., Watson, C., Wang, Y. and Green, P. (2009). **College student perceptions of teaching and learning quality**. *Educational Technology Research and Development*, 57(5), 705-720. [R&T]

Frick, T., translated into Mongolian by Uvsh Purev (2006). **Education**

structure and technology management innovation. *Education Management, 1*, 5-18. [T]

Frick, T., Thompson, K., Koh, J. (2006). **Systemic change: Get Ready, SET, Go! -- Where?** *TechTrends, 50*(2), 47-48. [R&T]

*An, Y.-J. and Frick, T. (2006). **Student perceptions of asynchronous computer-mediated communication in face-to-face courses.** *Journal of Computer-Mediated Communication, 11*(2), article 5. Available online: <http://jcmc.indiana.edu/vol11/issue2/an.html> (moved, now requires subscription). [R&T]

*Frick, T., Su, B. and An, Y.-J. (2005). **Building a Large, Successful Website Efficiently through Inquiry-based Design and Content Management Tools.** *TechTrends, 49*(04), 20-31. [R&S]

*Boling, E., Eccarius, M., Smith, K. and Frick, T. (2004). **Instructional illustrations: intended meanings and learner interpretations.** *Journal of Visual Literacy, 24* (2), 185-204. [R&T]

Frick, T. (2000). The Most Powerful Educational System in the World with No One in Charge. *Education at a Distance, 14*(11). Online at http://www.usdla.org/ED_magazine/illuminactive/NOV00_Issue/story05.htm (available to USDLA members). [T]

King, K. and Frick, T. (2000), Transforming Education: Case Studies in Systems Thinking. *Education at a Distance, 14*(9). Online at http://www.usdla.org/ED_magazine/illuminactive/SEP00_Issue/story03.htm (available to USDLA members). [R&T]

Frick, T. (2000). Criteria for Evaluating Use of Information Technology. *Education at a Distance, 14*(8). Online at http://www.usdla.org/ED_magazine/illuminactive/AUG00_Issue/story05.htm (available to USDLA members). [R&T]

*Boling, E., Beriswill, J., Xaver, R., Hebb, C. Kaufman, D. and Frick, T. (1998). **Text labels for hypertext navigation buttons.** *International Journal of Instructional Media, 25*(4), 407-421. [R]

*Frick, T. (1997). **Artificially intelligent tutoring systems: what computers can and can't know.** *Journal of Educational Computing Research, 16*(2), 107-124. **Web supplement.** [R&T]

*Corry, M., Frick, T. and Hansen, L. (1997). **User-Centered Design and Usability Testing of a Web Site: An Illustrative Case Study.** *Educational Technology Research and Development, 45*(4), 65-76. [R&S]

*Boling, E., King, K., Avers, D., Hsu, Y.-C., Lee, J. and Frick, T. (1996). **Navigating Backward: Concrete vs. Abstract Representation in Hypertext Buttons**. *Canadian Journal of Educational Communication*, 25(2), 161-176. [R]

*King, K., Boling, E., Anelli, J., Bray, M., Cardenas, D., and Frick, T. (1996). **Relative perceptibility of HyperCard buttons using pictorial symbols and text labels**. *Journal of Educational Computing Research*, 14(1), 67-81. [R]

*Welch, R. and Frick, T. (1993). **Computerized Adaptive Mastery Tests in Instructional Settings**. *Educational Technology, Research & Development*, 41(3), 47-62. [R&T]

*Frick, T. (1992). **Computerized Adaptive Mastery Tests as Expert Systems**. *Journal of Educational Computing Research*, 8(2), 187-213. [R&T]

*Frick, T. (1990). **A Comparison of Three Decision Models for Adapting the Length of Computer-Based Mastery Tests**. *Journal of Educational Computing Research* 6(4), 469-503. [R&T]

*Frick, T. (1990). **Analysis of Patterns in Time (APT): A Method of Recording and Quantifying Temporal Relations in Education**. *American Educational Research Journal*, 27(1), 180-204. See also: **Nonmetric temporal path analysis**. [R]

*Frick, T. (1989). **Bayesian Adaptation during Computer-Based Tests and Computer-Guided Practice Exercises**. *Journal of Educational Computing Research*, 5(1), 89-114. See **Web tool for Bayesian decision making**. [R&T]

Frick, T. (1988). **Large vs. Small Computers: A Comparison of Systems**. In Wolfe, G. (Ed.), *Guide to instructional computing for music educators*. Manhattan, KA: National Association of Jazz Educators, 68-79. [T]

Frick, T. (1986). **Mainframes, Mini's and Micro's: Considerations for Computer- Based Instruction**. *Jazz Educator*, Feb./Mar., 42-47. [T]

*Frick, T., Rieth, H.J. and Polsgrove, L.J. (1985). **Use of Microcomputers in Training Special Education Teachers**. *Peabody Journal of Education*, 62(1), 77-86. [T]

Frick, T. and Polsgrove, L.J. (1985). **Computers in the Assessment of Teacher Performance**. *On Line*, 4(1), 18-19. [T]

*Rieth, H.J., Polsgrove, L.J., Frick, T., Goh, S. and Eckert R. (1985).

Using Micro-computers as an Integral Part of Teacher Preparation in Special Education. *Teacher Education and Special Education*, 8(4), 175-182. [T]

*Frick, T. and Semmel, M.I. (1978). Observer Agreement and Reliabilities of Classroom Observational Measures. *Review of Educational Research*, 48(1), 157-184. [R]

Book Chapters

*Frick, T. W. (2018). **The theory of totally integrated education: TIE**. In J. M. Spector B. B. Lockee, and M. D. Childress (Oversight Eds.), *Learning, Design, and Technology: An International Compendium of Theory, Research, Practice and Policy* (Vol. 1): Learning theory and the learning sciences (J. Elen, Vol. ed.). https://doi.org/10.1007/978-3-319-17727-4_69-2.

*Frick, T. W., Dagli, C., Kwon, K. & Tomita, K. (2018, in press). Indiana University plagiarism tutorials and tests: 14 years of worldwide learning online. In B. Hokanson, et al. (Eds.), *Educational technology and narrative*. Chapter 16.

*Frick, T. W. (2017). The theory of totally integrated education: TIE. In J. M. Spector B. B. Lockee, and M. D. Childress (Oversight Eds.), *Learning, Design, and Technology: An International Compendium of Theory, Research, Practice and Policy* (Vol. 1): Learning theory and the learning sciences (J. Elen, Vol. ed.).

