

## CURRICULUM VITAE OF RHONDA KARLA KOWALCHUK

### I. PROFESSIONAL AFFILIATION AND CONTACT INFORMATION

Department of Counseling, Quantitative Methods, and Special Education  
Quantitative Methods (formerly Measurement and Statistics)  
Southern Illinois University Carbondale  
Mailcode 4618  
Carbondale, IL 62901-4618

Office: 222K Wham  
Phone: (618) 453-6921 Fax: (618) 453-7110  
E-mail: [rkowal@siu.edu](mailto:rkowal@siu.edu)

### II. EDUCATION

B.A.	University of Manitoba, Winnipeg, Canada	05/1990	Psychology Honours
M.A.	University of Manitoba, Winnipeg, Canada	10/1993	Psychology (Quantitative)
Ph.D.	University of Manitoba, Winnipeg, Canada	05/2000	Psychology (Quantitative)

### III. PROFESSIONAL EXPERIENCE

Position: Associate Professor – Cross-appointed in Department of Psychology  
Dates: 10/2013 - present  
Institution: Southern Illinois University Carbondale

Position: Associate Professor - Department of Counselling, Quantitative Methods and Special Education (formerly Educational Psychology and Special Education)  
Dates: 08/2010 - present  
Institution: Southern Illinois University Carbondale

Position: Director, Applied Research Consultants - Department of Psychology  
Dates: 06/2014 – 05/2016  
Institution: Southern Illinois University Carbondale

Position: Assistant Professor - Department of Educational Psychology and Special Education  
Dates: 08/2004 – 07/2010  
Institution: Southern Illinois University Carbondale

Position: Assistant Professor - Department of Educational Psychology  
Dates: 05/2000 - 08/2004  
Institution: University of Wisconsin Milwaukee

Position: Instructor - Department of Educational Psychology  
Dates: 08/1999 - 05/2000  
Institution: University of Wisconsin Milwaukee

Position: Lecturer - Department of Statistics  
Course: Basic Statistical Analysis I  
Dates: 01/1999 - 05/1999  
Institution: University of Manitoba

Position: Lecturer - Department of Psychology  
Course: Psychological Measurement and Assessment  
Dates: 01/1998 - 05/1998 & 01/1999 - 05/1999  
Institution: University of Manitoba

Position: Research Assistant - Department of Psychology (Supervisor: Dr. H.J. Keselman)  
Dates: 06/1995 - 06/1999  
Institution: University of Manitoba

Position: Teaching Assistant - Department of Psychology  
Courses: Research Methods, Advanced Statistics, Honours Research Seminar  
Dates: 09/1992 - 05/1998  
Institution: University of Manitoba

Position: Research Assistant - Faculty of Education (Supervisor: Dr. D. Harvey)  
Dates: 03/1992 - 03/1993  
Institution: University of Manitoba

Position: Research Assistant - Department of Psychology (Supervisor: Dr. C-L Huynh)  
Dates: 05/1991 - 05/1995  
Institution: University of Manitoba

#### **IV. RESEARCH**

##### **A. Interests and Specialties:**

Applied Statistics (ANOVA, Multiple Comparison Procedures, Repeated Measures Designs), Monte Carlo Methods, Experimental Design, Survey Methods, and Program Evaluation

##### **B. Current Projects:**

Morrison, M. M., Komaraju, M., & Kowalchuk, R. K. (in progress). Intercultural and intracultural relationships: Examining differences in cohesion, consensus, and commitment.

##### **C. Grants Applied for:**

Grants Under Review

Grants Not Funded

Organization: National Science Foundation  
Amount: Preliminary Proposal: NSF INCLUDES  
Title: First-Gen to Next-Gen (F2N): Increasing Diversity in STEM Fields through Research Experience and a Total Eclipse  
Principal Investigator: Harvey Henson, College of Education, SIUC  
Co-Principal Investigators: Carraminana, R., Chitambar, M., Kowalchuk, R.K., & DeRuntz, B.  
Date: Submitted April 15, 2016

Organization: National Science Foundation  
Amount: \$2,525,432  
Title: STEM Excellence: Community of Engaged Leaders (STEM EXCEL)  
Principal Investigator: Bruce DeRuntz , College of Engineering, SIUC  
Co-Principal Investigators: Henson, H., & Kowalchuk, R.K.,  
Date: Submitted January 13, 2016

Organization: National Science Foundation  
Amount: \$2,922,617  
Title: STEM Excellence: Community of Engaged Leaders (STEM EXCEL)  
Principal Investigator: Bruce DeRuntz , College of Engineering, SIUC  
Co-Principal Investigators: Henson, H., Kowalchuk, R.K., Sisson, J., & Small, B.,  
Date: Submitted January 13, 2015

Organization: National Science Foundation  
Amount: \$250,000  
Title: SIUC Leadership Development Program for STEM Majors  
Principal Investigator: Bruce DeRuntz , College of Engineering, SIUC  
Co-Principal Investigators: Henson, H., Kowalchuk, R.K., Small, B., & Woodward, B.  
Date: Submitted October, 24, 2014

Organization: First in the World (FITW) Program  
Amount: \$1,018,686  
Title: An Integrated Structured Supported and Accelerated Pathway (ISAP) in Psychology  
Director: Reza Habib, Department of Psychology  
Co-Directors: Manfredi, P. & Berry, K.  
Project Evaluator: Kowalchuk, R. K.  
Date: Submitted June, 30, 2014

Organization: National Science Foundation  
Amount: \$2,300,000  
Title: PRISM Education Pipeline for Achievement of Research Excellence (PREPARE)  
Principal Investigator: T. Mark Beasley, University of Alabama at Birmingham  
Co-Principal Investigators: Fernandez, J., Kowalchuk, R.K., McKayle, C., & Tiwari, H.  
Date: Submitted March 8, 2010

