

CURRICULUM VITAE

Russell Lowell

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Education

Ph. D in Kinesiology, Concentration: Exercise Science

August 2020 – Present, Department of Kinesiology, Mississippi State University, MS.

- Graduate Teaching Assistant: Advisor/Mentor: Dr. Zack Gillen

Master of Science in Exercise Science, Concentration: Human Performance

May 2019, Liberty University, Lynchburg, VA.

Thesis: Correlation of 2-Dimensional analysis of the Modified Landing Error Scoring System (LESS) and a deceleration task

- Committee Members: Dr. David Titcomb, Dr. Andy Bosak

Bachelor of Science in Exercise Science, Concentration: Clinical Exercise Physiology

December 2016, Mississippi State University, MS.

Education and Professional Experience

January 2020 – August 2020

Fitness Professional

Life Time Fitness, Collierville, TN

- Planned, designed, and implemented exercise programs for athletes, adults, and elderly individual training sessions
- Programmed and instructed group fitness classes of 8-12 members
- Provided online/virtual training for clients working outside of fitness center

August 2019 – December 2019

Strength and Conditioning Intern

Mississippi State Olympic Sports Strength and Conditioning

- Assisted in training sessions for softball, volleyball, Men's and Women's tennis, and track and field team lifts
- Experience with Nordboard, GroinBar, Tendo Units, GymAware, and Polar Pro software for athlete monitoring assessments
- Understanding of exercise modifications to assist with return-to-play athletes

August 2017 – May 2019

Graduate Assistant, Biomechanics and Motion Analysis Laboratory

Department of Allied Health Professions, Liberty University

- Serving as a Graduate Assistant for undergraduate and graduate courses
 - UG Biomechanics
 - GD Biomechanics
 - Research Methods
 - UG Biomechanics lab
 - GD Biomechanics lab
 - Exercise Physiology lab
- Instructed students on proper utilization of various lab equipment in various classes
- Collaborated with undergraduate, graduate, and faculty research projects in both the human performance and motion analysis labs

Related Experience

January – March 2019

Strength and Conditioning Assistant, Lacrosse and Ultimate Frisbee

Club Sports, Liberty University

- Worked closely with strength coaches in development of strength training program
- Recorded physiological responses during lacrosse practice with Firstbeat software
- Implemented various modalities to reduce the likelihood of sports-related injuries
- Provided a knowledgeable and positive environment for optimal growth of student-athletes

September - December 2016

Industrial Engineer Research Assistant, Human Systems Engineering Laboratory

Department of Industrial Engineering, Mississippi State University

- Analyzed motion capture data using Motion Analysis software
- Assisted in measuring participants Rate of Perceived Exertion
- Measured participants perceived muscle recovery using Likert scale
- Recorded data utilizing an Excel spreadsheet

January – May 2016

Neuromechanics Laboratory Research Intern

Department of Kinesiology, Mississippi State University

- Operated BioAnalysis program to collect and analyze force plate data
- Conducted electromyography to capture skeletal muscle activity
- Administered Star Excursion Balance Test to assess dynamic balance
- Analyzed results utilizing an Excel spreadsheet

Primary & Secondary Publications

McDevitt, S., Hernandez, H., Hicks, J., **Lowell, R.**, Bentahaikt, H., Burch, R., Ball, J., Chander, H., Freeman, C., Taylor, C., Anderson, B. (2022). Wearables for Biomechanical Performance Optimization and Risk Assessment in Industrial and Sports Applications. *Bioengineering*, 9(33).

Nelson, H., Bosak, A., **Lowell, R.**, McDermott, M. ., Ziebell, B. ., de Moors, M., Blackley, A., & Arter, S. (2021). Comparison of Peak Aerobic Capacity Between the Treadmill and a Skiing Ergometer . *Journal of Exercise and Nutrition*, 4(3).

Nelson, H. E., Bosak, A., Lowell, R. K., Ziebell, B. M., Sanders, R. T., Feister, J., Phillips, M. M. (2018). An Assessment of a 15 vs. 30 Second Recovery Period on Vertical Jump Performance: 3246 Board #115 June 2 800 AM – 930 AM. [Abstract]. *Medicine & Science in Sports & Exercise*, 50(5S). p. 801.

Phillips, M., Sanders, R. T., Feister, J. R., Bosak, A. M., Nelson, H. E., **Lowell, R. K.**, Ziebell, B. M. (2018). Assessing the Impact of a Governed Focal Point on Broad Jump Performance in Collegiate Females: 3226 Board #95 June 2 800 AM – 930AM. [Abstract]. *Medicine & Science in Sports & Exercise*, 50(5S). p. 795.