*Myers, R. & Frick, T. (2015). Using pattern matching to assess gameplay. In C. S. Loh, Y. Sheng, & D. Infenthaler (Eds.), *Serious games analytics: Methodologies for performance measurement, assessment, and improvement*, (Chapter 19, pp. 435-458). Heidelberg, Germany: Springer. [R]

Frick, T., Koh, J. & Chadha, R. (2011). **Designing effective online courses with First Principles of Instruction**. In R. Roy (Ed.), *Education technology in changing society* (pp. 22-47). Delhi: Shipra Publications. [R&T]

Frick, T., Chadha, R., Watson, C., and Wang, Y. (2010). **Theory-based evaluation of instruction: Implications for Improving Student Learning Achievement in Postsecondary Education**. In M. Orey, S. Jones & R. Branch (Eds.), *Educational Media and Technology Yearbook*, (Vol. 35, pp. 57-77). New York: Springer. [R&T]

Baek, E.-O., Cagiltay, K., Boling, E., and Frick, T. (2008). **User-centered design and development**. In J. M. Spector, M. D. Merrill, J.J. van

Merrienboer & M. F. Driscoll (Eds.). *Handbook of research on educational communications and technology* (3rd ed., pp. 659-670). New York: Routledge. [R]

Frick, T. and Thompson, K. (2008). **Predicting education system outcomes: A scientific approach**. In M. Orey, V. McClendon, & R. Branch (Eds.), *Educational Media and Technology Yearbook* (Vol. 33, pp. 62-76). Westport, CT: Libraries Unlimited. [R]

Reigeluth, C. and Frick, T. (1999). **Formative Research: A Methodology for Improving Design Theories**. In C.M. Reigeluth (Ed.), *Instructional-Design Theories and Models: A New Paradigm of Instructional Theories* (Vol. II, pp. 633-651). Mahwah, NJ: Lawrence-Erlbaum. [R]

Boling, E. and Frick, T. (1997). **Holistic rapid prototyping for Web design: Early usability testing is essential**. In B. Khan (Ed.), *Web-Based Instruction* (pp. 319-328). Englewood Cliffs, NJ: Educational Technology Publications. [T]

Frick, T., Corry, M. and Bray, M. (1997). **Preparing and managing a course web site: understanding systemic change in education**. In B. Khan (Ed.), *Web-Based Instruction* (pp. 431-436). Englewood Cliffs, NJ: Educational Technology Publications. [T]

Hansen, L. and Frick, T. (1997). **Evaluation guidelines for Web-based course authoring systems**. In B. Khan (Ed.), *Web-Based Instruction* (pp. 299-306). Englewood Cliffs, NJ: Educational Technology Publications. [T]

Frick, T. (1993). **A Systems View of Restructuring Education**. In C.M. Reigeluth and B. Banathy (Eds.), *Comprehensive Systems Design: A New Educational Technology* (pp. 260-271). Berlin: Springer-Verlag. [R]

Semmel, M.I. and Frick, T. (1985). Learner Background Characteristics. In M. Kaufman, J.A. Agard & M.I. Semmel (Eds.), *Mainstreaming: Learners and their environments* (pp. 75-98). Cambridge, MA: Brookline Books. [R]

Semmel, M.I. and Frick, T. (1985). Learner Competence in School. In M. Kaufman, J.A. Agard & M.I. Semmel (Eds.), *Mainstreaming: Learners and their environments* (pp. 99-150). Cambridge, MA: Brookline Books. [R]

Books

*Fitzpatrick, K. and Pershing, J. (Eds.) (1996, March). *Technology: Indicators of quality information technology systems in K-12 schools*. Schaumburg, IL: National Study of School Evaluation. I was a major contributor of research for and the assessment parts of this NSSE

publication (see acknowledgment in preface), which was reviewed and critiqued by national leaders in educational technology, school administrators, school teachers, and the Board of Directors, NSSE. This publication is being used by thousands of K-12 schools for self-review as part of school accreditation. [Web summary](#). [R&S]

Frick, T. (1991). *Restructuring education through technology*. Bloomington, IN: Phi Delta Kappa Educational Foundation (ISBN 0-87367-326-3). [T]

GRANTS FUNDED

Frick, T. *Bridging Qualitative and Quantitative Methods in Educational Research: Analysis of Patterns in Time and Configuration (APT&C)*. Funded by the Proffitt Foundation, July 2005-2007. [R]

Boling, E., Smith, K., Eccarius, M. and Frick, T. *Visual Representations to Support Learning: Effectiveness of Graphical Elements Used to Extend the Meaning of Instructional Illustrations*. Funded by the Proffitt Foundation, June 2003-2005. [R&T]

Frick, T. *I-WEB: Linking K-12 Schools in Indiana on the World Wide Web*. Funded by the Indiana University Strategic Directions Charter, 1996-97. [S]

Pershing, J., Molenda, M., Frick, T., Britton, R. *Development of Evaluative Criteria for Educational Technology in K-12 Schools*. Funded by the National Study of School Evaluation, 1993-95. [R&S]

Frick, T. *An Investigation of Motivational and Learning Effects of an Intelligent Method of Individualizing Instruction*. Funded by the Proffitt Foundation, 1989-1990. &T]

Frick, T. *An Empirical Investigation of Expert Systems Reasoning in Adapting Computer-Based Tests*. Funded by the Proffitt Foundation, 1988-1989. [R&T]

Frick, T. *A Comparison of the Sequential Probability Ratio Test, Adaptive Mastery Testing and Bayesian Decision Models for Mastery Decisions during Criterion-Referenced Testing*. Funded by the Proffitt Foundation, 1986-1987. [R&T]

Frick, T. *An Investigation of the Validity of the Sequential Probability*

Ratio Test for Mastery Decisions during Criterion-Referenced Testing. Funded by the Spencer Foundation, 1985-1986. [R&T]

----- *Summer Institute for Training Teachers in Logo.* Funded by the Indiana Consortium for Computer and Higher Technology Education, State Department of Public Instruction, Mar., 1984 - Aug., 1984. [T&S]

Rieth, H.J. and Frick, T. *A special project to develop and implement a micro-computer based special teacher education and evaluation laboratory (STEEL).* Funded by the Personnel Training Division of the Office of Special Education, U.S. Department of Education, 1983- 1986. [R&T]

Semmel, M.I., Olson, J.L. and Frick, T. *A technological innovation utilizing microprocessors and videotape for inservice education of teachers of the handicapped: Portable COMAVI -- CComputer-Mediated Assessment of Videotaped Instruction.* Funded by the Handicapped Media Services and Captioned Films Program of the Bureau of Education for the Handicapped (BEH), U.S. Office of Education, 1978-1980. [R&T]

Semmel, M.I. and Frick, T. *A general systems approach to train preservice special teachers in research skills through systematic performance assessment of teaching-learning outcomes: Project CARTLO -- Computer-Assisted Research into Teaching-Learning Outcomes.* Funded by the Field Initiated Studies Program, BEH, U.S.O.E., 1976-1980. [R&T]

GRANTS SUBMITTED (to NSF)

Frick, T. **MAPSAT Curriculum Dashboard: Connecting the dots for STEM Careers.** To the National Science Foundation (NSF): I-TEST, April, 2008 (not funded). [R&S]

Frick, T. and Galindo, E. **SimEd-Math: Modeling Differentiated Instruction in Mathematics.** To NSF: ALT, April, 2008 (not funded). [R&T]

Frick, T., Galindo, E., Bardzell, J. and Bardzell, S. **A Simulation-Game on Technology Integration for Mathematics Learning.** NSF: DR-K12, January, 2009 (not funded). [R&T]

MAJOR PRESENTATIONS (Asterisk indicates a refereed conference presentation.)

*Frick, T. & Myers, R. (2017). **The Theory of Totally Integrated Education (TIE): Predictions for Systemic Change**. At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL.