Organization: National Institutes on Health  
Amount: \$2,300,000  
Title: Proactive Recruitment of Minorities for Experiences in Research (PREMIER)  
Principal Investigator: T. Mark Beasley, University of Alabama at Birmingham  
Co-Principal Investigators: Fernandez, J., Kowalchuk, R.K., & Tiwari, H.  
Date: Submitted September 10, 2009

Organization: United States Department of Agriculture (USDA)  
Amount: \$499,996  
Title: Provisioning of Ecosystem Services from Agricultural Watersheds Under Climate Change and Policy Scenarios  
Principal Investigator: Sylvia Secchi, Department of Agribusiness Economics, SIUC  
Co-Principal Investigators: Kraft, S., Lant, C. Nicklow, J. Schoof, J. & Misgna, G. & Kowalchuk, R.  
Date: Submitted June 2, 2009

Organization: National Science Foundation  
Amount: \$2,302,393  
Title: PRISM Education Pipeline for Achievement of Research Excellence (PREPARE)  
Principal Investigator: T. Mark Beasley, University of Alabama at Birmingham  
Co-Principal Investigators: Fernandez, J., Kowalchuk, R.K., McKayle, C., & Tiwari, H.  
Date: Submitted February 16, 2009

Organization: National Science Foundation  
Amount: \$1,499,255  
Title: Climate Change, Hydrology, and Landscapes of America's Heartland: A Multi-scale Natural-Human System  
Principal Investigator: Christopher L. Lant, Department of Geography, SIUC  
Co-Principal Investigators: Kraft, S.E., Nicklow, J.W., Schoof, J.T., & Secchi, S.  
Evaluator: Kowalchuk, R.K.  
Date: Submitted November 14, 2008

Organization: National Science Foundation  
Amount: \$579,866  
Title: SIUC Leadership Development Institute: Providing Opportunities for Economically Disadvantaged Transfer Students in Engineering and Technology  
Principal Investigator: Bruce DeRuntz, College of Engineering, SIUC  
Co-Principal Investigators: Nicklow, J. & Kowalchuk, R.K.  
Date: Submitted August 12, 2008

Organization: National Science Foundation  
Amount: \$599,833  
Title: Creating Opportunities for Transfer Students for Careers in Engineering and Technology  
Principal Investigator: Bruce DeRuntz, College of Engineering, SIUC  
Co-Principal Investigators: Nicklow, J., Kowalchuk, R.K., & Caffey, R.  
Date: Submitted November 13, 2007

Organization: U.S. Department of Education, National Center for Education Research  
Amount: \$288,728 (direct & indirect costs)  
Title: A Multidimensional Study of Technology Student Performance Factors  
Principal Investigator: Carl J. Spezia, College of Engineering, SIUC  
Co-Principal Investigators: Dunston, J.K. & Kowalchuk, R.K.  
Senior Personnel: Waugh, K.  
Date: Submitted November 1, 2007

Organization: Law School Admission Council  
Amount: \$80,588 (direct costs)  
Title: Evaluating Success in Law School: Do Structured Study Groups Make a Difference?  
Co-Principal Investigators: Suzanne J. Schmitz, School of Law, SIUC & Rhonda Kowalchuk  
Consultant: Evensen, D.  
Date: Submitted February 1, 2007

Organization: National Institutes on Health  
National Institute on Alcohol Abuse and Alcoholism  
Amount: \$275,000 (direct costs)  
Title: Sequential Therapeutic Causal Mechanisms of Change in Alcoholism Recovery  
Principal Investigator: Ron A. Cisler, University of Wisconsin Milwaukee  
Co-Investigators: Brondino M.J., Kowalchuk, R.K., & Saunders, S.M.  
Consultant: Zweben, A.  
Date: Submitted January 19, 2007

Organization: National Science Foundation  
Amount: \$3,200,000  
Title: IGERT: Multidisciplinary, Team-Based Training in Watershed Science and Policy  
Principal Investigator: Nicholas Pinter, Department of Geology, SIUC  
Co-Principal Investigators: Lant, C., Chevalier, L., Kurkalova, L., & Whiles, M.  
Evaluator: Kowalchuk, R.K.  
Date: Submitted September 29, 2006 (Revised & Resubmitted April 5, 2007)

#### **D. Grants Received:**

Organization: National Science Foundation (NSF-BCS 1009925)  
Amount: \$1,430,000  
Title: Climate Change, Hydrology, and Landscapes of America's Heartland: A Multi-scale Natural-Human System  
Principal Investigator: Christopher L. Lant, Department of Geography, SIUC  
Co-Principal Investigators: Nicklow, J.W., Schoof, J.T., & Secchi, S.  
Evaluator: Kowalchuk, R.K.  
Date: 08/01/2010 to 07/31/2015

Organization: National Science Foundation (NSF-DUE 0966274)  
Amount: \$597,591  
Title: Leadership Development Program in Engineering and Technology  
Principal Investigator: Bruce DeRuntz, College of Engineering, SIUC

Co-Principal Investigators: Nicklow, J. & Kowalchuk, R.K.  
Date: 06/01/2010 to 05/31/2015

Organization: National Science Foundation (NSF-DGE 0903510)  
Amount: \$3,198,836 (\$599,999 in planning year)  
Title: IGERT: Multidisciplinary, Team-Based Training in Watershed Science and Policy  
Principal Investigator: Nicholas Pinter, Department of Geology, SIUC  
Co-Principal Investigators: Lant, C., Chevalier, L., Whiles, M., & Davenport, M.  
Evaluator: Kowalchuk, R.K.  
Date: 9/01/2009 to 08/31/2015

