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# David Richard Hartman

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drdhartman@gmail.org  
http:drdhartman.com  
7800 N. 134<sup>th</sup> Street  
Waverly, NE 68462  
402.440.6158

## EDUCATION

Doctor of Philosophy in Educational Studies: Teaching, Curriculum and Learning  
University of Nebraska; Lincoln, Nebraska; December 2010

GPA: 4.0

Advisor: Dr. Ruth M. Heaton

Dissertation Title: A Case Study of the Mathematical Learning of Two Teachers Acquiring  
Mathematical Knowledge for Teaching (<http://digitalcommons.unl.edu/cehsdiss/90>)

Master of Education in Curriculum and Instruction

Doane College; Crete, Nebraska; August 1999

GPA: 4.0

Bachelor of Science in Mathematics; Summa Cum Laude

Doane College; Crete, Nebraska; May 1995

GPA: 3.98

## CERTIFICATION

State of Nebraska, Teaching Certificate; Mathematics and Computer Science, 7-12

## K-12 TEACHING EXPERIENCE

**Waverly High School (WHS);** Waverly, Nebraska (2015-2019)

- Currently instructs students in algebra, differentiated geometry, and dual-enrollment college statistics courses. The dual-enrollment is through Southeast Community College (SCC). Previously taught geometry and general statistics.

**Lincoln Southwest High School (LSW);** Lincoln, Nebraska (2002-2015)

- Instructed students in algebra (traditional and extended), geometry, advanced algebra, problem solving, and pre-calculus courses in a 4x4 block schedule setting; Incorporated engaging instructional strategies, formative assessments, technology, and collaborative learning terms into lesson planning and classroom instruction; Utilized technology (e.g., an iPad and website) as a resource for providing additional support for all learners outside of the classroom; Built and maintained positive relationship with diverse learners, including but not limited to ELL, visually impaired, behavioral and learning disabled, and high ability learners; Placed emphasis on preparing all students for the state exam (NeSA-M) and ACT exam; Considered NCTM Principles and Standards as well as the Common Core Standards of Mathematical Practice while preparing lesson plans; Member of the LSW math professional learning community (PLC).

**Robin Mickle Middle School**; Lincoln, Nebraska (1995-2002)

- Incorporated alternative assessments, technology, and writing into seventh and eighth grade general mathematics, pre-algebra, and algebra courses; Grades 6-8 computer teacher; Member of a math, science, social studies, and English interdisciplinary team; Member of the technology committee; MathCounts coach.

## **COLLEGE TEACHING EXPERIENCE**

**Bryan College of Health Sciences**, Lincoln, Nebraska (2019-)

- Taught STAT 210 (Statistics) to Bryan College students. The goal of this course is to provide students with an introductory survey of the many mathematical, business, scientific, economic, and sociology applications of descriptive and inferential statistics.

**Southeast Community College**, Lincoln, Nebraska (2016-2019)

- Taught MATH 2170 (Statistics) to Waverly High School dual-enrolled students. The goal of this course is to provide students with an introductory survey of the many mathematical, business, scientific, economic, and sociology applications of descriptive and inferential statistics.

**Nebraska Wesleyan University**, Lincoln, Nebraska (2015-2019)

- Taught MATH 1300 (Statistics) for the 8-week session of the Wesleyan Advantage undergraduate program beginning in the spring of 2015. I have taught this course sixteen (16) times including face-to-face, online, and hybrid environments. The goal of this course is to provide students with an introductory survey of the many mathematical, business, scientific, economic, and sociology applications of descriptive and inferential statistics.
- Taught MATH 1100 (College Algebra) for the 8-week session of the Wesleyan Advantage undergraduate program beginning in the spring of 2017, fall of 2017 and fall of 2018. The goal of the course is to discover ways to mathematically describe various relationships among data and to use those mathematical models to analyze situations and solve problems. In the course of doing so, students refine skills in manipulating algebraic expressions, equations, and inequalities while improving graphical analysis.
- Taught NURS 5020 (Statistics) during the 8-week 2016 summer session of the NWU Nursing Master's degree program. This course examined selected concepts needed to develop sound judgment about data analysis and the appropriate use of statistics. The course prepared students to interpret and critically analyze the results of health care research.

**University of Nebraska (UNL)**, Lincoln, Nebraska (2012-2018)

- Taught TEAC 892 (Teacher Learning about Reasoning & Sense Making in Secondary Mathematics) face-to-face during the summers of 2012-2015 and 2018 to UNL graduate students as part of Nebraska Math & Science Summer Institute (NMSSI) and online during the summers of 2015 and 2017. Cases of Reasoning and Proving (CORP) was a National Science Foundation project co-directed by Smith (Pittsburg) and Arbaugh (Missouri). Principle aims of CORP included exploring the nature of

reasoning-and-proving in secondary mathematics and developing strategies for modifying current textbook tasks to provide more reasoning opportunities for students. I was asked to become the UNL instructor to pilot the course for Smith and Arbaugh and adapt the course for NMSSI. I also modified and have taught this course as an online option for teachers desiring to earn a Master of Arts for Teachers (MAT) degree.