*Frick, T., Dagli, C. & Myers, R. (2017). **Answering Research Questions with Big Data from a MOOC**. At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL.

*Frick, T., Dagli, C., Kwon, K., & Tomita, K. (2016). **Indiana University Plagiarism Tutorials and Tests: 14 Years of Worldwide Learning Online**. At the bi-annual Summer Research Conference, Association of Educational Communications and Technology, Bloomington, IN.

*Myers, R. & Frick, T. (2015). **Measuring Effectiveness of Instructional Games and Simulations**. At the annual conference of the Association of Educational Communications and Technology, Indianapolis, IN.

*Frick, T., Dagli, C. & Myers, R. (2015). **Design Case for a Mini-MOOC on Learning to Recognize Plagiarism**. At the annual conference of the Association of Educational Communications and Technology, Indianapolis, IN.

*Frick, T. & Thompson, K. (2015). **Educology for Systemic Change**. At the annual conference of the Association of Educational Communications and Technology, Indianapolis, IN.

*Myers, R. & Frick, T. (2014). **Using Pattern Matching to Assess Gameplay**. At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL.

*Frick, T., Barrett, A., Dagli, C., & Myers, R. (2014). **Defeating the Cheating: Redesigning a Web-Based Mastery Test during Heavy Usage**. At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL.

*Frick, T. (2012). **Dimensions of Educational Quality**. At the annual conference of the Association of Educational Communications and Technology, Louisville, KY.

*Frick, T. (2011). **A Vision for Systemic Change: The Theory of Totally Integrated Education (TIE)** (ppt). At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL. [R&T]

Related monograph: **The Theory of Totally Integrated Education** (pdf)

- *Watson, C., Gray, C., Jia, X., Jung, J., Wang, Y. & Frick, T. (2011). **A Case Study in Designing Online Instruction Using van Merriënboer's Ten Steps to Complex Learning** (pdf). Paper presented at the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL. [R&T]
- *Barrett, A. & Frick, T. (2011). **A Design Case: Improving an Online Plagiarism Tutorial by Preventing Cheating and Supporting Mobile Access** (video). At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL. (prezi) [R&T]
- *Myers, R. & Frick, T. (2011). **Analyzing Interaction Patterns to Verify a Simulation/Game Model** (ppt). At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL. [R]
- *Frick, T., Myers, R., Howard, C. & Barrett (2011). **Applications of MAPSAT in Educational Research: Map & Analyze Patterns & Structures Across Time** (ppt). At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL. [R]
- *Enfield, J., Myers, R., Lara, M., Kwon, S., Wu, T.-F. & Frick, T. (2011). **Approaches to Studying Online Games for Learning** (ppt). At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL. [R&T]
- *Barrett, A. & Frick, T. (2011). **Bridging the Divide Between Assessment Practice in Low and High-Stakes Contexts**. At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL. [R&T]
- *Frick, T., Barrett, A., Gray, C., Howard, C. & Jung, J. (2011). **Presidential Panel: Preparing Students in Instructional Design and Technology to Become Skilled Researchers: Multiple Approaches** (ppt). At the annual conference of the Association of Educational Communications and Technology, Jacksonville, FL. [T]
- *Chadha, R. & Frick, T. (2011). **Dependability of college student ratings of teaching and learning quality** (ppt). Paper presented (pdf) at the annual meeting of the American Educational Research Association, New Orleans, LA. [R]
- *Barrett, A., Howard, C. & Frick, T. (2011). Product quality and conditions of anonymity in formative peer assessment: Preservice teachers' asynchronous communication. Paper presented at the annual

meeting of the American Educational Research Association, New Orleans, LA. [R&T]

*Lara, M., Enfield, J., Myers, R. & Frick, T. (2011). Learning assessment in the Diffusion Simulation Game. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA. [R]

*Lara, M., Enfield, J., Myers, R., & Frick, T. (2010). Assessing learning in online simulations: a case study of the diffusion simulation game. Paper presented at the annual conference of the Association for Educational Communications & Technology, Anaheim, CA. [R&T]

*Frick, T. & Myers, R. (2010). Map and Analyze Patterns and Structures Across Time (MAPSAT): Theoretical foundations for observing systemic change. Paper presented at the annual conference of the Association for Educational Communications & Technology, Anaheim, CA. [R]

*Frick, T. & Watson, C. (2010). Map and analyze patterns and structures across time (MAPSAT): Theoretical foundations for observing systemic change. Poster session at the annual conference of the Association for Educational Communications & Technology, Anaheim, CA. [R]

*Myers, R., Enfield, J., Lara, M. & Frick, T. (2010). Analyzing gameplay data to improve the design of a simulation game. Paper presented at the annual conference of the Association for Educational Communications & Technology, Anaheim, CA. [R&T]

*Ertmer, P., Reiser, R., Frick, T., Gibbons, A., Hannafin, M., Jonassen, D., Wilson, B. (2010). Preparing students to be skilled instructional technology researchers: Multiple approaches. Structured poster session at the annual conference of the American Educational Research Association, Denver, CO. [S]

*Frick, T., Chadha, R., Watson, C., & Zlatkowska, E. (2010). New measures for course evaluation in higher education and their relationships with student learning. Paper presented at the annual conference of the American Educational Research Association, Denver, CO. [R]

*Frick, T., Howard, C., Barrett, A., Enfield, J., & Myers, R. (2009). **Alternative research methods: MAPSAT your data to prevent aggregation aggravation.** Paper presented at the annual conference of the Association for Educational Communications & Technology, Louisville, KY. [R]

*Lara, M., Myers, R., Frick, T., Karabacak, S., & Michaelidou, T. (2009). **A design case: Creating an enhanced version of the *Diffusion Simulation***

Game. Paper presented at the annual conference of the Association for Educational Communications & Technology, Louisville, KY. [R&T]

Frick, T., Lara, M., Myers, R., Michaelidou, T., Karaback, Sinem, Enfield, J., & Kwon, S. (2009). The *Diffusion Simulation Game*: Development of an enhanced version. At the 2nd annual IST Colloquium, Bloomington, IN. [R&T]

*Frick, T., Myers, R., Thompson, K. & York, S. (2008). *New ways to measure systemic change: Map & Analyze Patterns & Structures Across Time (MAPSAT)*. Featured research paper presented at the annual conference of the Association for Educational Communications & Technology, Orlando, FL. [R]

*Frick, T., Chadha, R., Watson, C., Zlatkovska, E. & Green, P. (2008). *Improving course evaluations to improve instruction and complex learning in higher education*. Featured research paper presented at the annual conference of the Association for Educational Communications & Technology, Orlando, FL. [R&T]

*Frick, T. (2008). User-centered design and development. Presented at the research symposium on the AECT Handbook of Research (3rd. Ed.) at the annual conference of the Association for Educational Communications & Technology, Orlando, FL. [R]

*Frick, T., Myers, R., Thompson, K. & York, S. (2008). *New ways to measure systemic change: Map & Analyze Patterns & Structures Across Time (MAPSAT)*. Paper presented at the Second Annual Summer Research Symposium, Association for Educational Communications & Technology, Bloomington, IN. [R]