Organization: National Science Foundation (NSF-DUE 0622483)  
Amount: \$1,173,676 (\$311,416 in year 5 contingent on availability of funds)  
Title: Engineering and Technology Talent Expansion Program at Southern Illinois University  
Carbondale  
Principal Investigator: John W. Nicklow, College of Engineering, SIUC  
Co-Principal Investigators: Gupta, L., Mathias, J., Pericak-Spector, K., & Tezcan, J.  
Evaluators: Kowalchuk, R.K., & Lewis, E. (after implementation of the project in summer  
2007, the evaluation was conducted by Dr. Kowalchuk)  
Date: 9/15/2006 to 8/31/2011

Organization: National Institutes on Health  
National Institute on Alcohol Abuse and Alcoholism  
Amount: \$150,000 (direct costs) R21-AA13651-01A1  
Title: Clinical Significance of Alcohol Treatment Research  
Principal Investigator: Ron A. Cisler, University of Wisconsin Milwaukee  
Co-Investigators: Kowalchuk, R.K., Saunders, S.M., Trinh, H.Q., & Zweben, A.  
Consultants: Kivlahan, D.R. & Wirtz, W.  
Date: 7/1/2003 to 6/30/2005 (extension to 6/30/2006)

#### **E. Honors and Awards:**

Certificate of Academic Excellence, Canadian Psychological Association (2001)  
An award in recognition of an outstanding Ph.D. thesis entitled "Repeated Measures Multiple  
Comparison Procedures with a Mixed Model Analysis"

University of Wisconsin Milwaukee Graduate School Research Committee Award (2001-2002)  
An award in the amount of \$5,349 for a project entitled "The Analysis of Repeated  
Measurements with Mixed-Model Adjusted F-Tests"

Best Paper Award for the First-year Programs Division, American Society for Engineering  
Education (2009) for the paper entitled "An Evaluation of a New Engineering Residential  
College Initiative"

Distinguished Research Poster Award, Association of Leadership Educators (2015) for the poster entitled "Leadership development program: Increasing achievement in the engineering leaders of tomorrow"

#### **F. Papers and Presentations at Professional Meetings:**

*Note:* \*Paper presented by a Ph.D. student working under my supervision.  
\*\*Paper presented by a Masters student working under my supervision  
\*\*\*Paper presented by an Undergraduate student working under my supervision

Kowalchuk, R. K., Lix, L. M., & Keselman, H. J. (1996, April). *Robust and powerful multiple comparison procedures for the one-way layout*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

Kowalchuk, R. K., Lix, L. M., & Keselman, H. J. (1996, June). *The analysis of repeated measures designs*. Paper presented at the annual meeting of the Psychometric Society, Banff, AB, Canada.

Kowalchuk, R. K., Lix, L. M., & Keselman, H. J. (1997, March). *Robust nonorthogonal analyses based on trimmed means and Winsorized variances*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Kowalchuk, R. K., Keselman, H. J., & Wilcox, R. R. (1998, April). *Can tests for treatment group equality be improved?: The bootstrap and trimmed means conjecture*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Fradette, K., Murray, L., Wright, L., Clara, I., Walker, J., Torgrud, L., Cristall, N., Kowalchuk, R. K., Frankel, S., & Enns, M. (2000, March). *Emotional well-being and social support compared: Students, mood disorder clients, and general population members*. Poster presented at the Red River Valley Psychology Conference, Fargo, ND.

Kowalchuk, R. K. & Keselman, H. J. (2000, April). *Mixed model pairwise multiple comparison procedures of repeated measures means*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Kowalchuk R. K. & Keselman H. J. (2001, April). *The analysis of repeated measurements with mixed-model Kenward-Roger's adjusted F-tests*. Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.

Carlstrom, A. H., Solberg, S. V., & Kowalchuk, R. K. (2001, August). *Longitudinal evaluation: School success intervention with low-income diverse youth*. Paper presented at the American Psychological Association Annual Convention, San Francisco, CA.

- Murray, L. T., Frankel, S. I., Enns, M., Clara, I., Kowalchuk, R. K., & Wright, L. (2001, September). *Social support components relationship to well-being and psychiatric symptomatology: What matters most?* Poster presented at Health Psychology 2001: Challenging Behaviour Health and Healthcare. St. Andrews, Scotland.
- Kowalchuk, R. K., Keselman, H. J., Wilcox, R. R., & Algina, J. (2004, April). *Multiple comparison procedures, trimmed means and transformed statistics*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- McKenzie, L. B. & Kowalchuk, R. K. (2004, November). *Psychological well-being within a low-income mid-western sample*. Paper presented at the International Conference on Social Science Research, New Orleans, LA.
- Steele, J., Asner-Self, K. K., & Kowalchuk, R. K. (2005, October). *Multicultural competencies and pedagogical style*. Paper presented at the Association of Counselor Education and Supervision (ACES) national convention, Pittsburgh, PA.
- Dillen, J., Ziomek, M., Garcia, Y., Rehfeldt, R. A., & Kowalchuk, R. K. (2005, May). *Assessing relational learning deficits in perspective-taking skills in children with high-functioning autism*. Paper presented at the meeting of the Association for Behavior Analysis, Chicago, IL.
- \*Hodis, F. A., Kowalchuk, R. K., & Ricks, R. A. (2006, April). *Inference by eye: Overlapping confidence intervals to evaluate statistical significance*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Nicklow, J., Gupta, L., Mathias, J., Tezcan, J., Pericak-Spector, K., Caffey, R., Chrisman, B., Pearson, C., Kowalchuk, R. K., & Lewis, E. (2007, March). *Framing an engineering residential college*. Poster presented at the National Science Foundation (NSF STEP PI) Meeting, Washington, D.C.
- \*Hodis, F. A. & Kowalchuk, R. K. (2007, April). *Pairwise multiple comparison procedures: Inference by eye with overlapping confidence intervals*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- \*Hodis, F. A., Hodis, G. M., & Kowalchuk, R. K. (2008, March). *Communication patterns of international students from individualistic and collectivistic cultures*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Kowalchuk, R. K. & Headrick, T. C. (2008, March). *Simulating correlated multivariate non-normal g-and-h distributions*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Nicklow, J., Gupta, L., Kowalchuk, R. K., Mathias, J., Tezcan, J., Pericak-Spector, K., Chrisman, B., Eisenhauer, J., Graceson-Martin, L., & Sims, R. (2008, March). *ENGR 101: A first-year experience for engineering and technology majors*. Poster presented at the National Science Foundation (NSF STEP PI) Meeting, Washington, D.C.



