

George McLeland Nickles III

Curriculum Vitae

Assistant to the Dean for Technology and Curriculum

Western Carolina University

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Nickname: "Lee"

EMPLOYMENT

November, 2006 – present: Assistant to the Dean for Technology and Curriculum,
College of Education and Allied Professions, Western Carolina University

Duties include:

- Provide technology consultation services to faculty and centers as needed
- Facilitate consultation with campus IT Services
- Oversee the curriculum change process within the college
- Manage the college's technology resources, including checkout of equipment to faculty, staff, and students
- Serve as the fixed assets coordinator for the college, including setting policy
- Provide implementation, training, and technical support for TaskStream portfolio and assessment system in the college
- Develop solutions for student data management within the college
- Chair the college's Technology Committee
- Provide website maintenance and support for the college and its units
- Manage the college's social media presence (Facebook, Youtube, Twitter)
- Manage equipment and technology budget
- Provide other technology training for the college (workshops, videos)
- Supervise administrative assistant and student workers
- Teach courses related to technology

June, 2004 – November, 2006: Postdoctorate Research Associate, Information Technology and Science Center for Teaching and Learning, Texas A&M University
The ITS Center was an NSF funded center to promote the use of inquiry-based learning and information technology for teaching science in grades 7-12 and undergraduate education.

Duties included:

- Internal evaluation coordinator for the center
- Web-based portal administrator
- Research focusing on
 - examining the concept of centeredness and how to define and measure it
 - applying cognitive engineering methods to model and evaluate the center
 - adapting the ITS Center model to K-12 engineering outreach
 - designing electronic tools to support center activities

August, 1999 – May, 2000, January, 2001 – May, 2004: Graduate Research Assistantship, Industrial and Systems Engineering, Georgia Institute of Technology
Research and development on supporting an integrated curriculum via a course management system.

August, 2000 – December, 2000: Graduate Research Assistantship, Center for the Enhancement of Teaching and Learning, Georgia Institute of Technology
Research on current practices of end of term course surveys in higher education

May, 2000 – August, 2000: Graduate Teaching Assistantship, Industrial and Systems Engineering, Georgia Institute of Technology
Instructor for senior level Design of Human Integrated Systems (ISyE 4009)

August, 1997 – August, 1999: Graduate Research Assistantship, Industrial Engineering, Clemson University
Project manager and developer for the computer-based simulator component of a commercial aircraft inspector training program

August, 1997 – December, 1997, August, 1998 – June, 1999: Graduate Teaching Assistantship, Industrial Engineering, Clemson University
Teaching assistant for senior level Production Planning and Control (IE 486)

January, 1997 – August, 1997: Undergraduate Research, Industrial Engineering, Clemson University
Developer for computer-based commercial driver's license training program

June, 1995 – August, 1995, January, 1996 – April, 1996: Co-op student, AMP Circuits, Carolina Division
Performed capacity, manpower, and facility layout studies, developed a flowchart of the plant process

June, 1995 – December, 2000: Self-employed computer consultant and technician
Advised on purchase of equipment; performed setup, troubleshooting, and basic computer use training

EDUCATION

Ph.D. - Industrial and Systems Engineering, Georgia Institute of Technology, 2004

- Emphasis in *Human-Integrated Systems*
- Minor in *Cognitive Science*
- Dissertation Title: “Work Action Analysis to Structure Planning and Formative Evaluation of an Engineering Course Using a Course Management System”
Available: <http://etd.gatech.edu/theses/available/etd-08202004-081034/>
- Cognitive Science Certificate, awarded 2001
- Advisor: Dr. Amy Pritchett

M.S. - Industrial Engineering, Clemson University, 1999

- Emphasis in *Human Factors*
- Thesis Title: "Training Human Systematic Search Behavior Using a Job Aid"
- Advisor: Dr. Anand Gramopadhye

B.S. - Industrial Engineering, Clemson University, 1997

Minor in *Computer Science*

TEACHING EXPERIENCE

Western Carolina University

- Digital Literacy Methods, K-6, EDEL 446 (Redesigned based on ELMG 466), Fall 2010
- Digital Literacy Methods, ELMG 566 (for Jamaica outreach program), Summer 2010
- Computers in Education, ELMG 466, Fall 2009
- Computers in Education, EDPY 493 (for Jamaica outreach program), Summer 2008

Georgia Tech

Design of Human-Integrated Systems, ISyE 4009, Summer 2000

Clemson University

Production Planning and Control, IE 486, Fall 1997, Fall 1998, Spring, 1999 (Teaching Assistant)

RESEARCH PRODUCTS

Journal Articles

Nickles, G. & Pritchett, A. (accepted). Work Action Analysis: A Cognitive Engineering Method to Examine Educational Systems. *Journal of Cognitive Engineering and Decision Making*.