*Frick, T., Chadha, R., Watson, C., Zlatkovska, E. & Green, P. (2008). *Improving course evaluations to improve instruction and complex learning in higher education*. Paper presented at the Second Annual Summer Research Symposium, Association for Educational Communications & Technology, Bloomington, IN. [R&T]

*Frick, T., Chadha, R., Watson, C., Wang, Y. & Green, P. (2008). *Theory-based course evaluation: Implications for improving student success in postsecondary education*. Paper presented at the American Educational Research Association, New York, NY. [R&T]

*Frick, T. Chadha, R., Watson, C., Wang, Y. and Green, P. (2007). Does Your Instruction Rate 9 Stars? College Student Perceptions of Teaching and Learning Quality. *Featured Research Presentation* at the Association for Educational Communication and Technology, Anaheim, CA. Available

online at: <https://www.indiana.edu/~tedfrick/AECT2007NineStars.pdf>
[R&T]

*Koh, J. and Frick, T. (2007). Measuring System Structural Properties of Autonomy-Support in a Montessori Classroom. Proceedings of the Association for Educational Communication and Technology, Anaheim, CA. Available online at:

https://www.indiana.edu/~tedfrick/montessori_AECT2007_proceedings_koh_frick.pdf
[R]

*Boling, E., Smith, K., Frick, T. and Eccarius, M. (2007). Graphical Devices in Instructional Illustrations: Designers' Intentions and Viewers' Interpretations. Paper presented at the 2007 American Educational Research Conference, Chicago, IL. Available online at:

https://www.indiana.edu/~tedfrick/instructional_illustrations_AERA_2007.pdf
[R&T]

*Frick, T. and Koh, J. (2007). Self-Regulation, Autonomy, and Expertise Development in Problem-Based or Design-Based Learning Environments. Paper presented at the 2007 American Educational Research Conference, Chicago, IL. Available online at:

https://www.indiana.edu/~tedfrick/montessori_AERA_2007.pdf [R&T]

*Frick, T. with An, J. and Koh, J. (2006). Patterns in Education: Linking Theory to Practice. In M. Simonson (Ed.), Proceedings of the Association for Educational Communication and Technology, Dallas, TX. Available online at: <https://www.indiana.edu/~tedfrick/aect2006/patterns.pdf> -- requires Acrobat Reader

Slides -- require Powerpoint [R]

*Frick, T., Thompson, K. and Koh, J. (2006). Predicting Education System Outcomes: A Scientific Approach. In M. Simonson (Ed.), Proceedings of the Association for Educational Communication and Technology, Dallas, TX. Available online at:

<https://www.indiana.edu/~tedfrick/aect2006/PESO.pdf> -- requires Acrobat Reader

Slides -- require Powerpoint [R]

*Frick, T., Elder, M., Hebb, C., Wang, Y., and Yoon, S. (2005). Adaptive Usability Evaluation of Complex Web Sites: How Many Tasks. In M. Simonson (Ed.), Proceedings of the Association for Educational Communication and Technology, Orlando, FL. Available online at:

<https://www.indiana.edu/~tedfrick/aect2005/adaptiveusability.pdf> [R]

*Frick, T., Thompson, K. and Koh, J. (2005). Stimulating and Simulating Systemic Change in Education: SimEd Technologies. In M. Simonson

(Ed.), Proceedings of the Association for Educational Communication and Technology, Orlando, FL. Available online at:

<https://www.indiana.edu/~tedfrick/aect2005/simed.pdf> [R&T]

*Frick, T., Su, B. and An, Y.-J. (2004). Building a Large, Successful Website on a Shoestring: A Decade of Progress. M. Simonson (Ed.), Proceedings of the Association for Educational Communication and Technology, Chicago, IL. Available online at:

<https://www.indiana.edu/~tedfrick/aect2004/fricksuan.pdf> [R]

*An, Y.-J. and Frick, T. (2004). Blended Instruction: Student Perceptions of Communications Technology in Face-to-Face Courses. M. Simonson (Ed.), Proceedings of the Association for Educational Communication and Technology, Chicago, IL. Available online at:

<https://www.indiana.edu/~tedfrick/aect2004/anfrick.pdf> [R&T]

*Frick, T., Kim, K.-J., Ludwig, B. and Huang, R. (2003). A Web Simulation on Educational Change: Challenges and Solutions for Development. Paper presented at the meeting of the Association for Educational Communication and Technology, Anaheim, CA. Available online at:

https://www.indiana.edu/~tedfrick/aect2003/frick_kim_ludwig_huang.pdf [R&T]

PLAY the Diffusion Simulation Game online!

*Duffield, J., Herring, M. and Frick, T. (2003). How Will NCLB Change Teacher Education? How Should AECT Respond? Symposium at the meeting of the Association for Educational Communication and Technology, Anaheim, CA. [S]

*Frick, T., Dodge, T., Liu, X. and Su, B. (2003). Is a Website or E-Learning Product Working Well? How Many Users Should You Test? Paper presented at the meeting of the Association for Educational Communication and Technology, Anaheim, CA. Available online at:

https://www.indiana.edu/~tedfrick/aect2003/frick_dodge_liu_su.pdf [R]

*Boling, E., Smith, K. and Frick, T. (2002). Visual Representations to Support Learning: Effectiveness of Graphical Elements Used to Extend the Meaning of Instructional Illustrations. Paper presented at the meeting of the Association for Educational Communication and Technology, Anaheim, CA. [R&T]

*Frick, T., Watson, C., Cullen, T. and Han, S. (2002). 5-Star Instructional Design Evaluation of Web-Based Instruction in Medical Science. Paper presented at the meeting of the Association for Educational

Communication and Technology, Dallas, Texas. Available online at:
<https://www.indiana.edu/~tedfrick/aect2002/frickwatsoncullenhan.pdf>
[R&T]

*Frick, T., Dabrowski, R., Parker, P., Robertson, P. and Subramony, D. (2002). 2001 AECT Member Needs Survey. Paper presented at the meeting of the Association for Educational Communication and Technology, Dallas, Texas. Available online at:
<https://www.indiana.edu/~tedfrick/aect2002/aectsurvey2001.pdf> [R&S]

*Boling, E., Frick, T., Sheu, F., Huang, J. and del Valle, R. (2002, November). Perceived Meanings Relative to Intended Meanings of Common Graphical Elements in Instructional Illustrations. Paper presented at the meeting of the Association for Educational Communication and Technology, Dallas, Texas. [R&T]

*Frick, T. (2002, Oct. 14), Improving and Assessing Instructional Effectiveness. Invited colloquium presentation to the Medical and Biological Sciences faculty, Indiana University Bloomington. PowerPoint for others to see and refer to at
<https://www.indiana.edu/~tedfrick/improveinstruction.ppt> . [T&S]

*Frick, T., Richter, K., Kim, M.-H., Yang, J. and Duvenci, A. AECT Needs Survey, 2000. Presented at the AECT National Conference, Atlanta, GA, Nov. 8, 2001. Available online at:
https://www.indiana.edu/~tedfrick/aect2001/theodorefrick_aectneedssurvey.doc
[R&S]