Phillips, M., Sanders, R., Feister, J., Bosak, A., Nelson, H., **Lowell, R.**, and Ziebell, B. (2018). Assessing the Impact of a Governed Focal Point on Broad Jump Performance in Collegiate Females. *International Journal of Exercise Science*, 6(9).

Nelson, H., Bosak, A., **Lowell, R.**, Ziebell, B., Sanders, R., Feister, J., and Phillips, M. (2018). An Assessment of 15 vs. 30 Second Recovery Period on Vertical Jump Performance. *International Journal of Exercise Science*, 9(6).

Bosak, A., M. Phillips, R. Sanders, J. Feister, H. Nelson, **R. Lowell**, and B. Ziebell. Evaluating the impact of lean mass and body fat percentage on broad jump performance . *The Journal of Strength and Conditioning Research*, 32(12).

Primary and Secondary Presentations

H. Nelson, A. Bosak, **R. Lowell**, M. Shanahan, B. Ziebell, M. de Moors, A. Blackley, A. Lau, A. Frech, A. McCarty. Assessing the Relationship Between Enjoyment Level and Metabolic Responses During Skiing Ergometer Activity. Poster Presentation at the National Strength and Conditioning Association’s National Conference (Washington, DC: July 2019)

H. Nelson, A. Bosak, M. Phillips, **R. Lowell**, B. Ziebell, M. De Moors, A. Blackley, A. Lau, A. Frech, & A. McCarty. *Comparison of Maximal Aerobic Capacity Between the Treadmill and Concept2 SkiErg*. Free Communication/Poster presentation at National American College of Sports Medicine Regional Conference (Orlando, FL: May 2019).

R. Lowell, J. Roper, A. McCarthy, H. Nelson, M. Phillips, A. Frech, A. Blackley, M. de Moors, P. Sullivan, B. Ziebell, J. Hornsby, J. Simpson, D. Titcomb, A. Bosak. *The Effects of Ankle Taping on Double Leg Balance after Plyometric Exercises*. Free Communication/Slide presentation at National American College of Sports Medicine Regional Conference (Orlando, FL: May 2019).

B. Ziebell, J. Feister, A. Bosak, **R. Lowell**, M. Phillips, H. Nelson, and R. Sanders. *The Relationship between BMI, Lean Mass, and Body Fat Percentage with Balance in Collegiate Archers*. Free Communication/Poster presentation at National American College of Sports Medicine Regional Conference (Orlando, FL: May 2019).

M. Phillips, B. Ziebell, M. de Moors, A. Frech, H. Nelson, **R. Lowell**, A. Blackley, & A. Bosak. *Assessing the Impact of Passive Vs. Active Recovery on Broad Jump Performance in Collegiate Females*. Free Communication/Poster presentation at National American College of Sports Medicine Regional Conference (Orlando, FL: May 2019).

H. Nelson, A. Bosak, M. Phillips, **R. Lowell**, B. Ziebell, M. De Moors, A. Blackley, A. Lau, A. Frech, & A. McCarty. (2019). *Comparison of Maximal Aerobic Capacity Between the Treadmill and Concept2 SkiErg*. Poster presentation at Southeast American College of Sports Medicine Regional Conference (Greenville, SC: February 2019).

R. Lowell, H. Nelson, M. Phillips, B. Ziebell, & A. Bosak. (2019). *Graduate Students' and a Program Director's Perspective on Achieving Academic and Professional Goals*. Tutorial presentation at Southeast American College of Sports Medicine Regional Conference (Greenville, SC: February 2019).

R. Lowell, J. Roper, A. McCarthy, H. Nelson, M. Philips, A. Frech, A. Blackley, M. de Moors, P. Sullivan, B. Ziebell, J. Hornsby, J. Simpson, D. Titcomb, A. Bosak. (2019). *The Effects of Ankle Taping on Double Leg Balance after Plyometric Exercises*. Poster presentation at Southeast American College of Sports Medicine Regional Conference (Greenville, SC: February 2019).

B. Ziebell, J. Feister, A. Bosak, **R. Lowell**, M. Phillips, H. Nelson, and R. Sanders. (2019) *The Relationship between BMI, Lean Mass, and Body Fat Percentage with Balance in Collegiate Archers*. Poster presentation at Southeast American College of Sports Medicine Regional Conference (Greenville, SC: February, 2019).