Nickles, G. (2007). Using work action analysis to identify web-portal requirements for a professional development program. *International Journal on E-Learning*. 6(4), 565-580. (Invited)

Nickles, G. (2005-2006). Identifying measures of student behavior from interaction with a course management system. *Journal of Educational Technology Systems*, 34(1), 111-126.

Nickles, G., Melloy, B., & Gramopadhye, A. (2003). A comparison of three levels of training designed to promote systematic search behavior in visual inspection, *International Journal of Industrial Ergonomics*, 32(5), 331-339.

Book Chapters

Nickles, G. & Herbert, B. (accepted). Connectivity in the IT-based Learning Ecology: A System Perspective, *An Information Technology-based Learning Ecology Model to Promote Science Education Leadership*: Teacher's College Press.

Nickles, G., Marshall, J., Gramopadhye, A., & Melloy, B. (2001). ASSIST: Training program for inspectors in the aircraft maintenance industry, *International Encyclopedia for Ergonomics and Human Factors* (Vol. 2, pp. 1178-1180): Taylor and Francis.

Nickles, G., & Gramopadhye, A. (2001). Using task analysis to design a computer-based inspection training program, *International Encyclopedia for Ergonomics and Human Factors* (Vol. 2, pp. 1378-1383): Taylor and Francis.

Nickles, G., Gramopadhye, A., & Melloy, B. (1998). Enhancing aviation safety through the development of aircraft inspection training modes and interventions, *Industrial and Occupational Ergonomics: Users' Encyclopedia*: International Journal of Industrial Engineering - Theory, Applications & Practice. Available on CD-ROM.

Conference Papers

Nickles, G. (2005). *Using work action analysis to design information technology support for an academic community*. Paper presented at E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education, Vancouver, BC, Canada.

Nickles, G. (2005). *Correlations of student grades and behavior while using a course management system under different contexts*. Paper presented at the American Society for Engineering Education Annual Meeting, Portland, OR.

Nickles, G., Stuessy, C., & Schielack, J. (2005). *Successful K-12 teacher and faculty participation in a STEM professional development program*. Paper presented at the American Society for Engineering Education Annual Meeting, Portland, OR.

Pritchett, A., Nickles, G., Quinn, A. (2003). *Contributions of cognitive engineering methods to engineering education*. Paper presented at the American Society for Engineering Education Annual Conference, Nashville, TN.

Nickles, G., & Pritchett, A. (2002). *Software for the automated evaluation of web-delivered instruction*. Paper presented at the American Society for Engineering Education Annual Conference, Montréal, Canada.

Pritchett, A., Quinn, A., Nickles, G., Ashok, M., Iken, M., & Lu, J. C. (2002). *Internet based curriculum innovation in information engineering and e-business: The integrated curriculum delivery system*. Paper presented at the American Society for Engineering Education Annual Conference, Montréal, Canada.

Emery, V. K., Jacko, J. A., Kongnakorn, T., Kuruchittham, V., Landry, S., Nickles, G. M., Sears, A., & Whittle, J. (2001). *Identifying critical interaction scenarios for innovative user modeling*. Paper presented at the Ninth International Conference on Human-Computer Interaction, New Orleans, LA, August 5-10, 481-485.

Gramopadhye, A., Melloy, B., Him, H., Koenig, S., Nickles, G., Bingham, J., Kauffman, J. Thacker, J., & Master, R. (2000). *The use of a high-fidelity simulator to improve aircraft inspection performance: The ASSIST program*. Paper presented at the IEA 2000/Human Factors and Ergonomics Society 44th Annual Meeting, San Diego, CA.

Him, H. D., Nickles, G., Leonard, M., Kimbler, D., & Gramopadhye, A. (1999). *Asynchronous learning applied to classroom instruction: lessons learned*. Paper presented at the Industrial Engineering Research Conference '99, Phoenix, AR.