*Frick, T., Joseph, R., Korkmaz, A., Oh, J.-E. and Twal, R. (2001). Relate@IU >>>Share@IU: A New and Different Computer-Based Communications Paradigm. Presented at the AECT National Conference, Atlanta, GA, Nov. 9, 2001. Available online at:
https://www.indiana.edu/~tedfrick/theodorefrick_relateatiu.pdf [R]

*Frick, T., Boling, E., Kim, K.-J., Oswald, D., Sugar, W. and Zazelenchuk, T. (2001). Software Developers' Attitudes toward User-Centered Design, 2000. Presented at the AECT National Conference, Atlanta, GA, Nov. 9, 2001. Available online at: https://www.indiana.edu/~tedfrick/aect2001/theodorefrick_softwaredevelopersattitudes.doc [R]

*Frick, T. and Su, B. **Building a Large, Successful Web Site on a Shoestring**. At WebDevShare 2001, Bloomington, IN, Oct. 9, 2001. [R]

*Frick, T. and Lim, B. Strategies for Building a Large, Decentralized Web Site. At AECT, Denver, CO, Oct. 26, 2000. [T]

*Frick, T., Branon, R., Graham, C., Kim, J. and Pyke, G. Future Directions for AECT: A Member Survey. At AECT, Denver, CO, Oct. 27, 2000. [R&S]

*Reiser, R., Hannafin, M., Frick, T. and Sullivan, H. Preparing Our Doctoral Students to Conduct Useful Research in the Field of Educational Technology. At AECT, Long Beach, CA, Feb. 18, 2000. [S]

*Frick, T., An, J.-S., Koons, A. and Ziaeehezarjeribi, Y. [Wayfinding on the Web](#). At AECT, Long Beach, CA, Feb. 18, 2000. [R]

*Frick, T., An, J.-S., Lim, B.-R., Chen, X. and Cummings, J. [Designing a School Psychology E-Journal](#). At AECT, Long Beach, CA, Feb. 18, 2000. [R]

*King, K. and Frick, T. [Transforming education: Case Studies in Systems Thinking](#), paper presented at the American Educational Research Association, April 1999. [R]

*Frick, T., Monson, J., Xaver, R., Kilic, G., Conley, A., and Wamey, B. (Feb. 99), [Navigational Structure on the World Wide Web: Usability Concerns, User Preferences, and Browsing Behavior](#). At AECT, Houston, TX. [R]

*Frick, T., Kisling, E., Cai, W., Yu, B., Giles, F. and Brown, J. (Feb. 99), [Impact of Navigational Models on Task Completion In Web-based Information Systems](#). At AECT, Houston, TX. [R]

*Shi, H.-S., Yi, Q., Li, S., Hara, N., Frick, T. and Appelman, R. (Feb., 1998). Distance Education: Analysis of Far/Near-Site Interaction Patterns. At AECT, St. Louis, MO. [R]

*Frick, T., Kirk, J., Soo, K.-S., Tao, C.-W., Park, J. and Xaver, R. (Feb., 1998). Creating Web-Sites for K-12 Education: Fostering Communication and Training. At AECT, St. Louis, MO. [T]

Frick, T. (Dec., 1997). The Indiana Educators' Home. To the PartnerShare Technology Coordinators, a Consortium of Indiana School Districts and the IU School of Education. [T]

Frick, T. (April, 1997). Criteria for Evaluating Use of Information Technology in K-12 Education. At the Technology and Teacher Education Conference, Indiana University, Bloomington. [R&T]

Frick, T. (Dec., 1996). Criteria for Evaluating use of Information Technology in K-12 Education. [Keynote address](#) to the International Symposium on New Technologies of Instruction, Taipei, Taiwan [R&T]

Frick, T. (Dec., 1996). Linking Indiana K-12 Schools on the Web. Invited talk, Tamkang University, Taipei, Taiwan. [T&S]

*Pershing, J., Frick, T., Michael, N. and Hansen, L. (Feb., 1997). A Lever for Systemic Change: Information Technology in K-12 Schools. At the Association for Educational Communications and Technology (AECT), Albuquerque, NM. [R]

*Frick, T., Hansen, L. and Corry, M. (Feb., 1997). A Systems Model Informs Hypermedia and Web Design. At AECT, Albuquerque, NM. [R]

*Hansen, L., Frick, T., Orrill, J. and Tamborrino, W. (Feb., 1997). Redesign and Development of an Informational World Wide Web Site. At AECT, Albuquerque, NM. [R]

*Frick, T. (Feb., 1997). A Vision of a Learning-Focused Educational System. At AECT, Albuquerque, NM. [T]

*Frick, T., Corry, M. and Hansen, L. (Feb., 1997). User-Centered Design for the World Wide Web: A Case Study. At AECT, Albuquerque, NM. [R]

*Frick, T., et al., (Feb, 1996). Creating World-Wide Web Materials: Hands-on Learning. Workshop presentation at the annual meeting of the Association for Educational Communications and Technology (AECT). [T]

*Frick, T., et al., (Feb, 1996). Understanding Systemic Change: Using the Web in Collaborative Research. At AECT. [R]

*Frick, T. (Feb, 1996). Simulating the Educational System. At AECT. [R]

*Frick, T., et al., (Feb, 1996). Systemic Differences in Schools: Case Studies of Two Contrasting Systems. At AECT. [R]

Frick, T., et al., (May, 1995). Learning to Spin the Web. Half-day workshop for educators, at PIDT (Professors of Instructional Development and Technology), Shawnee Bluffs, Bloomington. [T]

Frick, T., et al., (Oct., 1995). Collaborative Research on the Web: Understanding Systemic Change in Education. At Hypermedia '95, Indiana University, Bloomington. [R]

Frick, T., et al., (Oct. 1995). Learning to Spin the Web. Half-day workshop for educators, at Hypermedia '95, Indiana University, Bloomington. [T]

*Frick, T. (et al). Hypermedia on the Internet: The Development of a World-Wide Web Server. At the annual meeting of the Association for

Educational Communications and Technology (AECT), Feb., 1995. [R]

*Frick, T. Understanding Systemic Change in Education. AECT, Feb., 1995.

*(with Pershing, Molenda and Britton). Development of Evaluative Criteria for Educational Technology in K-12 Schools. AECT, Feb., 1995. [R]

Frick, T. (et al). Hypermedia on the Internet: The Development of a World-Wide Web Server. At Hypermedia '94, Oct., 1994. [R]

Frick, T. (et al). Hypermedia on the Internet: The Development of a World-Wide Web Server. At the annual conference of Professors of Instructional Design and Technology (PIDT). May, 1994. [R]

*Frick, T. and Reigeluth, C., **Verifying Prescriptive Instructional Theory by Analysis of Patterns in Time**. At the annual meeting of the American Educational Research Association (AERA), April, 1992. [R&T]

*Welch, R. and Frick, T., Computerized Adaptive Testing in Classroom Settings. At the annual meeting of AERA, April, 1992. [R&T]

*Frick, T. Epistemology of Natural Intelligence: Implications for Intelligent Tutoring Systems. At the annual meeting of AECT, Feb. 1992. [R&T]

*Frick, T. and Reigeluth, C., **Verifying Prescriptive Instructional Theory by Analysis of Patterns in Time**. At the annual meeting of the Association for Educational Communications and Technology (AECT), Feb., 1992. [R&T]