B. Ziebell, J. Feister, A. Bosak, **R. Lowell**, M. Phillips, H. Nelson, and R. Sanders. *An evaluation of the impact of flexibility on balance in archery athletes*. Poster Presentation at the Midwest American College of Sport and Medicine National Conference. (Grand Rapids, Michigan: November 2018)

Bosak, A., M. Phillips, R. Sanders, J. Feister, H. Nelson, **R. Lowell**, and B. Ziebell. *Evaluating the impact of lean mass and body fat percentage on broad jump performance*. Poster Presentation at the National Strength and Conditioning Association's National Conference. (Indianapolis, IN: July 2018).

Philips, M., Sanders, R., Feister, J., Bosak, A., Nelson, H., **Lowell, R.**, and Ziebell, B. *Assessing the Impact of a Governed Focal Point on Broad Jump Performance in Collegiate Females*. Poster Presentation at the American College of Sport and Medicine National Conference. (Minneapolis, MN: May 2018).

Nelson, H., Bosak, A., **Lowell, R.**, Ziebell, B., Sanders, R., Feister, J., and Philips, M. *An Assessment of 15 vs. 30 Second Recovery Period on Vertical Jump Performance*. Poster Presentation at the American College of Sport and Medicine National Conference. (Minneapolis, MN: May 2018).

Philips, M., Sanders, R., Feister, J., Bosak, A., Nelson, H., **Lowell, R.**, and Ziebell, B. *Assessing the Impact of a Governed Focal Point on Broad Jump Performance in Collegiate Females*. Verbal Presentation at the Liberty University Graduate Research Lunch Seminar Series. (Lynchburg, VA: April 2018).

Nelson, H., Bosak, A., **Lowell, R.**, Ziebell, B., Sanders, R., Feister, J., and Philips, M. *An Assessment of 15 vs. 30 Second Recovery Period on Vertical Jump Performance*. Verbal Presentation at the Liberty University Graduate Research Lunch Seminar Series. (Lynchburg, VA: April 2018).

Philips, M., Sanders, R., Feister, J., Bosak, A., Nelson, H., **Lowell, R.**, and Ziebell, B. *Assessing the Impact of a Governed Focal Point on Broad Jump Performance in Collegiate Females*. Poster Presentation at Southeast American College of Sports Medicine Regional Conference. (Chattanooga, TN: February 2018).

Nelson, H., Bosak, A., **Lowell, R.**, Ziebell, B., Sanders, R., Feister, J., and Philips, M. *An Assessment of 15 vs. 30 Second Recovery Period on Vertical Jump Performance*. Poster Presentation at Southeast American College of Sports Medicine Regional Conference. (Chattanooga, TN: February 2018).

Philips, M., Sanders, R., Feister, J., Bosak, A., Nelson, H., **Lowell, R.**, and Ziebell, B. *Assessing the Impact of a Governed Focal Point on Broad Jump Performance in Collegiate Females*. Thematic Poster Presentation at Mid-Atlantic American College of Sports Medicine Regional Conference. (Harrisburg, PA: November 2017).

Nelson, H., Bosak, A., **Lowell, R.**, Ziebell, B., Sanders, R., Feister, J., and Philips, M. *An Assessment of 15 vs. 30 Second Recovery Period on Vertical Jump Performance*. Thematic Poster Presentation at Mid-Atlantic American College of Sports Medicine Regional Conference. (Harrisburg, PA: November 2017).

J.C. Swain, B.L. Miller, M.T. Pace, **R.K. Lowell**, J.D. Simpson, A.C. Knight, & H. Chander. Impact of Minimalist Footwear Type and Fatigue on Balance. *Poster presentation submitted for undergraduate student research award at Southeast ACSM Annual Meeting, February 2017.*

A.J. Turner, H. DeBusk, **R.K. Lowell**, C.M. Hill, B.L. Miller, J.D. Simpson, A.C. Knight, & H. Chander. Effects of Military Type Footwear and Workload on Unilateral Static Balance. *Poster presentation submitted for undergraduate student research award at Southeast ACSM Annual Meeting, February 2017.*

B.L. Miller, J.D. Simpson, J.C. Swain, M.T. Pace, **R.K. Lowell**, Z. Pan, A.C. Knight, & H. Chander. Effect of Minimalist Footwear and Fatigue on Static Balance. *Poster presentation submitted for undergraduate student research award at Southeast ACSM Annual Meeting, February 2017.*