- May, M. E., Srour, A., Kowalchuk, R. K., Lightfoot, D. A., & Kennedy, C. H. (2008, October). *Serotonin transporter polymorphisms and aggression in adult males with intellectual/developmental disabilities*. Poster presented at the annual conference of the Midwest Association for Behavior Analysis, Champaign, IL.
- May, M. E., Srour, A., Kowalchuk, R. K., Lightfoot, D. A., & Kennedy, C. H. (2008, November). *No association of serotonin transporter polymorphisms and aggression in adult males with intellectual/developmental disabilities*. Poster presented at the annual conference of the Tennessee Association for Behavior Analysis, Nashville, TN.
- Nicklows, J., Gupta, L., Kowalchuk, R. K., Mathias, J., Tezcan, J., Pericak-Spector, K., Eisenhauer, J., Graceson-Martin, L., & Green, T. (2009, March). *Increasing retention of engineering and technology majors*. Poster presented at the National Science Foundation (NSF STEP PI) Meeting, Washington, D.C.
- Shaffer, J. P., Kowalchuk, R. K., & Keselman, H. J. (2009, April). *Error, power, and interpretability of multiple testing procedures*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Nicklows, J., Gupta, L., Kowalchuk, R., Mathias, J., Tezcan, J., Pericak-Spector, K., Eisenhauer, J., Graceson-Martin, L., and Green, T. (2010, March). *Innovation in increasing success rates of engineering and technology majors*. Poster presented at the National Science Foundation (NSF STEP PI) Meeting, Washington, D.C.
- Kowalchuk, R. K., Cisler, R. A., & Saunders, S. M. (2010, May). *Assessing classification accuracy of clinical significance methods*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.
- \*Bhattacharya, G., & Kowalchuk, R. K. (2011, May). *Role of Marriage and Sex in Experiencing Unwanted Sexual Attention in Military*. Poster presented at the annual convention of the Association for Psychological Science, Washington, DC.
- Kowalchuk, R. K. (2011, April). Discussant for paper session “*Significance Testing and Alternatives*” at the annual meeting of the American Educational Research Association, New Orleans, LA.
- \*\*Voyles, E. C., Nguyen, D., Kowalchuk, R. K., Nicklow, J. W., & Ricks, R. (2011, October). *Engineering students’ attitudes towards mathematics*. Poster presented at the annual meeting of the Midwestern Educational Research Association, St. Louis, MO.
- \*\*Voyles, E. C., Asunda, P. A., Kowalchuk, R. K., & Vineyard, G. M. (2012, April). *Retention and Academic Performance of Linguistically Diverse Engineering Students*. Paper presented at the International Organization of Social Sciences and Behavioural Research Conference, Atlantic City, NJ.

- Kowalchuk, R. K., DeRuntz, B., & Nicklow, J. W. (2012, November). *Student leadership program: Results and benefits*. Presentation at the Association of Technology Management and Applied Engineering (ATMAE) Conference. Nashville, TN.
- Lant, C., Kowalchuk, R. K., & Midden, C. (2013, October). *Exploring science with interactive computer models: Carbon, energy, nitrogen, water, and watersheds*. Presentation at the Illinois Science Education Conference. Tinley Park, IL.
- Griffith, W., & Kowalchuk, R. K. (2014, January). SIUC/National Science Foundation curriculum project recruitment. Workshop presentation at the 212 Conference South. Collinsville, IL.
- Lant, C., Kowalchuk, R. K., Bottje, H., & Piper, M. (2014, January). *A modeling approach to teaching watershed games and other biogeochemical cycle games and models*. Workshop presentation at the Science in the South Conference. Carbondale, IL.
- \*Hamel, M. G., Hamel, R. P., Neuhoﬀ, E. M., Narusis, J. D., Palmer, J. C., Thompson, I., & Kowalchuk, R. K. (2014, October). *SIUC Applied Research Consultants: Assessment services and external evaluation*. Presentation at the First Annual Assessment Day Conference: Assessing Academic and Co-Curricular Impact on Student Learning, Carbondale, IL.
- \*Narusis, J. D., Kowalchuk, R. K., Neuhoﬀ, E. M., Palmer, J. C., DeRuntz, B. D., & Nicklow, J. W. (2015, April). *Leadership development program: Investing in future leaders*. Poster presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- \*\*Neuhoﬀ, E. M., Kowalchuk, R. K., Palmer, J. C., Birchler, K. D., Narusis, J. D., & DeRuntz, B. D. (2015, July). *Leadership development program: Increasing achievement in the engineering leaders of tomorrow*. Poster presented at the 25<sup>th</sup> Association of Leadership Educators (ALE) Conference, Washington, DC. [Awarded the 2015 ALE Distinguished Research Poster Award]
- \*\*Feeser, K. M., Neuhoﬀ, E. M., Palmer, J. C., Narusis, J. D., Gilson, N., Jaffe, H., Morrison, M. M., & Kowalchuk, R. K. (2015, October). *Applied Research Consultants: A vertical practicum model for graduate assessment and evaluation training*. Presentation at the Second Annual Assessment Conference. Carbondale, IL.
- Kowalchuk, R. K. (2016, April). Chair for paper session “*Bayesian estimation and propensity score analysis in educational statistics*” at the annual meeting of the American Educational Research Association, Washington, DC.
- \*\*\*Mersman, D. Narusis, J., Kowalchuk, R., & DeRuntz, B. (2016, April). *Relationship of Grit and SLPI subscales and retention for engineering leadership program*. Poster presented at the Undergraduate Creative Activities & Research Forum, Carbondale, IL.