Frick, T. Restructuring Education Through Technology. Invited address to the Evansville Indiana Chapter of Phi Delta Kappa, Nov. 1991. [T&S]

*Frick, T. An Expert Systems Approach to Computerized Adaptive Testing. At the annual meeting of AECT, Feb., 1991. [R]

Frick, T. Adapting Instructional Systems through Analysis of Patterns in Time. At the Cognitive Science Colloquium, Indiana University, &T]

Frick, T. Adapting Instructional Systems through Analysis of Patterns in Time. At the Artificial Intelligence Committee meeting of the Indiana Corporation for Science and Technology, Indianapolis, March, 1990. [R&T]

*Frick, T., Plew, G.T. and Luk, H.-K. EXSPRT: An Expert Systems Approach to Computer-Based Adaptive Testing. At the annual meeting of

AERA, March 1989. [R]

*Frick, T. Non-metric Temporal Path Analysis: A Method by which Tutorial Systems Can Learn through Inquiry. At the Fourth International Conference on Systems Research, Cybernetics and Informatics, Baden-Baden, West Germany, August 1988. [R&T]

*Rieth, H.J. and Frick, T. Technology-Based Special Education and Evaluation Laboratory. At the First World Congress on Education and Technology, Vancouver, Canada, May 1986. [R&T]

*Frick, T. An Investigation of the Validity of the Sequential Probability Ratio Test for Mastery Decisions during Criterion-Referenced Testing. At the annual AERA meeting, San Francisco, April, 1986. [R&T]

*Frick, T. Describing Educational Systems through **Nonmetric Temporal Path Analysis**. At the annual meeting of the American Society for Cybernetics, Palo Alto, October, 1983. [R]

Rieth, H.J. and Frick, T. Teacher Actions that Increase Academic Achievement of Mildly Handicapped Children. At the state meeting of the Council for Exceptional Children (CEC), Indianapolis, February, 1983. [R&T]

Rieth, H.J. and Frick, T. An Analysis of Academic Learning Time (ALT) of Mildly Handicapped Students in Special Education Service Delivery Systems. At the state CEC meeting, Indianapolis, February, 1982. [R&T]

*Semmel, M.I. and Frick, T. Systems Thinking in Educational Decision Making. At the annual AERA meeting, Toronto, March, 1978. [R&T]

*Frick, T. Project CARTLO: Computer-Assisted Research into Teaching-Learning Outcomes. At the meeting of the American Association of Colleges for Teacher Education, Chicago, February, 1978. [R]

*Semmel, M.I. and Frick, T. (1975). The Computer-Assisted Teacher Training System: Past, Present and Future. In C.K. Blong (Ed.), *Systems Thinking and the Quality of Life*. College Park, MD: Society for General Systems Research, Proceedings, 234-243. [R&T]

*Frick, T. and Semmel, M.I. Observation Systems: Observer Agreement and Reliabilities. At the annual AERA meeting, Chicago, April, 1974. [R]

Semmel, M.I. and Frick, T. Observation Systems: Reliabilities and Observer Agreement. At the meeting of the American Academy of Mental Deficiency, Atlanta, Georgia, May, 1973. [R&T]

WEB SITE DESIGN: Directed by T. Frick

FutureMinds, Association for Educational Communications and Technology, 2007 [S]

Office of Teacher Education, School of Education, 2004 [S]

Accreditation Report 2002 for the National Council for Accreditation of Teacher Education and the Indiana Professional Standards Board, 2002 [S]

City of Bloomington e-Government Website, 1999 [S]

Indiana Educators' Home, 1997 [S]

Indiana University School of Education, 1995 - 2005 [S]

Indiana University Bloomington, 1995 [S]

SIGGS Educational Systems Theory, 1995 - present [T]

INSTRUCTIONAL DEVELOPMENT

Frick, T., Lara, M., Myers, R., Enfield, J., Jordan, E., Kwon, S., Wu, T., Michaelidou, T., Aslan, S. (2010 - present). **The Diffusion Simulation Game** (Version 2).

Frick, T., Ludwig, B., Kim, K.J. and Huang, R. (2007 - present). The Diffusion Simulation Game (**PLAY the Diffusion Simulation Game online!** for general public) [T&S]

Frick, T., Boling, E., Albayrak-Karahan, M. Defazio, J. and Matsumura, N. (2003 - present). **How to Recognize Plagiarism** (Web-based tutorial, available online at: <http://www.indiana.edu/~istd>) &S]

Frick, T., Ludwig, B., Kim, K.J. and Huang, R. (2002 - present). **Diffusion Simulation Game** (available online at: <http://www.indiana.edu/~istdemo/dsgnew/login.phtml> (requires IU network ID and password)). [T]

Frick, T. (2001 - present). **What Is Plagiarism at Indiana University? A Short Interactive Concept Lesson** (on the Web: <https://www.indiana.edu/~tedfrick/plagiarism/>). Bloomington, IN:

Department of Instructional Systems Technology, School of Education, Indiana University. [T&S]

Frick, T. (with Lindeman, A., et al). Nutrition for a Healthy Life. A series of computer-mediated learning activities for undergraduate students, including the Energy Balance Tool that Frick wrote in TenCORE, 1993. [T]

Frick, T. Test of Understanding How Computers Work. A 100-item adaptive test for assessing student mastery of basic computer structures, component relationships and operations, 1993. [T]

Frick, T. (et al). Understanding How Computers Work. A series of adaptive, dynamic, computer-based instructional modules and mastery tests, 1989 - 1994. [T]

Rieth, H.J., Goh, S., Eckert, R., Hindman, S. and Frick, T. COLT: COmputer Literacy Training for Special Education Teacher Modules 1 - 8. Bloomington, IN: Center for Innovation in Teaching the Handicapped (CITH), Indiana University, 1984. [T]

Semmel, M.I. and Frick, T. Teacher Inquiry into Education Modules 1 - 9: Bloomington, IN: Project CARTLO, CITH, 1980. [T]

Semmel, M.I., Olson, J.L. and Frick, T. COmputer- Mediated Assessment of Videotaped Instruction: (two modules). Bloomington, IN: Project COMAVI, CITH, 1980. [T]

COMPUTER SOFTWARE DEVELOPED FOR RESEARCH AND DEVELOPMENT PURPOSES

Web-based CGI applications:

[EdWeb Publishing Tools: TechTrends article](#) (2005) [R&S]

[Bayesian decision making](#): Available online at:

<https://www.indiana.edu/~tedfrick/decide/start.html> (2002)

[R&T]

Programs for Analysis of Patterns in Time (APT), formerly called Non-metric Temporal Path Analysis (NTPA). Revised for MS-DOS PC's, 1988. [R]

----- Program CARTLO (main driver program which allows user to enter commands which load and execute other CARTLO

programs listed below).

----- Program DEFINE (allows user to create, modify and store an observation system on the computer).

----- Program CODE (allows user to observe and code a lesson live on the computer with previously DEFINEd code numbers).

----- Program QUERY (a complex program which allows user to specify joint and/or sequential patterns of interest, and reports the frequency, likelihood, duration and percent time each pattern occurred in the observational data.

----- Program HELP (allows user at any response point in any program to obtain further information on that or any other program).

