Amanda L. McGowan, PhD

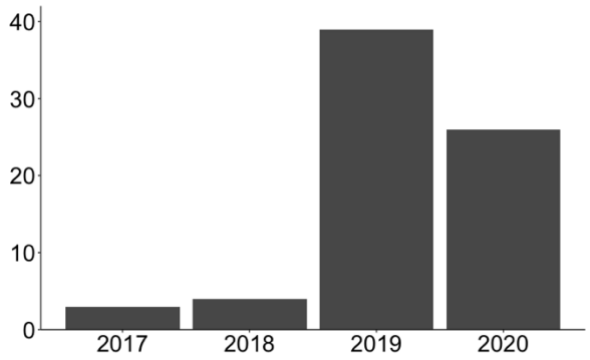
Updated: 6.22.2020

AREA OF EXPERTISE

Using psychophysiological measures, my research is in the area of health neuroscience, focusing on the influence of health behaviors on cognitive function and brain health. A key aim of this work is to inform interventions that support neurocognitive health, scholastic performance, and physical literacy.

Scholarly Highlights

Citations Per Year



Publication Metrics

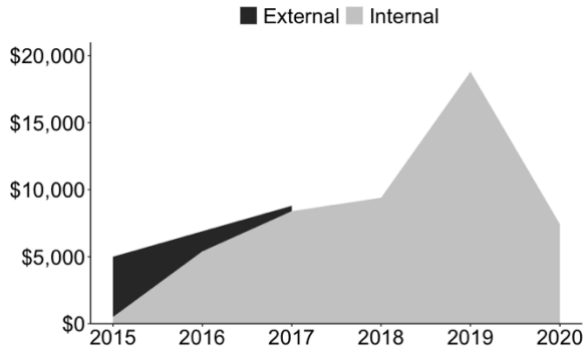
Total Publications:	Total Citations:
12	73
First Author:	**Mean Impact Factor**
6	2.5

Recent Presentations

- Poster presentation at the Society for Psychophysiological Research
- Verbal presentation at the Canadian Society for Brain, Behavior, & Cognitive Science

Funding Highlights

Funding Spent Per Year (including Honors & Awards)



Funding Metrics

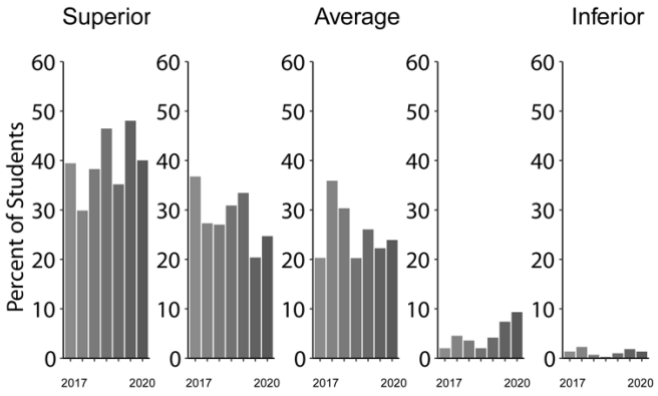
Total Grants Funded:	Funding Awarded:
18	$48,280
Grants Pursued:	**Funding Pursued:**
23	$340,280

Recently Submitted Grants

- Canada First Research Excellence Fund (PI)
- Natural Sciences and Engineering Research Council of Canada (PI)

Teaching Highlights

Overall Teaching Ratings by Semester



Recently Taught Courses

- Foundations of Kinesiology
- Biomechanics of Physical Activity
- Physical Growth & Motor Behavior

Service Highlights

Recent Journals Reviewed for

- *Journal of Sport and Health Science*
- *International Journal of Psychophysiology*
- *Health Education & Behavior*

Recent Service

- College of Education Curriculum Committee
- Department of Kinesiology Curriculum Committee

Professional Affiliations

- American College of Sports Medicine
- North American Society for the Psychology of Sport and Physical Activity
- Society for Psychophysiological Research

WORK ADDRESS

38 IM Sports Circle
308 W. Circle Drive
East Lansing, MI 48824

P: 517.944.6203
E: mcgowa78@msu.edu
Lab website: http://education.msu.edu/kin/hbcl

LANGUAGES

English (native)
French (fluent: read, write, speak)

ACADEMIC POSITIONS

July 2020 – Present **Postdoctoral Researcher**
Addiction, Health, and Adolescence Lab
University of Pennsylvania, Philadelphia, PA, USA
Advisor: Dr. David M. Lydon-Staley

May – August 2020 **Assistant Professor (Fixed Term)**, Department of Kinesiology
Michigan State University, East Lansing, MI, USA

EDUCATION

2016 – 2020 **PhD Kinesiology**
Michigan State University
Advisor: Dr. Matthew B. Pontifex
Dissertation: *Preschoolers exhibit similar learning but greater on-task behavior following physically active lessons on the approximate number system*

2015 **MSc Experiential Education**
Minnesota State University, Mankato
Advisor: Dr. Julie A. Carlson

2011 **BEd Outdoor Experiential Education**
Queen's University, ON, Canada

2010 **BA (Hons) Kinesiology**
Wilfrid Laurier University, ON, Canada

2010 **BA (General) French**
Wilfrid Laurier University, ON, Canada

HONOURS AND AWARDS

2020 **American Kinesiology Association Outstanding Doctoral Student (Honorable Mention)**

2020 **Outstanding Doctoral Degree Student Award**, Michigan State University

2020 **Outstanding Doctoral Student Mentor Nominee**, Michigan State University

2020	**Excellence-In-Teaching Nominee**, Michigan State University	
2019	**American Kinesiology Association Student Writing Award**, Michigan State University	
2019	**KIN Research Award**, Michigan State University	$700
2019	**Kinesiology Endowed Fellowship**, Michigan State University	$2,350
2018	**Janice Marston Memorial Scholarship**, Michigan State University	$2,500
2017	**Distinguished Master's Thesis Award**, Minnesota State University	
2015	**Future Scholar Award**, Academy of Leisure Sciences	$1,000

PROFESSIONAL INTERESTS

Research Interests:

Using psychophysiological measures (i.e., event-related potentials, pupillometry), my research is in the area of health neuroscience, focusing on the influence of health behaviors on cognitive function and brain health. A key aim of this work is to inform interventions that support neurocognitive health, scholastic performance, and overall well-being.