- Modified MATH 802T (Functions, Algebra, and Geometry for Middle Level Teachers), an existing UNL course, to be an online course as well as taught 802T during the summers of 2013, 2014, and 2016 as well as the spring of 2017 as part of NMSSI. MATH 802T was developed to help teachers deepen their understanding of the concept of function, algebra, and geometry concepts taught in the middle-level (through early high school) curriculum.
- Taught TEAC 808J (Improvement of Instruction in Middle School Mathematics) during the 2015 fall semester to Lincoln Public Schools (LPS) Title I teachers who were part of Math in the Middle (M2). M2 is a 36-hour graduate program leading to a master's degree.
- Taught TEAC 808J (Improvement of Instruction in Elementary Mathematics: Special Topics "Helping Young Children Become Mathematical Thinkers") during the 2015 spring semester to LPS Title I teachers who were part of Primarily Math (PM). PM is an 18-hour graduate program leading to a K-3 Math Specialist Certificate. 808J focuses on the continued design and implementation of math lessons aimed at helping children become mathematical thinkers begun in TEAC 808A. This course, in part, emphasizes meeting the needs of diverse learners and includes strategies for increasing the frequency and content of parent communication.
- Taught TEAC 808A (Improvement of Instruction in Elementary Mathematics) during the 2014 fall semester to UNL graduate students who are part of a Master of Arts in elementary teaching (MAet) cohort. The goals for students included: (a) reflecting on past experiences as well as continuing to develop as a learner of mathematics, (b) better understanding the nature of mathematics teaching practice based on recent research, and (c) better understanding some of the challenges, tensions, and dilemmas associated with teaching mathematics in a diverse classroom.
- Taught TEAC 800 (Inquiry into Teaching & Learning) during the summer of 2012 to UNL graduate students newly selected as Robert Noyce Teaching Fellows and then during the summer of 2014 to UNL graduate students selected to be part of Math in the Middle. The course was organized, in part, around two key questions: *What does it look like to teach? What does it look like to learn?* Further, participants in the course took a deeper look at what it looks like to teach the discipline of mathematics. The course was also designed to introduce participants to the field of educational inquiry, particularly various designs and methods of doing educational research.

#### **Union College, Lincoln, Nebraska (2013-2014; 2018)**

- Taught EDUC 413 (Secondary Mathematics Methods) during the spring semesters of 2013, 2014, and 2018 to Union College undergraduate students studying secondary education. The principle aim of EDUC 413 was to help prospective teachers examine the theoretical and practical aspects of secondary math education. The instruction was centered on the varied levels of standards (e.g., NCTM, Nebraska State, and Common

Core), current literature in math education, technology (e.g., graphing calculators, iPads, document cameras and projectors), lesson design and presentation, instructional strategies (e.g., think-pair-share, quiz-quiz-trade, and roundtable), and formative and summative assessment techniques. The course was centered on two key questions: *What does it look like to learn mathematics?* and *What does it look like to teach mathematics?*

## **RELATED PROFESSIONAL EXPERIENCE**

### **Department Chair, Waverly High School (2016-2019)**

- Responsibilities include overseeing four mathematics teachers and over 600 students; serving as the liaison between the math department and administration, the counseling department, and school patrons; managing the annual math budget in addition to textbooks, calculators, and other teaching technologies and manipulatives.

### **Co-Student Council Sponsor, Waverly High School (2016-2019)**

- Responsibilities include overseeing and advising all student council activities.

### **Quiz Bowl Sponsor, Waverly High School (2016-2019)**

- Responsibilities include overseeing club day practices and taking students to competitions. 2018-19 membership is 153 students.

### **National Advisory Board Member, University of Nebraska-Lincoln (2018)**

- National Advisory Board Member for *Teacher Leadership (T-Lead): Investigating the Persistence and Trajectories of Noyce Master Teaching Fellows* (PI's: Smith, Criswell, Rushton, Yow, and Lotter)

### **Department Chair, Lincoln Southwest High School (2009-2015)**

- Responsibilities include overseeing twelve mathematics teachers and over 1700 students; serving as the liaison between the math department and administration; assisting with the interviewing and hiring of math teachers; assigning teaching assignments as well as creating the master teaching schedule for the department; managing the annual math budget in addition to over \$175,000 in textbooks, calculators, and other teaching technologies; participating in building and district leadership meetings and assisting with decision making; leading department meetings; facilitating the math PLC; helping to implement assessments; mentoring new teachers.