----- Utilities: Programs LIST, FIND, CATALOG, DELETE (display contents of observation systems and data files, find such files by name search, display all such files, erase files

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Professor Emeritus: Theodore W. Frick

School of Education, Indiana University Bloomington

Curriculum Vita

Teaching Activities

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GRADUATE COURSES TAUGHT

R531: Using Computers in Education -- Spring 1984 (as W531) - 1990; 1991 - 1993.

R536: Computer-Assisted Instruction -- Fall 1983 (two sections); 1991 - 1994.

R547: Computer-Mediated Learning -- Summers, 1994 - 2000; Fall semesters, 1994 - 1995; 2000 - 2008 (including the online version taught at a distance).

R561: Evaluation and Change in the ID Process -- Core course, Spring semesters, 1995 - 1997.

R562: Practicum in CAI -- Spring and Fall semesters, 1984 - 1990, 1991,

R641: Instructional Design & Development Process II -- 1999 - 2007.

R680: Topical Seminar -- Advanced CAI Techniques, Spring semesters only, 1986 - 1989

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R690: Research Methods in Instructional Systems Technology -- also listed as R595; Spring 1993, Fall semesters 1993 - 2012.

R695: Topical Seminar -- Research on Web Design, Doctoral seminar, Fall 1997.

R695: Topical Seminar -- Linking K-12 Schools on the Web, Doctoral seminar, Fall 1996.

R695: Topical Seminar -- Understanding Systemic Change in Education, Doctoral Seminar, Spring 1995.

R695: Doctoral Research Seminar -- 2006 - 2012.

DOCTORAL DISSERTATIONS

Dissertations: Directed

Dagli, Cesur, *Effectiveness of first principles of instruction in an online tutorial*, 2017.

Barrett, Andrew, *Facilitating variable-length computerized classification testing in instructional contexts via automatic racing calibration heuristics*, 2015.

Kwon, Seolim, *Instructional design overlay theory for complex simulation games*, 2014.

Lara, Miguel, *Personality traits and performance in online game-based learning: Collaborative vs. individual settings*, 2013.

Enfield, Jacob, *Designing an educational game with Ten Steps to Complex Learning*, 2012.

Myers, Rodney, *Analyzing interaction patterns to verify a simulation/game model*, 2012.

Branon, Rovy, *Learning objects: A user-centered design process*, 2010.

Chadha, Rajat, *Dependability of mean student ratings of instruction and within-class agreement on teaching and learning course quality (TALQ) evaluation*, 2009.

Koh, Joyce, *The use of scaffolding in introductory technology skills instruction for pre-service teachers*, 2008.

Fitzpatrick, Christine, *Peer review in an online technical writing course*, 2006.

Kim, Kyong-Jee, *Adult learners' motivation in self-directed e-learning*, 2005.

Hebb, Christopher, *Adaptive usability rvaluation using sequential analysis*, 2005.

Giles, Franklin, *Teacher professional development and their concerns about using computers: Do they match?* 2003.

An, Jaesoon, *Understanding mode errors in modern human-computer interfaces: Toward the design of usable software*, 2003.

Zazelenchuk, Todd, *Measuring satisfaction in usability tests: A comparison of questionnaire administration methods and an investigation into users' rationales for satisfaction*, 2002.

Lim, Byung-Ro, *Guidelines for designing inquiry-based learning on the web: online professional development of educators*, 2001.

Reinhart, Julie, *Student motivation, self-efficacy and task difficulty in web-based instruction*, 1999.

Yin, Li-Chung Roger, *Dynamic learning patterns during individualized instruction*, 1998.

King, Kira S., *Alternative educational systems: a multi-case study in museum schools*, 1998.

Corry, Michael D., *Designing tables of contents for navigating hypermedia*, 1997.

Despain, Scott, *The effects of two delivery systems for listening comprehension exercises on the language performance and attitude of beginning Spanish students*, 1997.

Welch, R. Edwin, *Computerized adaptive testing methodologies under real-time testing conditions: a study of efficacy and efficiency*, 1997.

Shon, Mi, *Formative research on an instructional theory for the*

design of computer-based simulations for teaching causal principles, 1996.

Wang, Kyungsu, *Computerized adaptive testing: A comparison of item response theoretic approach and expert systems approaches in polychotomous grading, 1996.*

Yi, JaeKyung, *Analysis of hypermedia using a general systems theory model, 1995.*

Hoogstrate-Cooney, Deborah, *Computer-supported collaborative learning: a case study of interactive written communication, 1995.*

Hsin, Shih-Chang, *Implementing computers in schools: two case studies in Taiwan, 1994.*

Luk, Hing-Kwan, *A Comparison of an expert systems approach to computer adaptive testing and the three-parameter item response theory model, 1994.*

Wei, Chin-lung, *Instructional uses of computers in boys', girls', and coeducational senior high schools in Taiwan, the Republic of China, 1992.*

Powell, Emily, *Test anxiety and test performance under computerized adaptive testing, 1991.*

Wang, Albert, *The effects of omitting intermediate instruction in a learning hierarchy, being notified of such, and prior learning achievement on acquisition of superordinate skills, 1991.*

Plew, George Thomas, *An empirical investigation of major adaptive testing methodologies and an expert systems approach, 1989.*

Yao, Kai-Ti, *Acquisition of mathematical skills in a learning hierarchy by higher and lower ability students when instruction is omitted on coordinate and subordinate skills, 1989 (Co-director).*

Sze, Ding-Kuo David, *The effects of different mastery levels used in adaptive computer-guided practice on student learning achievement and attitude, 1988.*

Dissertations: Research Committee Member

Instructional Systems Technology: Pratima Dutta (2013), Craig Howard (2012), Douglas Doblar (2010), Herbert Fiester (2010), Dominique Galloway (2009), Ji-Eun Lee (2007), Bruce Peterson (2007), Yun-Jo An (2006), Yun Jeong Park (2005), Jeong-So Hyo (2006), Gi-Zen Liu (2003), Marian Sweeny-Dillon (2003), John Monson (2003), Kursat Cagiltay (2002), Randy Siebold (2000), Julie Hutchins (1999), Jessie Lennertz (1999), Laurie Nelson (1998), Kathy Ross (1997), Ken Luterbach (1997), Lottie Naugle (1996), Badrul Khan (1994), Siat-Moy Chong (1995), Susanna Tsai (1995), YoungHwan Kim (1994), Cheol-il Lim (1994), ChiSyan Lin (1994), Ali Carr (1994), Thomas Welsh (1994), Susan Hathaway (1992), Carol Langdon (1991), Kenneth Gustin (1991), Suella Walter (1989), Nay-Ching Tyan (1989), Ilju Rha (1988), Thomas Seamster (1986), Merton Thompson (1985), Sara Huyvaert (1985)

Special Education: Sara Hindman (1986), Christine Bahr (1988)

Language Education: Patricia Heine (1990), Jacqueline Comas (1987)

Science Education: Gulsen Bagcli Kilic (1999)

Business: Sidney Davis (1989)

Applied Linguistics: Kathleen Mahnke (1988)

Library Science: Lanju Yoon (1992), Hak Joon Kim (1999)

Health, Physical Education and Recreation: Jeff Hill (1993)