Teaching Interests:

My current teaching responsibilities comprise core courses in the undergraduate kinesiology program in the concentration of cognitive motor neuroscience. Using inquiry-based and guided discovery approaches to learning, a key aim of my teaching is to integrate theory, research, and direct experience, thereby allowing students to develop cross-curricular connections and to apply their knowledge in relevant contexts. To complement traditional classroom instruction and reinforce key concepts, I use digital instructional strategies to enhance and transform student learning.

RESEARCH EXPERIENCE

2016 – Present **Graduate Research Assistant**, Health Behaviors and Cognition Laboratory
Department of Kinesiology, Michigan State University
(**Lab Director:** Matthew B. Pontifex, PhD)

PROFESSIONAL EXPERIENCE

2015 – 2016 **Writing & Multimodal Communication Specialist (STEM)**
University of Waterloo, Waterloo, ON, Canada

2012 – 2015 **Secondary School Teacher**
York Region District School Board, Newmarket, ON, Canada

2011 – 2012	**Coordinator: Student Leadership** Student Affairs, Wilfrid Laurier University, Waterloo, ON, Canada
2010 – 2011	**Recreation Programmer: Summer Camps & Youth Centre** Town of Newmarket, Newmarket, ON, Canada

FUNDING

External Grants (submitted and funded):

Total External Funding Pursued: $ 295,900; Total External Funding Awarded: $ 3,900

1. Association for Experiential Education, **Co-Principal Investigator**, International Scholarship: "The mentor/mentee relationship in experiential education: A systematic literature review," $400 (**funded**, September 2017)
   [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

2. Ontario Secondary School Teachers' Federation S. Hunter Henry Grant, **Principal Investigator:** "Outdoor education integrated curriculum program impact on adolescent self-authorship," $3,500 (**funded**, April 2015)
   [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

External Grants (unfunded):

1. Canada First Research Excellence Fund, **Principal Investigator**, BrainsCAN Fellowship Program: "Determining the neurocognitive effects of physical activity in young children," $149,000 (**unfunded**, May 2020)
   [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

2. Natural Sciences and Engineering Research Council of Canada, **Principal Investigator**, Fellowship Program: "Bridging Cognitive, Physiological, and Neural Dimensions of Self-Regulation: Predicting Individual Differences in Children's Self-Regulation," $64,000 (ranked 21st in Psychology [11 applications were funded, total applicants unknown], **unfunded**, January 2020)
   [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

3. Blue Cross and Blue Shield of Michigan Foundation, **Principal Investigator**, Student Award Program Grant: "Physically-active Learning in Young Children (PLAY)," $3,000 (**unfunded**, July 2019)
   [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

4. North American Society for the Psychology of Sport and Physical Activity, **Principal Investigator**, Graduate Student Research Grant: "The association between aerobic fitness and decision-making," $2,000 (**unfunded**, May 2018)
   [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

5. Canadian Institutes for Health Research, **Principal Investigator**, Doctoral Foreign Study Award: "Investigating the role of the locus-coeruleus norepinephrine (LC-NE) system in aerobic exercise-induced changes in executive function," $74,000 (rating: 4.18/5, ranked 215 of 592, **unfunded**, April 2018)
   [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

Internal Grants (submitted and funded):

Total Internal Funding Pursued: $44,380; Total Internal Funding Awarded: $44,380

1. Michigan State University, The Graduate School, **Principal Investigator**, Travel Award, "Preschoolers exhibit similar learning but greater on-task behavior following physically active lessons on the approximate number system," $430 (**funded**, February 2020)
   [X] Application Materials [X] Supporting Documents

2. Michigan State University, The Graduate School, **Principal Investigator**, Dissertation Completion Fellowship, $7,000 (**funded**, January 2020)
   [X] Application Materials [X] Supporting Documents

3. Michigan State University, College of Social Sciences, **Doctoral Student Mentor** (Faculty Mentor: Dr. Hope K. Gerde), Provost's Undergraduate Research Initiative, "Improving health outcomes and emergent numeracy skills through PLAY (Physically-Active Learning in Young Children)," $4,000 (**funded**, September 2019)
   [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

4. Michigan State University, Department of Kinesiology, **Principal Investigator**, Graduate Student Conference Award, "Fitness modulates behavioral not pupillometric indices of arithmetic processing in college-aged adults," $400 (**funded**, August 2019)
   [X] Application Materials [X] Supporting Documents

5. Michigan State University, The Graduate School, **Principal Investigator**, Travel Award, "Fitness modulates behavioral not pupillometric indices of arithmetic processing in college-aged adults," $350 (**funded**, August 2019)
   [X] Application Materials [X] Supporting Documents

6. Michigan State University, The Graduate School, **Principal Investigator**, Research Enhancement Fund, "Improving Health Outcomes in Young Children through Physically-active Learning (PLAY)," $1,000 (**funded**, August 2019)
   [X] Application Materials [X] Supporting Documents

7. Michigan State University, College of Education, **Principal Investigator**, Dissertation Research Support Grant, "Relationship of children's physical activity and acuity of numerical cognition," $4,000 (**funded**, January 2019)
   [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