\*\*\*Mersman, D. Narusis, J., Kowalchuk, R., & DeRuntz, B. (2016, April). *Relationship of Grit and SLPI subscales and retention for engineering leadership program*. Poster presented at the St. Louis Area Undergraduate Research Symposium, St. Louis, MO.

\*Morrison, M. M., Komarraju, M., & Kowalchuk, R.K. (2016, May). *Effect of sample and relationship type on cohesion and consensus facets of dyadic adjustment*. Poster presented at the meeting of Association for Psychological Science, Chicago, IL.

Palmer, J. C., Komarraju, M., Carter, M. Z., Kowalchuk, R. K., & Karau, S. J. (2016, October). *Angel on one shoulder: Perceived organizational support, dark personalities, and counterproductive work behaviors*. Paper presented at the Southern Management Association (SMA) 2016 Annual Meeting, Charlotte, NC.

## G. Other:

### Published Conference Proceedings

Mathias, J., Gupta, L., Nicklow, J., Tezcan, J., Caffey, R., Chrisman, B., Pearson, C., Pericak-Spector, K., Kowalchuk, R. K., Lewis, E., & Sevim, H. (2007, June). *Improved retention through innovative academic and non-academic programs*. Proceedings of the 2007 American Society for Engineering Education (ASEE) Conference, Honolulu, HI.

Tezcan, J., Mathias, J., Gupta, L., Nicklow, J., & Kowalchuk, R. K. (2008, June). *A freshman engineering course to improve retention*. Proceedings of the 2008 American Society for Engineering Education (ASEE) Conference, Pittsburgh, PA.

Tezcan, J., Nicklow, J., Mathias, J., Gupta, L., & Kowalchuk, R. K. (2009, January). *An innovative freshmen engineering course to improve retention*. Proceedings of the 63<sup>rd</sup> Midyear Meeting of the Engineering Design Graphics Division (EDGD) of the American Society for Engineering Education (ASEE), Berkeley, CA.

\*Ricks, R., Kowalchuk, R. K., Nicklow, J., Graceson-Martin, L., Gupta, L., Mathias, J., Tezcan, J., & Pericak-Spector, K. (2009, June). *Evaluation of a new engineering residential college initiative*. Proceedings of the 2009 American Society for Engineering Education (ASEE) Conference, Austin, TX.

Nicklow, J., Kowalchuk, R. K., Gupta, L., Tezcan, J., & Mathias, J. (2009, October). *A short-term assessment of a multi-faceted engineering retention program*. Proceedings of the 2009 Frontiers in Education (FIE) Conference, San Antonio, TX.

Kowalchuk, R. K., Green, T., Ricks, R., & Nicklow, J. (2010, June). *Evaluation of a summer bridge program on engineering students' persistence and success*. Proceedings of the 2010 American Society for Engineering Education (ASEE) Conference, Louisville, KY.

- \*\*Voyles, E. C., Kowalchuk, R. K., Nicklow, J., & Ricks, R. (2011, June). *Residential peer mentoring benefits mentees: What about mentors?* Proceedings of the 2011 American Society for Engineering Education (ASEE) Conference, Vancouver, BC Canada.
- DeRuntz, B., Kowalchuk, R. K., & Nicklow, J. W. (2012, July). *Industrial and STEM partnership creates engineering student leaders.* Proceedings of the 2012 ASQ Advancing the STEM Agenda Conference, Menomonie, WI.
- DeRuntz, B., Kowalchuk, R. K., & Nicklow, J. W. (2014, June). *Hoshin Kanri X-Matrix drives engineering leadership program success.* Proceedings of the 2014 American Society for Engineering Education (ASEE) Conference, Indianapolis, IN.
- \*\*\*Dos Santos, N. C. G., DeRuntz, B. D., & Kowalchuk, R. K. (2015, June). *Engineering leadership development programs: Universities respond to critical needs in the US and internationally.* Proceedings of the 2015 American Society for Engineering Education (ASEE) International Forum Conference, Seattle, WA.
- \*\*Palmer, J. C., Birchler, K. D., Narusis, J. D., Kowalchuk, R. K., & DeRuntz, B. (2016, June). *LEADing the way: A review of engineering leadership development programs.* Proceedings of the 2016 American Society for Engineering Education (ASEE) Conference, New Orleans, LA.

#### Invited Presentations

- Cribbie, R., Kowalchuk, R. K., & McKeen, N. (2000, March). *So you're looking for an academic position: Stop and ask for directions.* Invited colloquium presentation. Department of Psychology, University of Manitoba, Winnipeg, Canada.
- Kowalchuk, R. K. (2001, November). *The analysis of repeated measurements: Where we've been, where we're at, and where we're going.* Invited presentation. Research Seminar Series, School of Business Administration, University of Wisconsin Milwaukee.
- Kowalchuk, R. K. (2013, November). *A path less traveled: Quantitative psychology.* Invited presentation. Applied Psychology Brown Bag Seminar Series, Department of Psychology, Southern Illinois University Carbondale.

#### Facilitating Undergraduate Student Research

- Okolita, K., Fradette, K., Murray, L. T., Frankel, S. I., & Kowalchuk, R. K. (2004, April). *A single item visual analog scale of psychiatric symptomatology: Test, retest, reliability, and satisfaction with social support.* Presented at the 17<sup>th</sup> Annual Undergraduate Research Conference at the University of Saskatchewan Department of Psychology.

