

NANCY C. LAVIGNE

Assistant Professor
School of Education
University of Delaware
206C Willard Hall
Newark, DE 19716

Office Phone: 302.831.3109 Fax: 302.831.4110
Email: nlavigne@udel.edu Homepage: <http://udel.edu/soe/lavigne>

EDUCATION

- Ph.D. Educational Psychology (2000), McGill University, Montréal, PQ, Canada
Major in Applied Cognitive Science with a Minor in Instructional Psychology
Thesis Title: *Project-based Investigations for Producing and Critiquing Statistics*
- M. A. Educational Psychology (1994), McGill University, Montréal, PQ, Canada
Major in Applied Cognitive Science
Thesis Title: *Authentic Assessment: A Library of Exemplars for Enhancing Statistics Performance*
- B. A. Psychology (1991), McGill University, Montréal, PQ, Canada

PROFESSIONAL WORK EXPERIENCE

- 2002-present Assistant Professor, Cognition, Development, and Instruction (CDI)
School of Education
University of Delaware, Newark, DE
- 1999-2002 Postdoctoral Fellow
Learning, Research, and Development Center
University of Pittsburgh, Pittsburgh, PA
- 1992-1999 Graduate Research Assistant
Dept. of Educational and Counselling Psychology
McGill University
- 1996-1997 Teaching Assistant (Research Methods and Introductory Statistics)
Dept. of Educational and Counselling Psychology
McGill University

GRANTS

- 2005 Instructional Grant on Service Learning, University of Delaware (\$12, 227)
2004 General University Grant (GUR), University of Delaware (\$6, 000)

FELLOWSHIPS AND AWARDS

- 1998 McGill University Social Sciences Dissertation Grant
McGill University Alma Mater Student Travel Award
- 1997-1998 Social Sciences and Humanities Research Council of Canada Doctoral Fellowship (SSHRC) (National competition)

- 1997 Telelearning/Networks of Centres of Excellence (NCE) Award for Best Computer Demonstration at the conference- 2nd Prize (see Publications for complete reference)
- 1994-1997 Fonds pour la Formation de Chercheurs et l'Aide à la Recherche Doctoral Fellowship (FCAR) (Provincial competition)
- 1987 McDonald's Bursary of Excellence in academic studies and employee performance

PEER-REVIEWED JOURNAL ARTICLES

- Lavigne, N. C., Salkind, S. J., & Yan, J. (2007). College students' mental representations of inferential statistics. *Journal of Mathematical Behavior*, doi: 10.1016/j.jmathb.2007.10.003
- Lavigne, N. C., & Lajoie, S. P. (2007). Statistical reasoning of middle school children engaged in survey inquiry. *Contemporary Educational Psychology*, 32, 63-666.
- Lavigne, N. C. (2005). Mutually informative measures of knowledge: Concept maps plus problem sorts in statistics. *Educational Assessment*, 10 (1), 33-71.
- Lajoie, S. P., Lavigne, N. C., Guerrero, C., & Munsie, S. D. (2001). Constructing knowledge in the context of Bioworld. *Instructional Science*, 29, 155-186.
- Lavigne, N. C., & Lajoie, S. P. (1996). Communicating performance standards to students through technology. *Mathematics Teacher*, 89 (1), 66-69.
- Lajoie, S. P., Jacobs, V. J., & Lavigne, N. C. (1995). Empowering children in the use of statistics. *Journal of Mathematical Behavior*, 14 (4), 401-425.

BOOK CHAPTERS

- Ginsburg-Block, M., Rohrbeck, C., Lavigne, N. C., & Fantuzzo J. W. (in press). Peer assisted learning: An academic strategy for enhancing motivation among diverse students. To be published in C. Hudley and A. E. Gottfried (Eds.), *Academic motivation and the culture of schooling in childhood and adolescence*. Oxford University Press.
- Ginsburg-Block, M., Rohrbeck, C., Fantuzzo J. W., & Lavigne, N. C. (2006). Peer assisted learning strategies. In G. Bear & K. Minke (Eds.), *Children's needs III: Understanding and addressing the developmental needs of children* (pp. 525-536). Bethesda, MD: National Association of School Psychologists.
- Lajoie, S. P., Lavigne, N. C., Munsie, S. D., & Wilkie, T. V. (1998). Monitoring student progress in statistics. In S. P. Lajoie (Ed.), *Reflections on statistics: Agendas for learning, teaching, and assessment in K-12* (pp. 199-231). Mahwah, NJ: Erlbaum.