8. Michigan State University, Department of Kinesiology, **Principal Investigator**, Graduate Student Conference Award, "The effect of acute exercise on pupillometric indices of locus-coeruleus activation in college-aged young adults," $400 (**funded**, September 2018)
   [X] Budget [X] Supporting Documents

9. Michigan State University, College of Education, **Principal Investigator**, Summer Research Renewable Fellowship, "The role of fitness in attentional networks, cognitive load, and mathematical cognition in preadolescent children," $12,000 (**funded**, May 2018)
   [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

10. Michigan State University, Council of Graduate Students, **Recipient**, Professional Development Award, $500 (**funded**, April 2018). Supported participation in Brock University & SHARCNET: EEG Analysis Workshop.
    [X] Budget [X] Supporting Documents

11. Michigan State University, College of Education, **Principal Investigator**, Dissertation Research Support Grant, "Influence of Cardiorespiratory Fitness on Attentional Networks and Mathematical Cognition in Children," $3,000 (**funded**, December 2017)
    [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

12. Michigan State University, Council of Graduate Students, **Principal Investigator**, Graduate Student Conference Award, "Evidence for differential effects of sports-related concussion on subtypes of cognitive flexibility," $400 (**funded**, September 2017)
    [X] Budget [X] Supporting Documents

13. Michigan State University, College of Education, **Principal Investigator**, Summer Research Development Fellowship, "The concurrent use of electroencephalography and pupillometry," $5,000 (**funded**, May 2017)
    [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

14. Michigan State University, College of Education, **Recipient**, Fellowship to Enhance Global Understanding, "Language, Religion, and Immigration: Multicultural Identity and Education in France," $5,000 (**funded**, December 2016)
    [X] Formulated Concept [X] Aims [X] Research Plan [X] Budget [X] Supporting Documents

15. Michigan State University, Department of Kinesiology, **Principal Investigator**, Graduate Student Conference Award, "Evidence for differential effects of sports-related concussion on subtypes of cognitive flexibility," $400 (**funded**, September 2016)
    [X] Budget [X] Supporting Documents

16. Minnesota State University, The Graduate School, **Principal Investigator**, P.O. Brunsvold Endowment Travel Award, "Does outdoor education promote self-authorship? Examining outdoor educators' perspectives of self-authorship as an outcome of outdoor education programs," $500 (**funded**, January 2015)
    [X] Budget [X] Supporting Documents

SCHOLARSHIP

Google Scholar	*ResearcherID*	*ORCID*	*Research Gate*
http://scholar.google.com	*G-9746-2016*	*http://orcid.org/0000-0003-3422-0135*	*http://researchgate.net/profile/Amanda_Mcgowan*

Peer-Reviewed Journal Articles = 11 **First Author** = 6 **Book Chapter** = 1
h-index = 3 **Mean Impact Factor** = 2.5

Peer-Reviewed Journal Articles (in review or accepted):

2020

1. Chandler, M. C., **McGowan, A. L.,** Burles, F., Scavuzzo, C. J., Mathewson, K. E., & Pontifex, M. B. (In print). Aerobic fitness is unrelated to the acquisition of relational memory in college-aged adults. *Journal of Sport & Exercise Psychology*.
   [X] Revised Manuscript [X] Data Collection

   Journal Metrics: 1st Quartile Applied Psychology [2019] Impact Factor: 2.434

2. **McGowan, A. L.**, Gerde, H. K., Pfeiffer, K. A., Ferguson, D. P., Pontifex, M. B. (2020). Preschoolers exhibit greater on-task behavior following physically active lessons on the approximate number system. *Scandinavian Journal of Medicine & Science in Sports*, 1-10. doi: 10.1111/sms.13727
   [X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

   Journal Metrics: 1st Quartile Orthopedics and Sports Medicine [2018] Impact Factor: 3.631

3. Covassin, T., **McGowan, A. L.**, Bretzin, A. C., Anderson, M. A., Petit, K. M., Savage, J. S., Stephenson-Brown, K., Elbin, R. J., & Pontifex, M. B. (2020). Preliminary investigation of a multimodal enhanced brain function index among high school and collegiate concussed male and female athletes. *The Physician and Sports Medicine*, 1-8. doi: 10.1080/00913847.2020.1745717
   [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

   Journal Metrics: 2nd Quartile Orthopedics and Sports Medicine [2018] Impact Factor: 1.874

4. Chandler, M. C., **McGowan, A. L.,** Ferguson, D. P., & Pontifex, M. B. (2020). Carbohydrate mouth rinse has no effects on behavioral or neuroelectric indices of cognition. *International Journal of Psychophysiology*, *151*, 49-58. doi: 10.1016/j.ijpsycho.2020.02.012
   [X] Revised Manuscript [X] Data Collection [X] Software [X] Supervision

   Journal Metrics: 2nd Quartile Neuropsychology and Physiological Psychology [2018] Impact Factor: 2.407

2019

5. Chandler, M. C., **McGowan, A. L.,** Payne, B. R., Hampton Wray, A., & Pontifex, M. B. (2019). Aerobic fitness relates to differential attentional but not language-related cognitive processes. *Brain and Language, 198*, 104681. doi: 10.1016/j.bandl.2019.104681
   [X] Revised Manuscript [X] Data Collection

Journal Metrics: 1st Quartile Experimental & Cognitive Psychology [2018] Impact Factor: 2.7

6. **McGowan, A. L.**, Bretzin, A. C., Savage, J. L., Petit, K. M., Covassin, T. M., & Pontifex, M. B. (2019). Acute and protracted disruptions to inhibitory control following sports-related concussion. *Neuropsychologia, 131,* 223-232. doi: 10.1016/j.neuropsychologia.2019.05.026
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

Journal Metrics: 1st Quartile Behavioral Neuroscience [2018] Impact Factor: 2.872

