Technology HETL Annotated Bibliography
[Compiled by Patty Kannapel, Dec. 2009]

Bebell, D. & Kay, R. E. (2009). *Summary of research findings from the Berkshire 1:1 Laptop Program*. Paper presented at the National Meeting of the National Educational Computing Conference, Washington, D. C. Retrieved Nov. 10, 2009 from http://www.iste.org/Content/NavigationMenu/Research/NECC_Research_Paper_Archives/NECC2009/Bebell_NECC09.pdf
This article reports on the three-year study of a pilot program that provided laptops to all teachers and students in five public and private middle schools in Massachusetts. The researchers used a pre-post comparative study design, comparing data gathered from teacher and student surveys, teacher and principal interviews, and classroom observations.

Bracewell, R., Breuleux, A., Laferriere, T., Benoit, J., & Abdous, M. (1998). *The emerging contribution of online resources and tools to classroom learning and teaching*. Montreal: Universite Laval.
Review of literature covering 1996-1998 time period.

Brush, T. A. (1997). The effects on student achievement and attitudes when using integrated learning systems with cooperative pairs. *Educational Technology Research and Development, 45*(1), 51–64.
Examined 65 5th grade students in a single elementary school implementing Compass Math in computer lab; two classes did the work in cooperative groups, the third class did the work individually. Achievement then compared.

Byrom, E. (1997). *Review of the professional literature on the integration of technology into educational programs*. Durham, NC: SERVE, Inc. Retrieved Nov. 11, 2009 from http://www.serve.org/seir-tec/publications/litreview.html
This article is a review of the literature on technology integration.

Carroll, T. (2007). Teaching for the future. In *Building a 21st century U. S. education system*, B. Wehling & C. Schneider (Eds.), pp. 46-58. National Commission on Teaching and America's Future. Retrieved Nov. 11, 2009 from http://www.nctaf.org/resources/research_and_reports/nctaf_research_reports/documents/Chapter4.Carroll.pdf
The basis for this article is unclear. Examples are shared of schools and school districts engaged in certain practices. Book is published by a well-respected organization.

CEO Forum on Education and Technology. (2001, June). *The CEO Forum school technology and readiness report: Key building blocks for student achievement in the 21st century*. Retrieved Nov. 10, 2009 from http://www.ceoforum.org/downloads/report4.pdf
Based on synthesis and development of case studies of best practice classrooms, analysis of existing research, and interviews with education experts to identify the educational objectives that technology can help achieve for students.

Commission on Architecture and the Built Environment (2002). *The value of good design*. London: Author.
Reviews studies from the United Kingdom and abroad of the effects of building design in the areas of healthcare, education, housing, civic pride and cultural activity, business, and crime prevention to make the point that investment in good design generates economic and social value.

Hare, J. C., Ault, M., Niileksela, C. (2009). *Technology rich classrooms: Effect of the Kansas Model*. Paper presented at the National Meeting of the National Educational Computing Conference, Washington, D. C. Retrieved Nov. 10, 2009 from http://www.iste.org/Content/NavigationMenu/Research/NECC_Research_Paper_Archives/NECC2009/Ault_NECC09.pdf
Reports on a pilot study of Kansas' Technology Rich Classroom Project, which has provided technology grants to grades 3-6 since 2003. The article includes a literature review, as well as findings of an observational study of six participating and three non-participating teachers and their classrooms.

Hendrix, J. & Tracy, B. (2009). *Continuing to assess technology in math classrooms for state assessments*. Retrieved Nov. 11, 2009 from http://www.iste.org/Content/NavigationMenu/Research/NECC_Research_Paper_Archives/NECC2009/Hendrix_Jeremy_NECC09.pdf
Reports on a two-year study in a math classroom in an Arizona high school to determine if the use of interactive technology would affect student success on the Arizona Instrument to Measure Standards (AIMS).

Hopson, M. H. Simms, R. L. & Knezek, G. A. (2001-2002). Using a technology-enriched environment to improve higher-order thinking skills. *Journal of Research on Technology in Education, 34* (2), 109-119.
This article shares results of a study of 5th/6th graders in a Texas school district. The treatment group was enrolled in technology-enriched classrooms; comparison groups were students without a technology-enriched curriculum. The Ross Test of Higher Cognitive Processes was administered to both groups.