Research Experience

Neuromechanics Laboratory

Department of Kinesiology, Mississippi State University

“Impact of Cognitive Interference, Standing Surface, and Simulated Occupational Task and Fatigue on Balance”

- Recorded participants’ performance during cognitive trails
- Implemented fatigue protocol
- Used the Borg scale to measure Rate of Perceived Exertions

Laboratory Equipment Capabilities

- AMTI Force Plate
- Delsys Trigno Wireless EMG
- Dartfish
- Biodex Balance System
- Vicon Nexus
- Motion Analysis
- Tendo Unit
- Parvo Medic
- Inbody 770
- BodPod

Related Coursework

Mechanical Analysis of Movement
Neural Control & Human Movement
Biomechanics & Lab
Physiology of Exercise & Lab

Certifications

CPR/AED/First Aid Certified, American Heart Association, November 2021
NASM CPT, National Academy of Sports Medicine, December 2020

Conferences Attended

1. **2017** - Southeast American College of Sports Medicine Meeting; Greenville, SC.
2. **2017** - Mid-Atlantic American College of Sports Medicine Meeting; Harrisburg, PA.
3. **2018** - Southeast American College of Sports Medicine Meeting; Chattanooga, TN.
4. **2018** - American College of Sports Medicine National Annual Meeting; Minneapolis, MN.
5. **2018** - NSCA Juniata Strength and Conditioning Conference; Huntingdon, PA.
6. **2018** - Midwest American College of Sports Medicine Meeting; Grand Rapids, MI
7. **2019** - Southeast American College of Sports Medicine Meeting; Greenville, SC.
8. **2019** - American College of Sports Medicine National Annual Meeting; Orlando, FL.
9. **2022** - Southeast American College of Sports Medicine Meeting; Greenville, SC.

Research Interests / Current Research

- Sport Performance
- Wearable Technology
- Sports Biomechanics
- Lower Extremity Injury Prevention
- Biomechanics of Human Balance and Gait
- Motor Control of Human Movement
- Aerobic Assessment

Awards and Honors

MS Graduate with Distinction
Dean's List Spring 2015 and Fall 2016

Funds Solicited and Grants Awards

Graduate Student Assistantship

August 2017 – May 2019

Department of Allied Health Professions, Liberty University

Funded: \$16,800

Graduate School Student Presentation award

May 2019

Funded: \$590.00

Graduate School Student Presentation award

February 2019

Funded: \$270.00

Memberships in Professional Organizations

National Strength and Conditioning Association, student member, October 2020 - Present

American College of Sports Medicine (ACSM), student member, May 2018 - Present

Southeast American College of Sports Medicine (SEACSM), January 2017 - Present

Mid-Atlantic American College of Sports Medicine (ACSM), November 2017 - November 2018

University Service

Liberty University Swimming and Diving Team (March 2019)

- Utilize AMTI force plates to record and analyze jump performance

Liberty University Football (January 2019)

- Assessment of athlete's body fat percentage

Liberty University Triathlon Team (October 2017)

- Assessment of athlete's body fat percentage and VO₂max through laboratory testing

Liberty University Football (June-July 2017)

- Perform FMS screening on football players
- Analyze nutritional knowledge of players through surveys/questionnaires

Indirect Work Experience

May - August 2019

Event Officer

University Events, Liberty University

- Communicate and schedule events on 25Live
- Provide event support to event coordinators

- Organize and plan events with customers

May - August 2016

Camp Ozark Top Staff

Camp Ozark, Mt. Ida, AR

- Supervise campers and counselors during Morning Instructional classes
- Ensure that all policies are being followed to maximize safety
- Assist with administrative Top Staff responsibilities

May - August 2015

Camp Ozark Camp Counselor

Camp Ozark, Mt. Ida, AR.

- Supervised and cared for nine kids per session for five sessions throughout the summer
- Conducted camp activities as a ropes course instructor
- Received emergency training for potential crises

Community Service

Occupational Physiologist Testing Assistant (March 2017 – May 2019), Lynchburg, VA firefighter cadets

- Assisted with testing and training of firefighter cadets

Liberty Christian Academy MS Wrestling Team Assessments (November 2017 - May 2019), Lynchburg, VA

- Pre- and post- test assessments of fitness aspects of the middle school wrestling team

Community Involvement

2020 – Present	Starkville High School Young Life leader
2017 - 2019	Heritage High School Young Life leader
2017 - 2018	Assistant Soccer Coach, YMCA of Central Virginia, Lynchburg, VA.
2015 - 2017	Starkville High School Young Life leader