ENCYCLOPEDIA ARTICLES

- Lajoie, S. P., & Lavigne, N. C. (2003). Mathematics learning: Learning tools. In J. W. Guthrie (Ed.), *Encyclopedia of Education, Second Edition, Volume 5* (pp. 1550-1552). New York: Macmillan Reference USA.

CONFERENCE PROCEEDINGS

- Yan, J., & Lavigne, N. C. (2006). College students' representations of calculus problems. In R. Sun (Ed.), *Proceedings of the 28th Annual Conference of the Cognitive Science Society* (p. 2630). Mahwah, NJ: Erlbaum.

Lavigne, N. C., & Lajoie, S. P. (2002). Factors affecting student decision-making on statistics projects. In B. Phillips (Ed.), *Developing a Statistically Literate Society*. CD of the Proceedings of the Sixth International Conference on Teaching Statistics (ICOTS-6). Voorburg: The Netherlands: International Association for Statistical Education.

Lavigne, N. C. (1999). Critiquing Statistics for reasoning about statistical investigations. In C. Desmoulin (Ed.), *Young Researcher Track Proceedings. Open Learning Environments: New Computational Technologies to Support Learning* (pp. 31-32). AI-ED Society.

Lavigne, N. C., & Lajoie, S. P. (1995). Learning statistics through exemplars. In J. D. Moore & J. F. Lehman (Eds.), *Proceedings of the Seventeenth Annual Conference of the Cognitive Science Society* (pp. 643-647). Mahwah, NJ: Erlbaum.

TECHNICAL REPORTS

Lavigne, N. C., & Glaser, R. (2003). *Assessing expert knowledge representations of introductory statistics* (Tech. Rep. No. 600). Los Angeles, California: UCLA, National Center for Research on Evaluation, Standards, and Student Testing (CRESST).

Lavigne, N. C., & Glaser, R. (2001). *Assessing student representations of inferential statistics problems* (Tech. Rep. No. 553). Los Angeles, California: UCLA, National Center for Research on Evaluation, Standards, and Student Testing (CRESST).

UNPUBLISHED MANUSCRIPTS

Lavigne, N. C. (2002). *A preliminary examination of experienced teacher and researcher descriptions of teaching and learning events*. Learning Research and Development Center (LRDC) report, Pittsburgh, PA.

Lavigne, N. C., & Glaser, R. (2001). *Students' conceptual knowledge for deciding which statistical analysis is appropriate*. Technical report for the National Center for Research on Evaluation, Standards, and Student Testing (CRESST).

Lavigne, N. C. (2000). *Project-based investigations for producing and critiquing statistics*. Unpublished Ph.D. thesis, McGill University, Montréal, Québec, Canada.

PAPERS IN PREPARATION

Lavigne, N. C., Mattern, R., & Pemberton, E. (in prep.). *Pre-service teachers' understanding of child and adolescent development*.

Lavigne, N. C., Yan, J., Song, Y., & Crissinger, B. (in prep.). *The effect of concept mapping on cuing relevant statistical knowledge*.

PAPER AND POSTER PRESENTATIONS

Song, Y., & Lavigne, N. C. (2006, April). *The effect of feedback from reviewers with differing experience in writing persuasively on eighth grade students' revision and persuasive writing*. Poster presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