7. **McGowan, A. L.**, Chandler, M. C., Brascamp, J. W., & Pontifex, M. B. (2019). Pupillometric indices of locus-coeruleus activation are not modulated following single bouts of exercise. *International Journal of Psychophysiology, 140*, 41-52. doi: 10.1016/j.ijpsycho.2019.04.004
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

Journal Metrics: 2nd Quartile Neuropsychology and Physiological Psychology [2018] Impact Factor: 2.407

8. **McGowan, A. L.** & Pontifex, M. B. (2019). Expert's Choice: 2018's most exciting research in the field of pediatric exercise science. [Invited Commentary on "Physical activity and cognition". *Pediatric Exercise Science*, *31*(1), 13-15. doi: 10.1123/pes.2019-0010
[X] Conceptualization [X] Drafted Manuscript [X] Revised Manuscript

Journal Metrics: 2nd Quartile Orthopedics and Sports Medicine [2018] Impact Factor: 1.707

9. Pontifex, M. B., **McGowan, A. L.,** Chandler, M. C., Gwizdala, K. L., Parks, A. C., Fenn, K., & Kamijo, K. (2019). A primer on investigating the after effects of acute bouts of physical activity on cognition. *Psychology of Sport & Exercise*, *40*, 1-22. doi: 10.1016/j.psychsport.2018.08.015
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

Journal Metrics: 1st Quartile Applied Psychology [2018] Impact Factor: 2.71

2018

10. **McGowan, A. L.**, Bretzin, A. C., Savage, J. L., Petit, K. M., Parks, A. C., Covassin, T., & Pontifex, M. B. (2018). Differential trajectories of recovery for cognitive flexibility following sports-related concussion. *Neuropsychology*, *32*(5), 564-574. doi: 10.1037/neu0000475
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

Journal Metrics: 1st Quartile Neuropsychology and Physiological Psychology [2018] Impact Factor: 2.477

2016

11. **McGowan, A. L.** (2016). Impact of one-semester outdoor education programs on adolescent perceptions of self-authorship. *Journal of Experiential Education, 39*(4), 386-411. doi: 10.1177/1053825916668902
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

Journal Metrics: 3rd Quartile Education [2018] Impact Factor: 1.35

Manuscripts in Preparation:

1. **McGowan, A. L.**, Chandler, M. C., & Pontifex, M. B. (In preparation). Aerobic fitness relates to superior exact and approximate arithmetic processing in college-aged adults.

[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

2. **McGowan, A. L.**, Gerde, H. K., & Pontifex, M. B. (In preparation). Preschoolers exhibit similar learning and retention but reduced disruptive behavior following physically active lessons on the approximate number system.
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

3. **McGowan, A. L.**, Gerde, H. K., Pontifex, M. B. (In preparation). Meeting physical activity and screen time recommendations relates to superior quantity estimation and reduced challenging behavior in preschool-aged children.
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

4. Bretzin, A. C., **McGowan, A. L.,** Anderson, M. A., Pontifex, M. B., Covassin, T. (In preparation). Sensitivity of neurocognitive and clinical outcomes following sports-related concussion.
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

5. **McGowan, A. L.**, Chandler, M. C., & Gerde, H. K. (In preparation). Infusing physical activity into the classroom to support young children's attention and reduce challenging behavior.
[X] Conceptualization [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

6. **McGowan, A. L.**, Ellison, O., Ham, M., Chandler, M. C., & Pontifex, M. B. (In preparation). Aerobic fitness modulates arithmetic strategy in college-aged adults.
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

7. Chandler, M. C., **McGowan, A. L.**, Brascamp, J. W., & Pontifex, M. B. (In preparation). Aerobic fitness is unrelated to pupillometric indices of locus-coeruleus activation.
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

8. **McGowan, A. L.**, Chandler, M. C., & Pontifex, M. B. (In preparation). Changes in resting EEG activity after acute aerobic exercise.
[X] Research Design [X] Statistical Analysis [X] Drafted Manuscript [X] Revised Manuscript [X] Data Collection

Book Chapters (in print or accepted):

1. Kamijo, K., **McGowan, A. L.**, Pontifex, M. B. (2019). Effects of physical activity on cognition in children and adolescents. In M. H. Anshel, S. J. Petruzzello, & E. E. Labbé (Eds.) *APA Handbook of Sport and Exercise Psychology: Volume 2 Exercise Psychology*.
[X] Conceptualization [X] Drafted Manuscript [X] Revised Manuscript

Published Conference Proceedings (in print or accepted):

1. **McGowan, A. L.**, Mansour, G. M., Ferguson, D. P., Gerde, H. K., Pfeiffer, K. A., & Pontifex, M. B. (2020). Preschoolers demonstrate similar learning and enhanced on-task behavior following physically active lessons on emerging numeracy skills. *Medicine and Science in Sport and Exercise, 52*(5). (Conference canceled)

2. Ellison, O., Ham, M., Chandler, M. C., Pontifex, M. B., & **McGowan, A. L.** (2020). The relationship between aerobic fitness and neuroelectric indices of arithmetic approximation in college-aged adults. *Medicine and Science in Sport and Exercise, 52*(5). (Conference canceled)

3. **McGowan, A. L.**, Chandler, M. C., & Pontifex, M. B. (2019). Fitness modulates behavioral not pupillometric indices of arithmetic processing in college-aged adults, *Psychophysiology, 56*(S1), S73.

4. Chandler, M. C., **McGowan, A. L.,** Mathewson, K. E., Scavuzzo, C. J., & Pontifex, M. B. (2019). Aerobic fitness does not predict acquisition of hippocampal-dependent memory in college-aged adults. *Journal of Sport and Exercise Psychology, 41*, S57.

5. **McGowan, A. L.**, Chandler, M. C., Brascamp, J. W., & Pontifex, M. B. (2018). The effect of acute exercise on pupillometric indices of locus-coeruleus activation in college-aged young adults. *Psychophysiology*, *55*(S1), S35.