International Society for Technology in Education (ISTE), Partnership for 21st Century Skills, & State Educational Technology Directors Association (SETDA) (2007). *Maximizing the impact: The pivotal role of technology in a 21st century education system*. Washington, D. C.: ISTE. Retrieved Nov. 11, 2009 from http://www.ena.com/files/PDF/wp_maximizingtheimpact.pdf
This report is a call to action to integrate technology as a fundamental building block of education.

Kalay, P. & Chen, D. (2002). Integrating a decision support system into a school: The effects on student functioning. *Journal of Research on Technology in Education, 34* (4), 435-452.
Using a quasi-experimental design, the researchers examined the achievement of 10th grade students in Israel, including 220 students in a control group in year 1 using a traditional decision-making system, and 208 students in the experimental group the next

year using a new Decision Support system (DSS) in school decision-making around teaching and learning. Validity of findings may be called into question because differences in outcomes might be attributed to differences between the experimental and control groups.

Kozma, R. B. (2003). Technology and classroom practices: An international study. *Journal of Research on Technology in Education, 36* (1), 1-14.
The author examines findings of 174 case studies from 28 countries of innovative pedagogical practices using technology.

Larson, M. B. (2005). *AEL framework research: A compilation of literature reviews and meta-analyses*. Charleston, WV: Edvantia.
This report is a compilation of literature reviews and meta-analyses on various topics, including technology.

Lemke, C., & Coughlin, E. C. (1998). *Technology in American schools: Seven dimensions for gauging progress. A policymaker's guide*. The Milken Exchange on Educational Technology. Retrieved Nov. 11, 2009 from http://www.mff.org/pubs/ME158.pdf
Draws on "respected experts in the field of education and learning technology" (p. 12) to suggest a framework for policymakers to assess whether schools have established the essential conditions for improving student learning through technology.

Marttunen, M. & Laurinen, L. (2007). Collaborative learning through chat discussions and argument diagrams in secondary school. *Journal of Research on Technology in Education, 40* (1), 109-126.
This article shares findings from a Finnish study of 17 secondary school students aged 16-17 to determine the effects on student knowledge and thinking after engaging in online chats with peers.

McMillan, J. H. (2000). *Basic assessment concepts for teachers and school administrators*. College Park, MD: ERIC Clearinghouse on Assessment and Evaluation.
The author presents eleven basic principles to guide the assessment training and professional development of teachers and administrators. Principles are based on Standards for Teacher Competence in Educational Assessment of Students (1990), a framework of assessment tasks for administrators (Impara & Plake, 1996), the Code of Professional Responsibilities in Educational Measurement (1995), the Code of Fair Testing Practices in Education (1988), and the new edition of Standards for Educational and Psychological Testing (1999).

Means, B. & Olson, K. (1995). *Technology's role in education reform: Findings from a national study of innovating schools*. Washington, D. C.: Office of Educational Research and Improvement.
This study addresses the question of whether technology can provide significant support for constructivist, project-based teaching and learning approaches and the associated issue of the elements needed for an effective implementation of technology within an educational reform context. The research was based on case studies of nine sites that had

been using technology in ways that enhanced a restructuring of the classroom around students' needs; and project-based activities formed the centerpiece of the project.

Metiri Group (2006). *Technology in Schools: What the research says*. San Jose, CA: Cisco Systems. Retrieved Nov. 11, 2009 from
http://www.cisco.com/web/strategy/docs/education/TechnologyinSchoolsReport.pdf
This highlights emergent research studies that indicate which technology does, and which does not, result in spikes in student learning.

Mouza, C. (2008). Learning with laptops: Implementation and outcomes in an urban, under-privileged school. *Journal of Research on Technology in Education, 40* (4), 447-472.
This article reports on a study that examined computer use and effects on student attitudes and learning in third- and fourth-grade classrooms. The study used a quasi-experimental design with treatment and control classes in which three classrooms used laptop computers and three did not.