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Professor Emeritus: Theodore W. Frick

School of Education, Indiana University Bloomington

Curriculum Vita

Professional Service

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DEPARTMENTAL SERVICE (INSTRUCTIONAL SYSTEMS TECHNOLOGY)

2010 July- 2012 Chairman: Department of Instructional Systems Technology

2009 (spring) Interim Chair: Department of Instructional Systems Technology

2008-2012 Chair: Qualifying Exam Committee

2006-2010 Master's and Distance Education Committee

2005-2007 Admissions Committee

2002-2005 Chair: Student Awards Committee

1996-2002 Admissions Committee (chair 2001-2002)

1995-1996 Search and Screen Committee for IST Faculty Position

Overview

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Other Interests

My Department

- 1994-2006 Website coordinator, IST Department
 - 1994-1997 Core Curriculum Planning Team
 - 1993-1996 Chair: Computer Competency Assessment for IST students
 - 1993-1999 Mentor for junior faculty member in the department
 - 1990-1992 Chair: Qualifying Exam Committee
 - 1988-1992 Qualifying Exam Committee
 - 1987-1991 Curriculum Planning Committee: made major curriculum changes in masters and doctoral programs
 - 1987-1988 Doctoral Student Admissions Committee
 - 1985-1986 Scholarship and Awards Committee
 - 1984-1991 Master's Student Admissions Committee
 - 1983-1984 Chair: Computer Curriculum Planning Committee
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SCHOOL OF EDUCATION SERVICE

- 2005-2010 Graduate Studies Committee
- 2003-2008 Committee on Teaching
- 2003 Promotion, Tenure and Contracts Committee
- 2001-2002 Led the design and production of the CD-ROM and website containing the Institutional Report by the School of Education and supportive documentation--for the site visit conducted by the National Council for Accreditation of Teacher Education (NCATE) and the Indiana Professional Standards Board (IPSB). See [NCATE Contributions](#). Awarded Dean's Medallion for Outstanding Service for this in 2003.
- 2002 Faculty Professional Development: Conducted 6 workshops for *education faculty* on use of Oncourse and Dreamweaver
- 2000-2004 Distance Learning Cabinet

- 1998-1999 Professional Development: Designed and conducted 29 professional development workshops for *education faculty and associate instructors* on use of the Web in teaching and research
- 1998-2005 Web Director: designed, developed and managed the website for the School of Education (administrative position)
- 1997-2000 Research, Development and Equipment Committee
- 1996-1997 Task Force on Distance Education Master's Degree
- 1995-1997 Chair: Long-Range Planning Committee
- 1994-1998 Volunteer webmaster, School of Education website
- 1993-1994 Search and Screen Committee for faculty members in performance assessment
- 1990-1991 Dean's Advisory Committee for planning for the new Wright Education Building
- 1990-1991 Curriculum and Teaching Committee
- 1990-1991 Graduate Program Committee
- 1988-1990 Chair: Graduate Program Committee
- 1988-1990: Co-chair: Curriculum and Teaching Committee.
- 1988-1989 Research, Development and Equipment Committee
- 1986-1988 Graduate Program Committee
- 1986-1988 Equipment Committee
- 1986 Search and Screen Committee, special education
- 1985-1988 Education Policy Council

- 1984-1989 Planning Committee: for technology use in new Wright Education Building
 - 1984 Search and Screen Committee, instructional computing
 - 1983-1985 Instructional Computing Committee, Office of Instructional Computing
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INDIANA UNIVERSITY SERVICE

- 2007-present IU Bloomington Campus Web Oversight Committee
 - 2002-2004 Teaching and Learning Systems Steering Committee (University Information Technology Services)
 - 1999-2000 Indiana University Bloomington Web Site Consultant
 - 1996 Vice President's Committee on Electronic Communications and Marketing for IU
 - 1995 Design-research for the information architecture of the Indiana University Bloomington website
 - 1994-1996 Consultant to University Computing Services: student computer competency assessment
 - 1993-1994 Service learning projects by students in my classes--
Computer-mediated learning projects for the following IU clients: Alice Lindeman (Dietetics and Nutrition), School of Optometry (Clinical Licensing Exam Simulation), Dan Maki (Venn Diagrams lessons, etc. for M118 students)
 - 1987-1991 Instructional Computing Task Force: established goals for instructional computing at IU and demonstrated instructional use of computers at IU to faculty
 - 1984-1985 Taught special courses to *IU faculty* on use of computers in teaching and learning (project funded by IU)
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COMMUNITY SERVICE (BLOOMINGTON, INDIANA)

- 2007 Photographer and design of slideshow for WISE Program: Working Out to Improve Strength & Endurance for Cancer Patients
 - 2002 Led redesign of [website for the City of Bloomington government](#)
 - 1999 Led design of [website for the Monroe County Habitat for Humanity](#)
 - 1995 (Oct.) Invited Speaker, Herald Times 21st-Century Planning Committee
 - 1982-1983 Inservice teacher training workshops in local and nearby school districts
 - 1980-1984 Member, Board of Directors: Bloomington Montessori Association -- directed long-range planning, culminating in the new school building on South Highland Avenue
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STATE OF INDIANA SERVICE

- 1991-1998 Indiana Business Modernization and Technology Corporation, Software Technology Committee
 - 1990-1991 Proposal Reviewer: Indiana State Department of Education, Schools for the 21st Century
 - 1989-1990 Vice-Chairman: Artificial Intelligence Committee and member of the AI Steering Committee, Corporation for Science and Technology
 - 1985-1991 Artificial Intelligence Committee, Corporation for Science and Technology
 - 1984 Designer and Instructor: Logo Institute for teachers from Indiana school districts
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NATIONAL AND PROFESSIONAL SERVICE

- 2008-2009 Executive Committee, Board of Directors: Association for Educational Communications and Technology

- 2008-present Consulting Editor, Development Section: *Educational Technology Research & Development*
- 2008-present Reviewer: *Educational Technology Research & Development*
- 2007-present E-learning product, *Diffusion Simulation Game*, available online for general public
- 2007-2008 Director of Design and Development: *FutureMinds* website, an initiative of the Association for Educational Communications and Technology
- 2006-2009 Board of Directors: Association for Educational Communications and Technology
- 2003-present E-learning product, *How to Recognize Plagiarism*, available online for general public
- 2002-2003 President: Systemic Change Division, Association for Educational Communications and Technology
- 2001-present E-learning product, *What Is Plagiarism at Indiana University?*, available online for general public
- 1999-2001 Project Director: Needs Assessment of AECT Members, Association for Educational Communications and Technology
- 1998-1999 Secretary, Systemic Change Division: Association for Educational Communications and Technology
- 1993-1995 Consultant: National Study of School Evaluation, in developing criteria for evaluating use of information technology in K-12 Schools
- 1990-1991 Manuscript reviewer: *American Educational Research Journal*
- 1990-1991 Manuscript reviewer: *Behavior Research Methods, Instruments, & Computers*
- 1986 Grant Proposal Reviewer: United States Department of Education, Office of Special Education
- 1985-1986 Manuscript reviewer: *Journal of Special Education Technology*
- 1984-present Manuscript reviewer: *Journal of Educational Computing Research*
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