Quantitative Search on NC State Site reveals the following studies:

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(2003). Considerations for developing evaluations of online courses. Journal of Asynchronous Learning Networks, 7(1). http://www.aln.org/publications/jaln/v7n1/v7n1\_achtemeier.asp | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=41) | The article reviews a wealth of literature on best practices for teaching online courses. The researchers also evaluate the appropriateness of assessment tools used in thirteen institutions in Georgia to redesign an evaluation tool for on-line courses. | | **Citation** | | | Anderson, A, Cheyne, W., Foot, H., Howe, C., Low, J., Tolmie, A. (2000). Computer support for peer-based methodology tutorials. Journal of Computer-Assisted Learning, 16(1), 41-53. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=4) | Computer software was used to help students organize group discussions. Results show that the software helped students remain on task more often. | | **Citation** | | | Barak, M. & Dori, Y. J. (2004). Enhancing undergraduate students' chemistry understanding through project-based learning in an IT environment. Science Education, 89,(1), 117-139. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=105) | The investigators studied how the use of computers to construct molecular models affected students' understanding of chemistry. Results demonstrate that students who utilized the computer to complete throughout the course retained a better understanding of the principles and concepts of chemistry. | | **Citation** | | | Brewer, C. A. (2004). Near real-time assessment of student learning and understanding in biology courses. Bioscience, 54, 11, 1034-1039. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=104) | Investigates the impact that personal response systems and web-based assessment has on student learning in biology. Results indicate that these types of technology enhance students' comprehension of the material presented in biology. | | **Citation** | | | Brown, G., Meyers, C.B., and Roy, S. (2003). Formal course design and the student learning experience. Journal of Asynchronous Learning Networks, 7(3). | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=23) | Explores the faculty process of developing and assessing course design and how that process affects student learning. Results indicate that systematic design improves students' interactions with faculty. | | **Citation** | | | Chen, P. and McGrath, D. (2003). Moments of joy: Student engagement and conceptual learning in the design of hypermedia documents. Journal of Research on Technology in Education, 35(3), 402-22. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=82) | Investigates the effects of hypermedia on students' organization of information and other outcomes. | | **Citation** | | | Collier, Catherine and Morse, Frances K. Requiring Independent Learners to Collaborate: Redesign of an Online Course. Journal of Interactive Online Learning, 1(1), Summer 2002. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=44) | Quantitative study on effects of using data to transform on-line course and create accountability for collaborative assignments. | | **Citation** | | | Comunale, C.L., Sexton, T.R., Pedagano-Voss, D.J. (2002). The effectiveness of course web sites in higher education: An exploratory study. Journal of Educational Technology Systems, 30(2), 171-190. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=5) | The article assesses the usefulness of incorporating a web site into a course as to supplement face-to-face lecture. Students reported the web site positively affected their learning and appreciated the usefulness of a variety of features (course notes, grades, discussion board). | | **Citation** | | | Curtin, J. (2002). WebCT and online tutorials: New possibilities for student interaction. Australian Journal of Educational Technology, 18(1), 110-126. http://www.ascilite.org.au/ajet/ajet18/curtin.html | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=65) | Assesses the effectiveness of WebCT in encouraging students to learn | | **Citation** | | | Draper, S.W. & Brown, M.I. (2004). Increasing interactivity in lectures using an electronic voting system. Journal of Computer Assisted Learning, 20, 81-94. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=103) | Analyzes the integration of a personal response system in classes across a number of disciplines to identify implications for interactive engagement and just-in-time teaching. | | **Citation** | | | Foertsch, J., Moses, G., Strikwerda, J. & Litzkow, M. (2002). Reversing the lecture/homework paradigm using eTeach web-based streaming video software. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=111) | Evaluates the impact on students of using eTEACH on-line computer application to reverse the homework/lecture paradigm of a large lecture course in computer science for engineers. Students viewed lectures on own time via the Internet and class time was used for group problem-solving exercises. | | **Citation** | | | Greer, L. & Heaney, P. J. Real-time analysis of student comprehension: an assessment of electronic student response technology in an introductory earth science course,” Journal of Geoscience Education, 52 (4), 2004. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=122) | Authors conducted a multi-faceted assessment of the use of student response technology (SRT) in an earth science course that included quantitative and qualitative perception data from students enrolled in the course and faculty/administrator visitors to our classroom. | | **Citation** | | | Hickey, D. T., Kindfield, A. C. H., Horwitz, P. & Christie, M.A.T. 2003). Integrating curriculum, instruction, assessment, and evaluation in a technology supported genetics learning environment. American Education Research Journal, 40, (2), 495-538. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=108) | Research report on collaboration to develop curricular materials to allow GenScope software to be disseminated, developing a tool for assessing learning outcomes, and implementing both in undergraduate and high school science classrooms. | | **Citation** | | | Hudson, S. T. (2002). Laptop computer integration in a lower level mechanical engineering course. Proceedings of the 2002 American Society for Engineering Education Annual Conference and Exposition, Session 1620. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=77) | The paper reviews a laptop implementation program and how the program evolved through continuous assessment. | | **Citation** | | | Kofoed, J. (2004). Can students improve performance by clicking more? Engaging students through online delivery. Studies in Learning, Evaluation, Innovation, and Development, 1,(2), 9-18. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=48) | Student engagement measured by number of hits to on-line resources. Analyzed relationship of number of hits, use of online assessment and final exam performance | | **Citation** | | | Kolar, R. L, Sabatini, D. A., and Fink, L. D. (2002). Laptops in the classroom: Do they make a difference? Journal of Engineering Education, 397-401. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=79) | The College of Engineering at Oklahoma University initiated a laptop requirement of students and assessed how the laptops impacted student learning as measured by final course grades. | | **Citation** | | | Kulik, J.A. (2003). Effects of using instructional technology in colleges and universities: what controlled evaluation studies say. Center for Science, Technology, and Economic Development. SRI International: Arlington, VA. Available online: http://sri.com/policy/csted/reports/sandt/it/Kulik\_IT\_in\_colleges\_and\_universities.pdf | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=84) | Analyzes quantitative research on effectiveness of instructional technology on student learning in higher education. Main focus on controlled evaluation studies. | | **Citation** | | | Laird, T. F. N. and Kuh, G. D. (2004). Student experiences with information technology and their relationship with other aspects of student engagement. Paper presented at the Annual Meeting of the Association for Institutional Research, Boston, MA. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=91) | The paper uses data from the National Survey of Student Engagement to identify relationships between technology use and other types of engagement commonly found among students. | | **Citation** | | | Lea, L. & Roberts, G. (?). Assessing the impact of technology on teaching and learning: A campus-wide approach. Available at: http://mtsu.edu:11139/syldoc.html. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=120) | Reports on a 1998 study of MTSU faculty to assess the status and effectiveness of instructional technology and services. | | **Citation** | | | Lee, J. (1999). Effectiveness of computer-based instructional simulation: A meta-analysis. International Journal of Instructional Media, 26, 71-85 | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=86) | Provides a meta-analysis of 19 studies and concludes that blended methods of instruction produced better results than pure (solely face to face) methods of instruction. | | **Citation** | | | Lockyer, L., Patterson, J., and Harper, B. (2001). ICT in higher education: Evaluating outcomes for health education. Journal of Computer-Assisted Learning, 17(3), 275-283. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=7) | The study uses online and face-to-face tutorial activities to determine their effectiveness as learning environments. The researcher concludes web-based learning provides meaningful learning experiences and can facilitate students' achievement of positive learning outcomes. | | **Citation** | | | Novarro, P. and Shoemaker, J. (1999). The power of cyber-learning: An empirical test. Journal of Computing in Higher Education, 11(1), 29-54. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=8) | Compares cyber-learners with traditional learners to explore the effectiveness of cyber-learning. | | **Citation** | | | Paschal, C. B. (2002). Formative assessment in physiology teaching using a wireless classroom communication system. Adv. Physiol. Educ, 26, 299-308. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=121) | Compares the effectiveness of the traditional approach with an approach in which a wireless classroom communication system was used to provide instant feedback on in-class learning activities and reading assignment quizzes. | | **Citation** | | | Peat, M. & Franklin, S. (2003). Has student learning been improved by the use of online and offline formative assessment opportunities? Australian Journal of Educational Technology, 19,(1), 87-99. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=42) | Investigating what contributions formative assessment activities have towards final grades | | **Citation** | | | Sanders, D. W. and Morrison-Shetlar, A.I. (2001). Student attitudes toward web-enhanced instruction in an introductory biology course. Journal of Research on Computing in Education, 33(3), 251-262. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=30) | The study investigated student attitudes/perceptions regarding the use of technology in a biology course. | | **Citation** | | | Spurlin, J. and Mayberry, K. (2005). Evaluation of laptop pilot program. http://www.eos.ncsu.edu/soc/assessment/laptop2001\_2005.pdf | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=69) | The College of Engineering implemented and evaluated a student and faculty laptop program to determine the impact of such technology on students' overall academic experience. | | **Citation** | | | Stoney, S. and Oliver, R. (1999). Can higher order thinking and cognitive engagement be enhanced with multimedia? Interactive Multimedia Electronic Journal of Computer-Enhanced Learning, 1(2), http://www.imej.wfu.edu/articles/1999/2/07/index.asp | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=75) | Examines how multimedia leads to the achievement of higher order thinking. Describes a study in which a multimedia program was implemented under controlled conditions to enable an exploration of the higher order learning process. | | **Citation** | | | Wankat, P.C. (2002). Integrating the use of commercial simulators into lecture courses. Journal of Engineering Education. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=112) | Describes use of commercial simulator in problem based learning environment in lab of engineering course. | | **Citation** | | | Weaver, B. E. & Nilson, L. B. (2005). Laptops in class: What are they good for? What can you do with them? New Directions for Teaching and Learning, 101, 3-13. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=47) | Entire journal related to laptop program at Clemson; this chapter give overview of survey results | | **Citation** | | | Webb, E., Jones, A., Barker, P., & van Schaik, P. (2004). Using e-learning dialogues in higher education, 41,(1), 93-103. | | | **Synopsis** | | | [Detail](http://www.fis.ncsu.edu/upa/bibliography/moredetail.asp?ID=102) | This provides an empirical examination of the impact of asynchronous discussion forums to support on-line dialogue in two undergraduate classes. |     University Planning & Analysis N.C. State University Name: Joni Spurlin Email: [Joni\_Spurlin@ncsu.edu](mailto:joni_spurlin@ncsu.edu) | |