Nickles, G., Sacrez, V., & Gramopadhye, A. (1998). *Can we train humans to be systematic inspectors?* Paper presented at the Human Factors and Ergonomics Society 42nd Annual Meeting, Santa Monica, CA.

Koenig, S., Nickles, G., Kimbler, D., Melloy, B., & Gramopadhye, A. (1998). *Visual inspection simulator (VisInS): A computer-based inspection simulation tool for off-line experimentation*. Paper presented at the Industrial Engineering Research Conference, Banff, Alberta, Canada.

Harris, J., Him, H. D., Koenig, S., Nickles, G., Kaufman, J., Thacker, J., Melloy, B., & Gramopadhye, A. (1998). *A unified approach to aircraft inspector training*. Paper presented at the Industrial Engineering Research Conference, Banff, Alberta, Canada.

Nickles, G., Him, H. D., Koenig, S., Gramopadhye, A., & Melloy, B. (1998). *A descriptive model of aircraft inspection activities*. Paper presented at the Industrial Engineering Research Conference, Banff, Alberta, Canada.

Presentations and Workshops

Nickles, G. (2011). *Hands-On Video Recorders*. Presentation for the AppState Summer FreeLearning Conference. Boone, NC. (Refereed)

Nickles, G. (2010). *WCU TaskStream Implementation*. Presentation for the North Carolina TaskStream User's Group. Online webinar.

Nickles, G. (2010). *EdTech Seminar*. Presentation for the WCU Teaching Fellows. Cullowhee, NC. (Invited)

Nickles, G. & Corbin, R. (2010). *Utilizing best practices: Lessons learned in developing an electronic assessment system*. Presentation at the 28th Annual North Carolina Teacher Education Forum. Raleigh, NC. (Refereed)

Houghton, R., Nickles G. & Strahan, D. (2010). *What does it mean to be digitally literate in the 21st century?* Teachers for Tomorrow Reaching To Teach Conference for Middle School Students. Cullowhee, NC.

Nickles G. (2006-2007). Various workshops on TaskStream for faculty, staff, students, and teachers.

Nickles, G. & Milam, J. (2006). *A Correlation Analysis of Social Network Measures with Social Perceptions and Planned Implementation Quality in a Professional Development Setting*, Presentation at the American Educational Research Association Annual Meeting. San Francisco, CA. (Refereed)

Nickles, G. (2006). Defining and Measuring Centeredness: Preliminary Work, *Centers for Learning and Teaching Principal Investigator Meeting*. Washington, DC: the National Science Foundation.

Schielack, J., & Nickles, G. (2005). *An Overview of the Information Technology in Science Center for Teaching and Learning with Project Evaluation in Mind*, Presentation at the Science Society and Technology Fall Seminar Series. College Station, TX: Texas A&M University. (Invited)

Nickles, G. (2005). *Introduction to accessibility for the Web*. Presentation to the ITS Center graduate students, April 5. College Station, TX: Texas A&M University.

Nickles, G. (2004). *Identifying measures of student behavior from interaction with a course management system*. Presentation for the Information Technology Working Group, September 14. College Station, TX: Texas A&M University. (Invited)

Quinn, A. & Nickles, G. (2002). *The integrated curriculum delivery system*. Presented at the Cognitive Science Student Conference. Atlanta, GA: Georgia Tech

Nickles, G., Pritchett, A., & Trotti, L. (2001). *Methods of measuring teaching effectiveness in the classroom and on the internet: a survey of engineering instructors*. Presented at the American Society for Engineering Education Annual Conference, Albuquerque, NM. (Refereed)

Nickles, G. (2001). *Supporting evaluation of educational web sites through perceptual displays*. Poster presented at the Cognitive Science Student Conference. Atlanta, GA: Georgia Tech/Emory University.

Gramopadhye, A., Copelan, S., Robinson, K., & Nickles, G. (1999). *Training for inspection: ASSIST, Workshop 3*. 13th Symposium on Human Factors in Aircraft Maintenance and Inspection. Daytona Beach, FL

Technical Reports

Gramopadhye, A., Melloy, B., Nickles, G., & Watson, J. (1999). *Use of computer based training for aircraft inspection: minimizing errors and standardizing the inspection process*. Human Factors in Aviation Maintenance and Inspection Research Phase Report. Washington, D. C.: Federal Aviation Administration.