- Senkow, Q., Tiede, H. L., Murray, L. T., Frankel, S. I., & Kowalchuk, R. K. (2004, April). *A global satisfaction with social support measure: Stability and its capacity to predict a standardized measure of emotional well-being*. Presented at the 17<sup>th</sup> Annual Undergraduate Research Conference at the University of Saskatchewan Department of Psychology.
- Smith, L., Fradette, K., Murray, L. T., Frankel, S. I., & Kowalchuk, R. K. (2004, April). *Symptoms, social support, and emotional well-being in persons diagnosed with mood disorders*. Presented at the 17<sup>th</sup> Annual Undergraduate Research Conference at the University of Saskatchewan Department of Psychology.
- Taylor, K., Tiede, H., Murray, L. T., Frankel, S. I., & Kowalchuk, R. K. (2004, April). *Emotional well-being, psychiatric symptomatology, and satisfaction with support: Stability through time*. Presented at the 17<sup>th</sup> Annual Undergraduate Research Conference at the University of Saskatchewan Department of Psychology.
- Zonneveld, K., Tiede, H., Murray, L. T., Frankel, S. I., Kowalchuk, R. K., Walker, J. R., & Enns, M. W. (2004, April). *Financial adequacy perception and its impact on psychiatric symptomatology: Mood disorders, clients, and general population compared*. Presented at the 17<sup>th</sup> Annual Undergraduate Research Conference at the University of Saskatchewan Department of Psychology.

## V. PUBLICATIONS

### A. Articles in Professional Journals:

- Keselman, H. J., Algina, J., Kowalchuk, R. K., & Wolfinger, R. D. (1998). A comparison of two approaches for selecting covariance structures in the analysis of repeated measurements. *Communications in Statistics - Simulation and Computation*, 27, 591-604.
- Keselman, H. J., Huberty, C. J., Lix, L. M., Olejnik, S., Cribbie, R., Donahue, B., Kowalchuk, R. K., Lowman, L. L., Petoskey, M. D., Keselman, J. C., & Levin, J. R. (1998). Statistical practices of educational researchers: An analysis of their ANOVA, MANOVA, and ANCOVA analyses. *Review of Educational Research*, 68, 350-386.
- Keselman, H. J., Kowalchuk, R. K., & Lix, L. M. (1998). Robust nonorthogonal analyses revisited: An update based on trimmed means. *Psychometrika*, 63, 145-163.
- Keselman, H. J., Lix, L. M., & Kowalchuk, R. K. (1998). Multiple comparison procedures for trimmed means. *Psychological Methods*, 3, 123-141.
- Wilcox, R. R., Keselman, H. J., & Kowalchuk, R. K. (1998). Can tests for treatment group equality be improved? The bootstrap and trimmed means conjecture. *British Journal of Mathematical and Statistical Psychology*, 51, 123-134.

- Keselman, H. J., Algina, J., Kowalchuk, R. K., & Wolfinger, R. D. (1999). The analysis of repeated measurements: A comparison of mixed-model Satterthwaite F-tests and a nonpooled adjusted degrees of freedom multivariate test. *Communications in Statistics – Theory and Methods*, 28(12), 2967-2999.
- Keselman, H. J., Algina, J., Kowalchuk, R. K., & Wolfinger, R. D. (1999). A comparison of recent approaches to the analysis of repeated measurements. *British Journal of Mathematical and Statistical Psychology*, 52, 63-78.
- Keselman, H. J., Algina, J., Wilcox, R. R., & Kowalchuk, R. K. (2000). Testing repeated measures hypotheses when covariance matrices are heterogeneous: Revisiting the robustness of the Welch-James test again. *Educational and Psychological Measurement*, 60, 925-938.
- Keselman, H. J., Kowalchuk, R. K., Algina, J., Lix, L. M., & Wilcox, R. R. (2000). Testing treatment effects in repeated measures designs: Trimmed means and bootstrapping. *British Journal of Mathematical and Statistical Psychology*, 53, 175-191.
- Keselman, H. J., Kowalchuk, R. K., & Boik, R. J. (2000). An examination of the robustness of the Empirical Bayes and other approaches for testing main and interaction effects in repeated measures designs. *British Journal of Mathematical and Statistical Psychology*, 53, 51-67.
- Keselman, H. J., Wilcox, R. R., Taylor, J., & Kowalchuk, R. K. (2000). Tests for mean equality that do not require homogeneity of variances: Do they really work? *Communications in Statistics - Simulation and Computation*, 29, 875-895.
- Keselman, H. J., Algina, J., & Kowalchuk, R. K. (2001). The analysis of repeated measures designs: A review. *British Journal of Mathematical and Statistical Psychology*, 54, 1-20.
- Kowalchuk, R. K. & Keselman, H. J. (2001). Mixed-model pairwise multiple comparisons of repeated measures means. *Psychological Methods*, 6, 282-296.
- Keselman, H. J., Algina, J., & Kowalchuk, R. K. (2002). A comparison of data analysis strategies for testing omnibus effects in higher-order repeated measures designs. *Multivariate Behavioral Research*, 37, 331-357.
- Keselman, H. J., Wilcox, R. R., Kowalchuk, R. K., & Olejnik, S. (2002). Comparing trimmed or least squares means of two independent skewed populations. *Biometrical Journal*, 44, 478-489.
- Kowalchuk, R. K., Keselman, H. J., & Algina, J. (2003). Repeated measures interaction test with aligned ranks. *Multivariate Behavioral Research*, 38, 433-461.
- Kowalchuk, R. K., Keselman, H. J., Algina, J., & Wolfinger, R. D. (2004). The analysis of repeated measurements with mixed-model adjusted  $F$  tests. *Educational and Psychological Measurement*, 64, 224-242.