6. Chandler, M. C., **McGowan, A. L.**, Hampton Wray, A., Payne, B. R., & Pontifex, M. B. (2018). The relationship between aerobic fitness and neuroelectric indices of reading in college-aged adults. *Psychophysiology*, *55*(S1), S109.

7. **McGowan, A. L.**, Chandler, Madison C., Brascamp, J. W., & Pontifex, M. B. (2018). Investigating the role of tonic and phasic locus-coeruleus activation in modulating cognition following acute exercise. *Journal of Sport and Exercise Psychology, 40*, S106.

8. Chandler, M. C., **McGowan, A. L.**, Brascamp, J. W., & Pontifex, M. B. (2018). Exploring the relationship between aerobic fitness and activation of the locus-coeruleus. *Journal of Sport and Exercise Psychology, 40,* S82.

9. **McGowan, A. L.**, Bretzin, A. C., Savage, J., LaFevor, M., Petit, K. M., Beidler, E., Parks, A. C., Covassin, T., & Pontifex, M. B. (2017). Evidence for differential effects of sports-related concussion on subtypes of cognitive flexibility. *Journal of Sport and Exercise Psychology, 39,* S281.

10. Gwizdala, K. L., **McGowan, A. L.,** Miskovic, V., Laszlo, S., & Pontifex, M. B. (2016). An investigation of fully automated approaches for the selection of eye blink ICA components. *Psychophysiology, 53*(S1), S36.

Unpublished Conference Proceedings:

** Denotes author was a student or trainee.*

1. Braggs, J. F.*, Scarcelli, L. L.*, Gerde, H. K., Pontifex, M. B., **McGowan, A. L.** (2020). Physically active learning and quantity estimation in preschoolers. Poster presentation at the Michigan State University Undergraduate Research and Arts Forum. (Conference canceled)

2. Ham, M.*, Kosmyna, E.*, Vasudevan, V.*, Pontifex, M. B., **McGowan, A. L.** (2020). What's the best way to get good data? Comparing mobile EEG and high-density EEG systems. Poster presentation at the Michigan State University Undergraduate Research and Arts Forum. (Conference canceled)

3. **McGowan, A. L.,** Chandler, M. C., & Pontifex, M. B. (2019). Pupillometric indices of arithmetic approximation in college-aged adults. Verbal presentation at the Mathematical Cognition and Learning Society Conference, June 16-18, 2019, Ottawa, ON, Canada.

4. **McGowan, A. L.**, Chandler, M. C., & Pontifex, M. B. (2019). Aerobic fitness and arithmetic processing in college-aged adults. Verbal presentation at the Canadian Society for Brain, Behavior, and Cognitive Science, June 7-9, 2019, Waterloo, ON, Canada.

5. Brascamp, J. W., **McGowan, A. L.,** & Pontifex, M. B. (2019). Bi-stable perception as a bridge between vision and decision making. Poster presentation at the Vision Sciences Society Conference, May 17-22, 2019, St. Pete Beach, FL, USA.

6. Voisard, K. A.*, **McGowan, A. L.,** Chandler, M. C., & Pontifex, M. B. (2019). Aerobic fitness and arithmetic approximation in college-aged adults. Poster presentation at the Michigan State University Undergraduate Research and Arts Forum. **Selected as first-place recipient for poster presentation.**

7. Sokolowski, C. A.*, Chandler, M. C., **McGowan, A. L.**, Brascamp, J. W., & Pontifex, M. B. (2018). Exploring the relationship between aerobic fitness and activation of the locus-coeruleus. Poster presentation at the Michigan State University Undergraduate Research and Arts Forum.

8. Middleton, G., & **McGowan, A. L.** (2017). The mentor/mentee relationship in experiential education: A systematic literature review. Poster presentation at the Association of Experiential Education, Montreal, QC.

9. **McGowan, A. L.** (2015). Does outdoor education promote self-authorship? Examining outdoor educators' perspectives of self-authorship as an outcome of outdoor education programs. Verbal presentation at the Canadian Student Outdoor Education Conference.

Invited Lectures & Symposia:

‡*Denotes invited presentation.*

1. ‡**McGowan, A. L.** (2016). Impact of one-semester outdoor education programs on adolescent perceived self-authorship development. Presented to the University of Waterloo 2016 Graduate Association of Recreation & Leisure Studies Symposium.

2. ‡**McGowan, A. L.** (2015). Commencement Address. Presented to the Minnesota State University College of Education.

Professional Reports and Service Publications (not peer-reviewed):

1. **McGowan, A.** (2014). From experience to practice: An integrated program where students become the teachers. In G. Linney (Ed.) *Journeys into relation: Vignettes of OEE-based integrated curriculum programs in Ontario secondary schools* (Vol. 1).
   [X] Conceptualization [X] Drafted Report [X] Revised Report

2. **McGowan, A.**, McIsaac, J. (2017). Literature review. *Writeonline*. Retrieved from www.writeonline.ca
   [X] Conceptualization [X] Drafted Materials [X] Revised Materials

3. Andres, G., Yang, C., Yoshida, E., **McGowan, A. L.** (2018). Not all rubrics are created equal: Impacts of student-centered rubrics on students' deep learning. *University of Waterloo Learning and Innovation and Teaching Enhancement (LITE)*.
   [X] Statistical Analysis [X] Drafted Report

TEACHING EXPERIENCE

Michigan State University:

Undergraduate courses:

2020 **Instructor**, KIN173: Foundations of Kinesiology
Michigan State University, East Lansing, MI, USA

The goal of this course is to review selected concepts in each of the major sub-disciplines (i.e., physiology, anatomy, research methods, expertise in sport, psychosocial processes, and motor skill development) and introduce students to multiple theoretical frameworks to the study of kinesiology (i.e., social, cognitive, biological, and applied).