Columns

Nickles, G. (2008). Member Forum: Engineering K-12 education. *Industrial Engineer*. 40(1), 24.

Software

ITWeb – A course management and delivery system designed to support an integrated curriculum. Developed using PHP, MySQL, and Perl. One of the two main graduate student developers and administrators (of four total) that worked on the project. Georgia Tech implementation: <http://itweb.isye.gatech.edu> (was in active use from Fall 2001 – Fall 2007)

Work In Progress

Nickles, G. & Milam, J. (in progress). An Analysis of Social Network Measures with Collaboration Perceptions and Learning Outcomes Quality in a Professional Development Program.

GRANTS

Applications

Western iPad Sensor Project (WiSP). Submitted: 2010. Proposal to the Institute for Education Sciences, U.S. Department of Education. Grant total: \$300,000.

SERVICE ACTIVITIES

Service on the following committees at Western Carolina University:

- CEAP Leadership Council – 2006-present
- CEAP Directors Council– 2006-2010 (convener for 2008-2009)
- CEAP Technology and Education Committee (chair) – 2007-present
- CEAP Disaster Management Committee (chair) – 2011-present
- CEAP Committee (ad hoc) on the Teacher Candidate Interview – Fall, 2008
- CEAP Curriculum Committee – 2007-present
- WCU Professional Education Council – 2007-present
- Professional Education Council subcommittee on Technology Integration into Teacher Education Programs – 2011-present
- Center for Math and Science Education Advisory Board – 2007-2009
- J. M. Robinson Award Committee – 2008, 2009
- WCU Academic Technology Committee – 2007-2009
- WCU Intranet Task Force – 2006-2007, 2011-present

State-level service:

- Facilitator for the UNC-General Administration/Education Deans workgroup on Assessment Technical Issues: Spring 2011.
- Chair of the NC Department of Public Instruction sub-workgroup on Technology for Implementing Teacher Education Revisioning: Summer 2011-present.

North Carolina State Employees Combined Campaign contribution solicitor: 2007-2011

Designed and implemented various technology solutions for business processes at WCU, including:

- Web-based reporting form to collect records of all services provided by any WCU employee to North Carolina public schools; database generates necessary reports for the Institutes of Higher Education report that WCU must submit annually (HTML form, perl script, CSV file to Access database, converted to Google Docs in 2011); 2009
- Web-based inquiry/pre-evaluation form for people interested in the alternative licensure programs at WCU (HTML form, perl script, CSV file to Access database); 2008
- Database for center directors that collects their events and tasks and generates the necessary monthly reports (Access database); 2008
- Database to inventory and track all fixed assets within the college (Access database); 2007, redesign in 2011

TaskStream coordinator for the College of Education and Allied Professions at WCU – includes supporting faculty, staff, host/cooperating teachers, & students, providing training sessions, creating and maintaining portfolio templates, creating and maintaining support website, creating and sending instructions to faculty, staff, host/cooperating teachers, and students; 2006-present

Presenter on “What is Industrial Engineering?” at the North Carolina Math and Science Education Network’s Pre-College program at WCU; June, 2007; November, 2008

Served as test proctor at Smoky Mountain High School, Sylva, NC in June 2007, 2008, 2009; Cullowhee Valley School, Sylva, NC in June 2010

Internal evaluation coordinator for 2-year teacher professional development program in the Information Technology in Science Center for Teaching and Learning, 2005-2006

Conference paper reviewer:

- American Society for Engineering Education – Southeastern Section Meeting, 2009
- American Society for Engineering Education Annual Meeting, 2002, 2003, 2005, 2006
- Human Factors and Ergonomics Society Annual Meeting, 2006

Co-Student Coordinator for the “Community of Scholars,” a series of meetings between the research groups of Drs. Julie Jacko, Amy Pritchett, and Francois Sainfort at Georgia Tech, 2002-2003

Student Volunteer for the Human Factors and Ergonomics Society Annual Meeting; Served as co-chair for poster session, 2002

AWARDS

Presidential Fellowship, Georgia Institute of Technology, 1999-2003

Faculty Graduate Assistant of the Year, Industrial Engineering, Clemson University, 1999 (Award selection is made by the department faculty)

PROFESSIONAL AFFILIATIONS

The Institute of Industrial Engineers (1999-2009)

The American Society for Engineering Education (2000-2009)

The Human Factors and Ergonomics Society (2001-2009)