- Cisler, R. A., Kowalchuk, R. K., Saunders, S. M., Zweben, A., & Trinh, H. Q. (2005). Applying clinical significance methodology to alcoholism treatment trials: Determining recovery outcome status with individual- and population-based measures. *Alcoholism: Clinical and Experimental Research*, *29*, 1991-2000.
- Kowalchuk, R. K., Keselman, H. J., Wilcox, R. R., & Algina, J. (2006). Multiple comparison procedures, trimmed means and transformed statistics. *Journal of Modern Applied Statistical Methods*, *5*, 44-64.
- Headrick, T. C. & Kowalchuk, R. K. (2007). The power method transformation: Its probability density function, distribution function, and its further use for fitting data. *Journal of Statistical Computation and Simulation*, *77*, 229-249.
- Rehfeldt, R. A., Dillen, J. E., Ziomek, M. M., & Kowalchuk, R. K. (2007). Assessing relational learning deficits in perspective-taking in children with high-functioning autism spectrum disorder. *The Psychological Record*, *57*, 23-47.
- Headrick, T. C., Kowalchuk, R. K., & Sheng, Y. (2008). Parametric probability densities and distribution functions for Tukey *g*-and-*h* transformations and their further use for fitting data. *Applied Mathematical Sciences*, *2*, 449-462.
- Kowalchuk, R. K. & Headrick, T. C. (2010). Simulating multivariate *g*-and-*h* distributions. *British Journal of Mathematical and Statistical Psychology*, *63*, 63-74.
- May, M. E., Lightfoot, D. A., Srour, A., Kowalchuk, R. K., & Kennedy, C. H. (2010). Association between serotonin transporter polymorphisms and problem behavior in adult males with intellectual disabilities. *Brain Research*, *1357*(21), 97-103.
- Pinter, N., Baer, S., Chevalier, L., Kowalchuk, R., Lant, C., & Whiles, M. (2013). An "IGERT" model for interdisciplinary doctoral education in water-related science and policy. *Journal of Contemporary Water Research & Education*, *150*, 53-62.
- Shaffer, J. P., Kowalchuk, R. K., & Keselman, H. J. (2013). Error, power, and cluster-separation rates of pairwise multiple testing procedures. *Psychological Methods*, *18*, 352-367. doi: 10.1037a0032478
- Kowalchuk, R. K., DeRuntz, B., & Nicklow, J. W. (2013). Investing in engineering student leaders through industrial and STEM partnerships. *Quality Approaches in Higher Education*, *4*, 23-30.
- Lant, C., Perez-Lapena, B., Xiong, W., Kraft, S., Kowalchuk, R., & Blair, M. (2016). Environmental systems simulations for carbon, energy, nitrogen, water, and watersheds: Design principles and pilot testing. *Journal of Geoscience Education*, *64*, 115-124.

DeRuntz, B. D., Kowalchuk, R. K., Narusis, J. D., & Nicklow, J. W. (in press). Hoshin Kanri X-Matrix: Organizational management tool successfully implemented in an engineering leadership development program. *Quality Approaches in Higher Education*.

**B. Other:**

Kowalchuk, R. K. (2000). *Repeated measures multiple comparison procedures with a mixed model analysis*. Unpublished doctoral dissertation, University of Manitoba, Winnipeg, Canada.

Technical Reports

Bader, C. M., Gilson, N., Surprise, M., Veeramani, V., Pankey, K., & Kowalchuk, R. K. (2016). *Thompson Woods and Campus Lake Survey*. Technical Report prepared for Physical Plant and Services for Southern Illinois University Carbondale. Applied Research Consultants. Department of Psychology, Southern Illinois University Carbondale. (<http://www.pso.siu.edu/common/documents/LakeWoodsSurvey.pdf>)

Unpublished Reports

Harvey, D., Kowalchuk, R. K., Perrier, L., & Brown, D. (1993, March). *A needs assessment for AIDS education for Swampy Cree tribal council school students*. Unpublished report, University of Manitoba.

Harvey, D., Boyd, K. R., Kowalchuk, R. K., Harrigan, T., Blanchard, J., & Doig, W. (1998, May). *CTFM Council for a tobacco-free Manitoba: 1996 Manitoba youth smoking survey*. Unpublished report, University of Manitoba.

Letters to the Editor

Keselman, H. J., Algina, J., & Kowalchuk, R. K. (2000). Dawson, K. S., Gennings, C., and Carter, W. H. (1997), "Two graphical techniques useful in detecting correlation structure in repeated measures data," *The American Statistician*, 51, 275-283: Comment by Keselman, Algina, and Kowalchuk [Letter to the editor]. *The American Statistician*, 54, 157-158.

Keselman, H. J., Algina, J., Kowalchuk, R. K., & Wolfinger, R. D. (2006). Gurka, M. J. (2006), "Selecting the best linear mixed model under REML" *The American Statistician*, 60, 19-26: Comment by Keselman, Algina, Kowalchuk, & Wolfinger [Letter to the editor]. *The American Statistician*, 60, 210-211.



## VI. TEACHING EXPERIENCE

### A. Teaching Interests and Specialties:

Inferential Statistics, Multiple Regression, Experimental Design, Research Methods, Survey Research, and Program Evaluation

### B. Current Graduate Faculty Status: Regular

### C. Number of Master's and Ph.D. Committees served on:

Master's Committees: 5 (University of Wisconsin Milwaukee)  
7 (Southern Illinois University Carbondale)

Ph.D. Committees: 2 (University of Wisconsin Milwaukee)  
15 (Southern Illinois University Carbondale)  
(currently serving on 8 at Southern Illinois University Carbondale)

## VII. UNIVERSITY EXPERIENCE

### A. Department Committees:

#### Southern Illinois University Carbondale

Member: Search and Screen Committee, Department of Educational Psychology and Special Education, Measurement and Statistics (2004/2005)

Member: Advisory Committee: Department of Educational Psychology and Special Education (2004/2005)

Member: Search and Screen Committee, Department of Educational Psychology and Special Education, Measurement and Statistics (2006/2007)