Semester	Total Students	Instructor Involvement	Student Interest	Student-Instructor Interaction	Course Demands	Course Organization
Summer 2020	26	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

2019 – 2020 **Instructor**, KIN330: Biomechanics of Physical Activity
Michigan State University, East Lansing, MI, USA

The goal of this course is to provide students with an introduction to concepts and principles related to biomechanics—with an emphasis on understanding whole body movements. These concepts are meant to provide the basis of understanding the biomechanics of physical activity. This course uses a multidisciplinary approach that integrates elements from anatomy, physiology, physics, and engineering. Applications of these concepts in fields such as athletic training, physical therapy, sports science, and human factors will be discussed.

Semester	Total Students	Instructor Involvement	Student Interest	Student-Instructor Interaction	Course Demands	Course Organization
Summer 2020	28	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Spring 2020	55	2.0 ± 1.1	1.9 ± 0.9	2.1 ± 1.1	2.1 ± 1.1	2 ± 1.0
Fall 2019	51	1.8 ± 1.1	1.9 ± 1.0	1.9 ± 1.1	2.1 ± 1.1	1.9 ± 1.0

Data Obtained from the MSU Student Instructional Rating System as of May 18, 2020.
Scores range from Superior (1) to Inferior (5).

2019 **Instructor**, KIN360: Physical Growth & Motor Behavior
Michigan State University, East Lansing, MI, USA

The goal of this course is to provide students with a general overview of physical growth and motor behavior across the lifespan. Required core course in Kinesiology, focusing on the theoretical, methodological, and empirical issues related to biological maturity as related to motor performance and development including sequential progressions of fundamental motor skills, physical fitness of children and youth, motor abilities, and stages of skill acquisition.

Semester	Total Students	Instructor Involvement	Student Interest	Student-Instructor Interaction	Course Demands	Course Organization
Spring 2019	54	1.8 ± 0.9	2.3 ± 0.9	1.8 ± 0.8	2.0 ± 0.8	1.9 ± 1.0

Data Obtained from the MSU Student Instructional Rating System as of May 18, 2019.
Scores range from Superior (1) to Inferior (5).

2018 **Instructor**, KIN250: Measurement in Kinesiology
Michigan State University, East Lansing, MI, USA

Instruct course content for one lecture section. Responsible for creation and delivery of instructional materials, grading assignments, and proctoring exams. Required core course in Kinesiology, focusing on the methods and materials for measurement and evaluation in the various fields within Kinesiology: administration, athletic training, biomechanics, cardiac rehabilitation, exercise physiology, sport psychology, physical therapy, sociology, and teaching. Measurement activities addressed motor skills, physical fitness, and knowledge and attitudes associated with physical activity. Supervised 5 undergraduate Honors College students who completed independent laboratory-based research projects.

Semester	Total Students	Instructor Involvement	Student Interest	Student-Instructor Interaction	Course Demands	Course Organization
Spring 2018	48	2.2 ± 1.0	2.7 ± 1.0	2.3 ± 1.0	2.5 ± 0.9	2.3 ± 0.9

Data Obtained from the MSU Student Instructional Rating System as of December 26, 2018.
Scores range from Superior (1) to Inferior (5).

2018 – 2019 **Head Teaching Assistant**, KIN173: Foundations in Kinesiology
Michigan State University, East Lansing, MI, USA

Mentor and supervise a team of undergraduate and graduate teaching assistants for a core introductory course in kinesiology. Designed and implemented rubrics for grading writing-intensive assignments. Responsible for maintaining and preparing laboratory equipment/activities. Redesigned laboratory curriculum to include topics related to submaximal estimation of VO2max, anatomical movement, research methods, and statistical analysis using JASP software.

Semester	Number of Undergraduate Teaching Assistants	Number of Graduate Teaching Assistants
Fall 2019	2	3
Spring 2019	2	3
Fall 2018	2	3
Spring 2018	2	2

2017 – 2018 **Laboratory Instructor**, KIN251: Principles of Human Movement
Michigan State University, East Lansing, MI, USA

Instruct course content for two laboratory sections. Responsible for dissemination of instructional materials, grading assignments, and proctoring exams. Required core course in Kinesiology, focusing on basic principles underlying human movement, including an introduction to mechanical (force and motion), motor behavior and movement coordination, and motor learning principles. Students collect and analyze data related to these concepts to learn real world applications of theoretical material presented in lecture.

Semester	Total Students	Instructor Involvement	Student Interest	Student-Instructor Interaction	Course Demands	Course Organization
Fall 2018	50	1.7 ± 0.7	1.9 ± 0.7	1.6 ± 0.8	1.9 ± 0.8	1.6 ± 0.8
Fall 2017	50	1.9 ± 1.0	2.2 ± 0.8	1.9 ± 0.9	2.1 ± 1.0	1.9 ± 1.0

Data Obtained from the MSU Student Instructional Rating System as of December 26, 2018.
Scores range from Superior (1) to Inferior (5).

2017 – 2018 **Laboratory Instructor**, KIN173: Foundations of Kinesiology
Michigan State University, East Lansing, MI, USA

Instruct course content for two laboratory sections. Responsible for dissemination of instructional materials, grading laboratory assignments, and proctoring exams for the lecture course. Required core course in Kinesiology, reviewing selected concepts in each of the major sub-disciplines (i.e., physiology, anatomy, research methods, expertise in sport, psychosocial processes, and motor skill development) and introducing students to multiple theoretical frameworks to the study of kinesiology (i.e., social, cognitive, biological, and applied).