### **Cooperating Teacher for Pre-Service Educators (1999-2015)**

- Cooperating teacher responsible for seven Doane College student teachers (Julia Peterson, Angie Smith, William Sadowski, Meagan Bauer, Gina Bartels, Aaron Callaway, and Alyssa Straube), six UNL student teachers (Kelly Gomez, Anthony Leetch, Chara Guthrie, Matthew Harmon, Mary Lingenfelter, and Marshall Payer), one Nebraska Wesleyan (NWU) student teacher (Alisa Mueller), and one Union College student teacher (Andrew Stevens).

**Panel Reviewer for the National Science Foundation (NSF) (2015)**

- Primary and secondary reviewer of proposals at the NSF headquarters in Washington D.C. for the NSF Robert Noyce Teacher Scholarship program.

**Primary Independent Reviewer for the U.S. Department of Education (2014)**

- Reviewer for the What Works Clearinghouse (WWC) practice guide *Improving Common Core High School Algebra Skills*.

**Instructor for *Instructional Practices* (LPS K-12 Tenure Course) (2011-2014)**

- Actively exposed participants to a variety of instructional strategies as well as the role that unexamined teacher perceptions and attitudes play in restricting learning opportunities for students in this thirty hour professional development course; Encouraged teachers to consider how their decisions affect various learners, the importance of understanding options for improving the learning of a wide array of students, as well as the research that informs best practices; co-instructor for 2 courses; lead instructor for 6 courses.

**Midwest Mathematics Meeting of the Minds (M4) Conference (2014)**

- One of forty P-16 Nebraska educators invited to attend the 2014 M4 conference. Leaders from Nebraska, Iowa, Missouri, and Kansas met to learn from Margaret Smith (University of Pittsburgh) and Barbara Dougherty (University of Missouri).

**Panel Reviewer for the National Science Foundation (NSF) (2013)**

- Primary and secondary reviewer of proposals at the NSF headquarters in Washington D.C. for the NSF Math and Science Partnership program.

**Doctoral Coursework at the University of Nebraska—Lincoln (2004-2010)**

- 70 graduate hours of coursework; Areas of concentration included mathematics, pedagogy, policy and practice, cognitive psychology, and research methods.

**LPS Mathematics Graduation Demonstration Exam Leader (2003-2009)**

- Member of the writing team; teacher trainer; lead grader.

**UNL Math in the Middle Institute-Partnership (2004-2009)**

- Funded by a five-year, \$5 million grant from the National Science Foundation, the Math in the Middle Institute Partnership educated and supported teams of outstanding middle-level (grades 5-8) mathematics teachers to become leaders in their schools.
- Graduate Teaching Assistant for three graduate level education courses (Inquiry into Teaching and Learning; Curriculum Inquiry; Teacher as Scholarly Practitioner) and four graduate level mathematics courses (Mathematics as a Second Language; Functions, Algebra and Geometry; Experimentation, Conjecture, and Reasoning; Discrete Mathematics for Middle Level Teachers).
- Graduate Research Assistant; Responsibilities included the collection of field work data, supervision and organization of project data, assistance with action research,

director of the alternative assessment; facilitator of participant learning teams; Collaboratively worked alongside principal investigators, internal and external advisory board members, and the external assessment company (RMC).

### **LPS-UNL Summer Professional Development Course Instructor (2004, 2005)**

- Developed course materials and taught a two-week summer professional development course to LPS mathematics teachers: *Algebra for Elementary and Middle Level Teachers*.

### **PRESENTATIONS**

- Nebraska Summit on Math and Science Education (Dec, 2014), *Making Sense of Sense Making*
- Lincoln Public School Mathematics Staff Development (1996-2013), “flex” session leader nearly every year of employment. Most recently, *Using the iPad in a Secondary Math Classroom*; (Feb, 2014)
- Lincoln Public Schools Staff Development (2000-2005, 2011-2012): session leader for newly hired teachers, *Harry Wong’s First Days of School*
- Nebraska Association of Teachers of Mathematics (NATM) Pre-Professional Conference: (Oct, 2011) *Exploring the “Habits of Mind” of a Mathematical Learner*; (Oct, 2010) *Exploring the “Habits of Mind” of a Mathematical Learner*; (Oct, 2009) *Using the NCTM Process Standards in the Middle School Classroom*; (Oct, 2008) *Teaching Under the Umbrella of the NCTM Process Standards*; (Feb, 2007) *Setting Up a Community of Learning Through Habits of Mind*
- University of Nebraska Issues in Mathematics Education Seminar (Feb, 2008) with UNL faculty members, Ruth Heaton, Ph.D. and Meixia Ding, Ph.D., *Promoting the Ability to Generalize in the Context of Teaching Problem Solving*
- Lincoln Area Math Teachers Circle (Jan, 2008), *Fault-Free Rectangles*
- University of Nebraska Issues in Mathematics Education Seminar (Nov, 2007), Proposed Dissertation Study: *A Study of the Learning and Use of Mathematical Knowledge by Three Middle Level Inservice Teachers*
- Illinois Department of Education Math Science Partnership (June, 2007; Oct, 2007) with UNL faculty members, Jim Lewis, Ph.D. and Cheryl Miner, Ph.D., *The Mathematical Education of Teachers: A National Imperative, A Local Commitment*
- National Science Foundation—Math & Science Partnership Evaluation Summit II (Oct, 2006) with UNL faculty member, Ruth Heaton, Ph.D., *A Study of Middle Level Students’ Mathematical Understanding Using Alternative Assessments*
- National Council of Teachers of Mathematics (NCTM) Regional Math Conference Presenter (1994; 2001)
- Doane College Math Splash Conference Presenter (1999; 2000)