North Central Regional Educational Laboratory. (2003). *enGauge 21st Century Skills: Literacy in the digital age*. Naperville, IL: Author.
This report identifies a set of skills that contribute to Digital Age readiness. The enGauge21st Century Skills were developed through a process of literature reviews, research on emerging characteristics of the Net Generation, review of current reports on workforce trends from business and industry, analysis of nationally recognized skill sets, input from educators, and reactions from constituent groups. Data were also gathered from educators at state-level conference sessions in 10 states, surveys, and focus groups in Chicago and Washington, D.C. Initial drafts of the enGauge21st Century Skills were reviewed by experts in the field prior to inclusion in the enGaugelist.

Partnership for 21st Century Skills (2008). *21st Century Skills, Education & Competitiveness: A resource and policy guide*. Tucson, AZ: Author.
This vision is the result of a multi-year, comprehensive effort to create a shared understanding and common vision for education. This effort included extensive research on 21st century skills, a National Forum on 21st Century Skills and outreach sessions with educators, employers, parents, community members, and students. (p. 12)

Pruitt-Mentle, D. (2009). *National C3 baseline study: State of cyberethics, safety and security awareness in US schools*. Paper presented at NECC Conference, Retrieved Nov, 11, 2009 from
http://www.iste.org/Content/NavigationMenu/Research/NECC_Research_Paper_Archives/NECC2009/PruittMentle_NECC09.pdf
Presents the results of the National C3 Baseline Survey conducted with 1569 educators and 94 technology coordinators using a web-based instrument.

Riel, M. & Fulton, K. (2001). The role of technology in supporting learning communities. *Phi Delta Kappan, 82* (7), 518-523.
The authors suggest ways technology can be used by students and teachers in the context of learning communities, drawing on examples and research.

Ringstaff, C. & Kelley, L. (2002). *The learning return on our educational technology investment*. San Francisco, CA: WestEd. Retrieved Nov. 11, 2009 from http://www.WestEd.org/online_pubs/learning_return.pdf
This article presents a summary of selected, methodologically-sound research on technology use.

Roschelle, J. M., Pea, R. D., Hoadley, C. M., Gordin, D. N., & Means, B. M. (2000). Changing how and what children learn in school with computer-based technology. *Children and Computer Technology, 10* (2), 76–101. Retrieved Nov. 10, 2009 from http://www.princeton.edu/futureofchildren/publications/docs/10_02_03.pdf
This article explores the characteristics of computer technology and its potential to enhance learning. The first section highlights a number of computer-based technology applications shown to be effective in improving how and what children learn. Seems to be based on review of research.

Ross, J. D., McGraw, T. M., & Burdette, K. (2001). *Toward an effective use of technology in education: A summary of research*. Charleston, WV: AEL.
Summarizes research on technology in education.

Sivin-Kachala, J. & Bialo, E. (2000). *2000 research report on the effectiveness of technology in schools* (7th edition). Washington, DC: Software and information Industry Association. Retrieved Nov. 11, 2009 from http://www.sunysuffolk.edu/Web/Central/InstTech/projects/iteffrpt.pdf
This report is based on 311 research reviews and reports on original research projects, from both published and unpublished sources. Of these 311 studies, 135 were published in professional journals and 56 were doctoral dissertations. The 311 studies were chosen from an original set of more than 3,500.

Smith, R., Clark, T., & Blomeyer, R. L. (2005). *A synthesis of new research on K-12 online learning*. Naperville, IL: Learning Point Associates. Retrieved Nov. 11, 2009 from http://www.ncrel.org/tech/synthesis/synthesis.pdf
Synthesizes 8 research studies commissioned by NCREL on online learning. NCREL.

Waxman, H. C., Lin, M., & Michko, G. M. (2003). *A meta-analysis of the effectiveness of teaching and learning with technology on student outcomes*. Naperville, IL: Learning Point Associates. Retrieved Nov. 9, 2009 from http://www.ncrel.org/tech/effects2/waxman.pdf
To estimate the effects of teaching and learning with technology on students' cognitive, affective, and behavioral outcomes of learning, 282 effect sizes were calculated using statistical data from 42 studies that contained a combined sample of approximately 7,000 students.

Wright, V.H. (2009). *Cyberbullying: Using virtual scenarios to educate and raise awareness*. Paper presented at the NEEC Conference. Retrieved Nov. 11, 2009 from

http://www.iste.org/Content/NavigationMenu/Research/NECC_Research_Paper_Archives/NECC2009/Wright_Vivian_NECC09.pdf

The author examined cyberbullying using surveys, focus groups, and use of simulations.