Semester	Total Students	Instructor Involvement	Student Interest	Student-Instructor Interaction	Course Demands	Course Organization
Fall 2018	80	1.5 ± 0.7	1.7 ± 0.7	1.6 ± 0.7	2.0 ± 0.9	1.5 ± 0.7
Spring 2017	78	1.9 ± 0.9	1.9 ± 0.7	1.8 ± 0.8	1.9 ± 0.9	1.9 ± 0.9
Fall 2017	68	2.1 ± 0.9	2.1 ± 0.9	2.1 ± 0.9	2.1 ± 0.9	2.1 ± 0.9
Spring 2016	79	1.7 ± 0.8	1.7 ± 0.8	1.7 ± 0.8	2.1 ± 1.0	1.8 ± 0.8

Data Obtained from the MSU Student Instructional Rating System as of December 26, 2018.
Scores range from Superior (1) to Inferior (5).

University of Waterloo: **Note: Different scoring scale.*

Graduate Courses:

2016 **Instructor**, TERRE CREATE Professional Skills: Technical Writing
University of Waterloo, Waterloo, ON, Canada

Coordinated and managed course content for one section. Responsible for development and dissemination of instructional materials. TERRE (Training toward Environmentally Responsible Resource Extraction) is a new program funded through the Natural Sciences and Engineering Research Council of Canada's CREATE (Collaborative Research and Training Experience) program. A course teaching the strategies and iterative practices of professional writing and communication, focusing on planning, developing, and revising research-based documents for academic and non-academic audiences with emphasis on the conventions of scientific writing and the structure and development of academic articles and reports.

Semester	Total Students	Quality of Teaching	Student Interest	Level of Knowledge Obtained	Usefulness of Course Activities	Overall Effectiveness of Course
Spring 2016	15	4.8 ± 0.4	4.3 ± 0.6	4.4 ± 0.6	4.6 ± 0.6	4.5 ± 0.6

Data Obtained from the Natural Sciences and Engineering Research Council of Canada's TERRE CREATE Survey as of May 31, 2016. Scores range from Below Expectation (1) to Exceeded Expectation (5).

2015 **Co-Instructor**, BIOL690: Scientific Communication
University of Waterloo, Waterloo, ON, Canada

Coordinated and managed course content for one section. Responsible for development and dissemination of instructional materials. This course introduces new graduate students in the department of Biology to the basic skills that will be necessary for them to acquire and organize information as well as present it effectively. Frequent opportunities to practice scientific research presentation and technical writing skills are provided to students through weekly discussions, workshops, and hands-on activities. Instructed in collaboration with Associate Dean of Science.

Semester	Total Students	Quality of Teaching	Student Interest	Level of Knowledge Obtained	Usefulness of Course Activities	Overall Effectiveness of Course
Fall 2015	15	4.5 ± 0.5	4.0 ± 0.6	4.4 ± 0.6	4.6 ± 0.3	4.5 ± 0.4

Data Obtained from the University of Waterloo Writing & Communication Centre as of January 25, 2016. Scores range from Below Expectation (1) to Exceeded Expectation (5).

2015 **Co-Instructor**, PHARM601/616: MSc Thesis Proposal & PhD Dissertation Proposal
University of Waterloo, Waterloo, ON, Canada

Coordinated and managed course content for one section. Responsible for development and dissemination of instructional materials. Required course for all pharmacy graduate students focusing on developing the skills to present their research objectives in oral and written form. The course gives students the opportunity to observe two other proposal defenses and participate in a workshop to learn the research and technical writing skills required for writing a thesis or dissertation proposal. Instructed in collaboration with subject librarian, professor, and thesis/dissertation supervisors.

Semester	Total Students	Quality of Teaching	Student Interest	Level of Knowledge Obtained	Usefulness of Course Activities	Overall Effectiveness of Course
Fall 2015	12	4.8 ± 0.2	4.6 ± 0.6	4.7 ± 0.3	4.5 ± 0.3	4.5 ± 0.5

Data Obtained from the University of Waterloo Writing & Communication Centre as of January 25, 2016.
Scores range from Below Expectation (1) to Exceeded Expectation (5).

2015 – 2016 **Co-Instructor**, STAT938: Statistical Consulting
University of Waterloo, Waterloo, ON, Canada

Coordinated and managed course content for one section. Responsible for development and dissemination of instructional materials. A course that covers some of the basic tools of a statistical consultant: statistical packages, problem-solving techniques, effective communication of statistical concepts, and management of consultant sessions. Instructed in collaboration with professor.

Semester	Total Students	Quality of Teaching	Student Interest	Level of Knowledge Obtained	Usefulness of Course Activities	Overall Effectiveness of Course
Summer 2016	8	4.8 ± 0.4	4.6 ± 0.4	4.8 ± 0.4	4.7 ± 0.2	4.6 ± 0.4
Summer 2015	7	4.7 ± 0.4	4.7 ± 0.6	4.5 ± 0.6	4.5 ± 0.6	4.5 ± 0.4

Data Obtained from the University of Waterloo Writing & Communication Centre as of January 25, 2016.
Scores range from Below Expectation (1) to Exceeded Expectation (5).

Undergraduate Courses:

2016 **Co-Instructor**, ECON472: Senior Honours Thesis
University of Waterloo, Waterloo, ON, Canada

Coordinated and managed course content for two sections. Responsible for development and dissemination of instructional materials. Required course for all honours economics programs focusing on developing research methods and writing skills. Students demonstrate their proficiency in essay and report writing for a research topic of interest. Instructed in collaboration with subject librarian, professors, and thesis supervisors.

Semester	Total Students	Quality of Teaching	Student Interest	Level of Knowledge Obtained	Usefulness of Course Activities	Overall Effectiveness of Course
Winter 2016	70	4.6 ± 0.4	4.8 ± 0.6	4.6 ± 0.3	4.6 ± 0.2	4.7 ± 0.4

Data Obtained from the University of Waterloo Writing & Communication Centre as of May 18, 2016.
Scores range from Below Expectation (1) to Exceeded Expectation (5).