## GRANTS

- \$5000 Turning Foundation Classroom Improvement Technology Grant (2010)
- \$15,000 GTE GIFT Fellow “Growth Initiatives for Teachers” (2000)
- \$975 Nebraska Math & Science Initiative (NMSI) Energy Grant (1997)

## HONORS

- 2011 Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST)—National Award
- 2011 PAEMST Nebraska State Finalist
- 2009 PAEMST Nebraska State Finalist
- 2008 Doane College Alumni Educator of the Year
- 2007 PAEMST Nebraska State Finalist
- 2007 Dr. Milton Beckmann UNL Fellowship
- 2006 Dr. David and Mrs. Margaret Wells UNL Fellowship
- 2006 Lincoln Rotary Club #14 Don W. Miller Math Award
- 2006 Mathematics Emeritus Faculty Award for Lincoln Public Schools (LPS) Teachers of Mathematics
- 2005 Miss Myrtle Clark Outstanding Mathematics Educator Award
- 2000 G.T.E. Gift Fellow: Growth Initiatives for Teachers, National Award
- 1996 Sallie Mae First Class Teacher Award, LPS Nominee
- 1995 Doane College Phi Eta Sigma Award for highest accumulated GPA
- 1995 Doane Scholar
- 1995 Doane College Advanced Mathematics Award
- 1992 Doane College First Year Calculus Award
- 1991 Salutatorian of Graduating Class at Norris High School

## PUBLICATIONS

- Ding, M., Heaton, R., & Hartman, D. (Winter 2012-2013). Teaching middle level students to generalize: From implicit to explicit. *Investigations in Mathematics Learning*, 5(2), 14-43.
- Heaton, R., Smith, W., Kromminga, R., & Hartman, D. (2008). *Understanding the meaning of rural within a middle school mathematics professional development and*

- research project in Nebraska* (Working Paper No. 40). Athens, OH: Appalachian Collaborative Center for Learning, Assessment, and Instruction in Mathematics.
- Heaton, R., Smith, W, Kromminga, R., & Hartman, D. (2008). The ambiguity of rural. *Rural Mathematics Educator*, 7(1).
  - Heaton, R., & Hartman, D. (2006, October). *A Study of middle level students' mathematical understanding using alternative assessments*. Paper presented at the MSP Evaluation Summit II, Minneapolis, MN.

## REFERENCES

### Matt Larson, Ph.D.

Lincoln Public Schools assistant superintendent  
Past National Council of Teachers of Mathematics (NCTM) President  
Former Mathematics Curriculum Specialist  
Lincoln Public Schools  
5905 O St. Lincoln, Nebraska 68510  
402.436.1801  
mrl@lps.org

### Ryan Ricenbaw

Past Principal  
Waverly High School  
Current: Chief Educator at Find Your Grind  
ryan@findyourgrind.com

### Hugh McDermott

(Retired) Principal  
Lincoln Southwest High School  
7001 South 14<sup>th</sup> St. Lincoln, Nebraska 68512  
402.436.1306  
hmcderm@lps.org

### Ruth Heaton, Ph.D.

William, Mary, Mollie & Margaret Gilmartin Professor of Education  
Department of Teaching, Learning, and Teacher Education  
University of Nebraska—Lincoln  
214A Henzlik Hall Lincoln, Nebraska 68588  
402.472.1991  
rheaton1@unl.edu

### Jim Lewis, Ph.D.

Former Deputy Assistant Director for the Education and Human Resources Directorate at the National Science Foundation  
703.292.8600 (NSF)  
wjlewis@nsf.gov



Aaron Douglass Professor of Mathematics  
Director—Center of Science, Mathematics, and Computer Education  
University of Nebraska—Lincoln  
302 Avery Hall Lincoln, Nebraska 68588  
402.472.7243 (UNL)  
wlewis1@unl.edu