- Lavigne, N. C., & Salkind, S. (2005, April). *What can we learn about representation through problem sorts and concept maps?* Poster to be presented to the annual meeting of the American Educational Research Association, Montréal, Québec, Canada.
- Lavigne, N. C., & Lajoie, S. P. (2003, April). *Benefits of multiple instructional phases in a project-based environment for learning descriptive statistics.* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Lavigne, N. C., & Glaser, R. (2001, April). *Variability in student representations of statistics problems.* Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.
- Lavigne, N. C., & Lajoie, S. P. (2000, April). *Design issues for scaffolded learning environments (SLEs).* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Lajoie, S. P., & Lavigne, N. C. (1999, April). *The use of models for enhancing statistical understanding.* Paper presented at the annual meeting of the Educational Research Association, Montreal, PQ, Canada.
- Lajoie, S. P., Lavigne, N. C., Guerrero, C., & Munsie, S. D. (1998, April). *Constructing knowledge in the context of BioWorld: What situations produce better opportunities for learning?* Paper presented at the annual meeting of the Educational Research Association, San Diego, CA.
- Lavigne, N. C., & Lajoie, S. P. (1998, April). *Critiquing Statistics: Technology for fostering reasoning about statistical investigation.* Paper presented at the annual meeting of the Educational Research Association, San Diego, CA.
- Lajoie, S. P., Guerrero, C., Lavigne, N. C., & Meilleur, L. (1997, November). *Distributed Cognition using BioWorld.* Computer demonstration presented at the second annual conference of the Telelearning Network of Centres of Excellence, Toronto, On.
- Lajoie, S. P., Munsie, S. D., & Lavigne, N. C. (1996, April). *The relationship between evidence and argumentation in BioWorld.* Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Lavigne, N. C., & Lajoie, S. P. (1995, July). *Learning statistics through exemplars.* Poster presented at the Seventeenth Annual Conference of the Cognitive Science Society, Pittsburgh, PA.
- Lajoie, S. P., & Lavigne, N. C. (1994, April). *How does group composition and gender influence the learning of statistics?* Poster presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Lavigne, N. C., Lajoie, S. P., Munsie, S. D., & Wilkie, T. V. (1994, April). *Authentic assessment of statistical reasoning in cooperative learning groups.* Poster presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Lajoie, S. P., Lavigne, N. C., & Lawless, J. (1993, April). *The use of hypercard for facilitating assessment: A library of exemplars for reifying statistical concepts.* Poster presented at the annual meeting of the American Educational Research Association, Atlanta, GA.
- Lajoie, S. P., Lawless, J., Lavigne, N. C., & Munsie, S. D. (1993, April). *New ways to measure problem solving, reasoning, connectedness, and communication.* Paper presented at the annual meeting of the American Educational Research Association, Atlanta, GA.

TEACHING EXPERIENCE

University of Delaware

- EDUC205: Human Development: Grades K-8
- EDUC203: Human Development II: Grades 5-8
- EDUC202: Child Development I: Grades K-4
- EDUC366: Independent Study (Carrie Connor)
- EDUC413: Adolescent Development and Educational Psychology
- EDUC466: Independent Study for CHEP Scholar (Danielle Ward)
- EDUC821: Cognition and Instruction
- EDUC867: Proseminar on Teaching in Higher Education

McGill University

- Winter 1998 Guest Lecturer, Computers in Education (graduate level) and Technology for Teachers (undergraduate level)
- Fall 1997 Teaching Assistant and Lab Instructor, Intermediate Statistics (graduate level)
- Fall 1996 Teaching Assistant, Research Methods (graduate level)
- Fall 1995 Teaching Assistant, Educational Foundations (graduate level)

Advising

- 2003-present Ph.D. Research Advisor, Song Yi (Co-advising with Dr. Ralph Ferretti since Fall 2005)
- 2003-present Ph.D. Research Advisor, Yan Jie
- 2004-2006 Ph.D. Academic Advisor, Wilkey Wong

Ph.D. Dissertation Committees

- 2007-present Jeff Klein, Ph.D., University of Delaware (CDI)
- 2005-2007 Rebecca Mattern, Ph.D. candidate, University of Delaware (CDI)
- 2004-2006 Julie Kittleson, Ph.D., University of Delaware (Science Education)

PROFESSIONAL SERVICE

On Campus

- 2007-2008 School of Education Graduate Studies Committee, University of Delaware
- 2005-2006 Executive Committee, University of Delaware
- 2004 Cognition, Development, & Instruction, Admissions, University of Delaware
- 2003-present Master of Instruction Program, Admissions Coordinator, University of Delaware
- 2003-2005 School of Education Graduate Studies Committee, University of Delaware
- 2003-2004 School of Education Doctoral Core Committee, University of Delaware

Off Campus

- 2007-present Reviewer for the *Mathematical Thinking and Learning* journal.
- 2006-present Reviewer for *Cognition and Instruction*
- 2003 Reviewer for a special issue of *Mathematics Education Research Journal* on stochastic education.
- 2002 Developmental Reviewer for a special issue of *Educational Researcher* on expertise
- 2000-present Proposal Reviewer for the American Educational Research Association meetings
- 1998-present Reviewer for the *Journal of Educational Computing Research (JECR)*

1998-2000 Proposal Reviewer for the Cognitive Science Society
1999 Proposal Reviewer for the 19th Annual Artificial Intelligence in Education Conference
1996-1997 Doctoral Student Member of the Library Advisory Committee, Faculty of Education,
McGill University
1993-1995 Doctoral Student Member of Student Affairs Committee, Dept. of Educational &
Counselling Psychology, McGill University
1994 Proposal Reviewer for the American Educational Research Association 1995 meeting,
Division C, Section 6 (Technology)

PROFESSIONAL AFFILIATIONS

- American Educational Research Association, National Council of Teachers of Mathematics.