Member: Search and Screen Committee, Department of Educational Psychology and Special Education, Measurement and Statistics (2008/2009)

Member: Advisory Committee: Department of Educational Psychology and Special Education (2009/2010)

Member: Department Chair Search Committee, Department of Educational Psychology and Special Education (fall 2013)

University of Wisconsin Milwaukee

- Member: Search and Screen Committee, Department of Educational Psychology, Research and Evaluation Area (1999/2000)
- Member: Search and Screen Committee, Department of Educational Psychology, Research and Evaluation Area (2000/2001)
- Member: Search and Screen Committee, Department of Educational Psychology, Research and Evaluation Area (2001/2002)
- Chair: Ad Hoc Committee on Research Environment, Department of Educational Psychology (March 2001)
- Chair: Research and Evaluation Area, Department of Educational Psychology (July. 2002-Aug. 2003)
- Member: Administrative Committee, Department of Educational Psychology (Aug. 2002-Aug. 2003)

**B. College and University Committees and Councils:**

- Member: College Advisory Committee: College of Education and Human Services (2006 – 2007)
- Member: Faculty Seed Grant Review Committee for Education (spring 2012)
- Member: Review Committee: MEd in Health Education (fall 2012)
- Member: Instructor Course Evaluation (ICE) Implementation Committee (fall 2012)
- Member: Task Force: Institute for Statistics and Methodology (spring 2013)
- Member: Associate Dean for Research and Statistical Analysis Search Committee, College of Education and Human Services (fall 2014)
- Member: Academic Advisory Committee: College of Education and Human Services (2016 – 2018)

## VIII. PROFESSIONAL SERVICE

### A. Membership in Professional Associations:

American Statistical Association (1994 – present)  
American Educational Research Association (AERA) (1996 – present)  
    AERA Special Interest Group - Educational Statisticians (1996 – present)  
American Psychological Association, Division 5: Evaluation, Measurement, and Statistics  
    (2000 – present)  
American Society for Engineering Education (2008 – present)  
American Evaluation Association (2014 – present)  
Midwestern Psychological Association (2015 – present)

### B. Honors Awarded in Professional Associations:

Outstanding Reviewer, American Educational Research Association Publications Committee and the Editors of *Educational Researcher* (2009, April). An award in recognition of outstanding participation in reviewing submissions for *Educational Researcher* for 2008.

### C. Consultantships:

Curriculum Committee, School of Law, Southern Illinois University Carbondale  
(December 2004 & March 2005)

Center Affiliated Scientist, Center for Addiction and Behavioral Health Research (CABHR)  
University of Wisconsin Milwaukee (2004 - 2006)

Center Affiliate, Center for Urban Population Health, Milwaukee, WI. (2006 - present)

### D. Evaluation of Manuscripts for Journal and Book Publishers:

Editorial Board Member: *Educational Researcher* (2007 – 2010)

Reviewer: *Psychological Methods* (2000, 2001, 2003, 2005, 2006, 2007, 2008, 2009)

Reviewer: *Multivariate Behavioral Research* (2004, 2010, 2011)

Reviewer: *Journal of Experimental Education* (2005)

Reviewer: *The American Statistician* (2007)

Reviewer: *British Journal of Mathematical and Statistical Psychology* (2009, 2016)

Reviewer: *International Journal of Quantitative Research in Education* (2014)

- Reviewer: *Evaluation and Program Planning (2016)*
- Reviewer: Textbook for Lawrence Erlbaum and Associates Publishers (2000)  
Maxwell, S.E. & Delaney, H.D. (2004). *Designing experiments and analyzing data: A model comparison perspective (2<sup>nd</sup> ed.)*.
- Reviewer: Textbook proposal for Oxford University Press (2005)  
Wilcox, R. R.  
*Basic statistics: Understanding conventional methods and modern insights*
- Reviewer: Book proposal for Routledge (2014)  
Mulvenon S. W.  
*Effective Educational Assessment*

**E. Presentations at Professional Meetings:**

- Kowalchuk, R. K. (2006, April). *Getting published: A panel of journal editors and emerging scholars*. Presenter for Professional Development and Training Course at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Kowalchuk, R. K. (2007, April). *Getting published: A panel of journal editors and emerging scholars*. Presenter for Professional Development and Training Course at the annual meeting of the American Educational Research Association, Chicago, IL.

**F. Other:**

- Reviewer: Mid-Western Educational Research Association Annual Meeting (2001)
- Reviewer: American Psychological Association, Division 5 conference proposals (2004)
- Participant: College of Education and Human Services Faculty Mentoring Program, Southern Illinois University Carbondale (2004 - 2005)
- Member: Awards Committee, Educational Statisticians (Special Interest Group) American Educational Research Association (2007, 2008, & 2009)

Professional Seminars & Workshops Attended:

Grant writing workshop at the University of Wisconsin Milwaukee (October 28, 2002) "Twelve Keys to Successful Grant Writing"  
Presented by Dr. Robert Lowman, Associate Vice Chancellor for Research  
University of North Carolina at Chapel Hill

COMBINE Investigator Use Data Distribution Training Session  
(July 11-12, 2006). Collaborative Studies Coordinator Center  
University of North Carolina at Chapel Hill

Grant Writing Workshop at Southern Illinois University Carbondale (October 3,  
2014) “Writing Winning Grants” Presented by Dr. John Robertson, Associate  
Member of Grant Writers’ Seminars & Workshops, L.L.C.  
([www.grantcentral.com](http://www.grantcentral.com))

Volunteer: 6<sup>th</sup> Annual Saluki Finals Finish Program, Southern Illinois University Carbondale  
(December 2004)

Volunteer: 8<sup>th</sup> Annual Saluki Finals Finish Program, Southern Illinois University Carbondale  
(December 2006)