2016 **Co-Instructor**, BASE44: Writing Skills
University of Waterloo, Waterloo, ON, Canada

Coordinated and managed course content for four sections. Responsible for development and dissemination of instructional materials. Bridge to Academic Success in English is an intensive program for students to develop their oral, reading, and writing skills in English alongside their academic programs. Students learn to write literature reviews, research essays, and lab reports. Instructed in collaboration with subject librarian and TESOL certified professors.

Semester	Total Students	Quality of Teaching	Student Interest	Level of Knowledge Obtained	Usefulness of Course Activities	Overall Effectiveness of Course
Winter 2016	100	4.8 ± 0.4	4.3 ± 0.6	4.7 ± 0.3	4.6 ± 0.2	4.7 ± 0.4

Data Obtained from the University of Waterloo Writing & Communication Centre as of May 18, 2016.
Scores range from Below Expectation (1) to Exceeded Expectation (5).

2015 **Co-Instructor**, PHYS491: Special Topics in Life, Medical, and Biophysics
University of Waterloo, Waterloo, ON, Canada

Coordinated and managed course content for one section. Responsible for development and dissemination of instructional materials. A lecture and project course offered in the areas of life, medical, and biophysics to enhance the learning experience of fourth-year students. Students develop skills in research methods and technical writing to produce a comprehensive literature review and academic presentation of findings. Instructed in collaboration with subject librarian and professor.

Semester	Total Students	Quality of Teaching	Student Interest	Level of Knowledge Obtained	Usefulness of Course Activities	Overall Effectiveness of Course
Winter 2016	100	4.7 ± 0.3	4.5 ± 0.4	4.6 ± 0.5	4.5 ± 0.6	4.8 ± 0.6

Data Obtained from the University of Waterloo Writing & Communication Centre as of May 18, 2016.
Scores range from Below Expectation (1) to Exceeded Expectation (5).

Supervision of Undergraduate Honors Options:

2018 – Present

Semester	Total Students	Kinesiology Majors	Other Majors
Spring 2020	1	1	0
Spring 2019	2	2	0
Spring 2018	5	3	2

Supervision of Undergraduate Research Assistants:

2016 – Present

Semester	Total Students	Kinesiology Majors	Other Majors
Spring 2020	17	9	6
Fall 2019	20	16	4
Spring 2019	16	15	1

Fall 2018	18	16	2
Spring 2018	14	10	4
Fall 2017	14	10	4
Spring 2017	14	8	6
Fall 2016	14	8	6

SERVICE

Ad-Hoc Journal Reviewer

Years	Impact Factor	Journal Title
2020	2.4	*Health Education & Behavior*
2020	2.4	*International Journal of Psychophysiology*
2019	3.6	*Journal of Sport and Health Science*
2016, 2017	0.4	*Recreation, Parks, and Tourism in Public Health*

Administrative Services to the University:

2016 – 2017 **Member**, Office for International Students and Scholars Advisory Committee
Michigan State University, East Lansing, MI, USA

Administrative Services to the College:

2020 **Reviewer**, College of Education Undergraduate Study Abroad Scholarship Committee
Michigan State University, East Lansing, MI, USA

2019 – 2020 **Committee Member**, College of Education Curriculum Committee
Michigan State University, East Lansing, MI, USA

2017, 2018, 2019 **College of Education Evaluator**, University Undergraduate Research and Arts Forum
Michigan State University, East Lansing, MI, USA

Administrative Services to the Department:

2019 – 2020 **Committee Member**, Curriculum Committee, Michigan State University, East Lansing, MI, USA

2018 – 2019	**Committee Member**, PhD Hearing Board, Michigan State University, East Lansing, MI, USA
2017 – 2018	**Committee Member**, Faculty Advisory Committee, Michigan State University, East Lansing, MI, USA

Administrative Services to Professional Societies:

2016 – 2017	**Mentor**, Graduate Women in Science Mid-Michigan Chapter Michigan State University, East Lansing, MI, USA
2011 – 2012	**Organizing Committee**, Congress of the Humanities and Social Sciences Conference, Wilfrid Laurier University, Waterloo, ON, Canada

COMMUNITY OUTREACH & PROGRAMMING

2017 – 2018	**Consultant & Outdoor Education Policy Reviewer** York Region District School Board, Newmarket, ON, Canada
2017	**Volunteer**, Teddy Bear Picnic East Lansing, MI, USA
2017	**Volunteer,** Community Safe Walk, Roll, & Ride Program East Lansing, MI, USA
2016	**Guest Speaker Department of Kinesiology Recruitment Webinar** Wilfrid Laurier University, Waterloo, ON, Canada
2016	**Guest Speaker Faculty of Science Student+Alumni Career Night** Wilfrid Laurier University, Waterloo, ON, Canada

PROFESSIONAL AFFILIATIONS

American College of Sports Medicine

North American Society for Psychology of Sport and Physical Activity

Society for Psychophysiological Research

PROFESSIONAL DEVELOPMENT

2020	Michigan State University Summer Online Instruction Readiness for Educational Excellence
2019	Mathematical Cognition & Learning Society Bayesian Statistics in Numerical Cognition
2018	Society for Psychophysiological Research Multilevel Modeling Workshop
2017	Brock University & SHARCNET: EEG Analysis Workshop
2017	Write Winning Grant Proposals (Institute for Research on Teaching & Learning)
2015	Instructional Skills Workshop (Centre for Teaching Excellence)

CERTIFICATIONS & LICENSURES

2011 – Present	**Ontario Certified Teacher,** Ontario College of Teachers Registration #616343 Status: Good Standing
2018	Adult & Pediatric CPR/First Aid/AED, American Red Cross
2005	Community Soccer Coach, Coaching Association of Canada