

Melissa M. Patchan, Ph.D.

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<https://lshd.wvu.edu/facilities/p2p-learning-lab>

Professional Experience

- 2016-current **Assistant Professor**, West Virginia University, Morgantown, WV
- Department of Learning Sciences & Human Development
- 2015-2016 **Research Associate**, Georgia State University, Atlanta, GA
- Department of Educational Psychology, Special Education, & Communication Disorders
- 2012-2015 **Postdoctoral Associate**, University of Pittsburgh, Pittsburgh, PA
- Department of Communication Science & Disorders
- 2011-2012 **Postdoctoral Researcher**, University of Antwerp, Belgium
- Faculty of Applied Economics | Department of Management

Education

- 2011 Ph.D. **Cognitive Psychology**, University of Pittsburgh, Pittsburgh, PA
- 2007 M.S. **Cognitive Psychology**, University of Pittsburgh, Pittsburgh, PA
- 2004 B.A. **Psychology** (Honors), University of South Florida, Tampa, FL

Grants

- 2013 – 2015 **Teaching early writing skills: A comparison between three conditions**
- Central Research Development Fund, University of Pittsburgh
 - Co-PI with C. Puranik
 - Total costs: \$15,993

Not funded:

- Submitted 08/19 **Online professional development for teaching peer review to improve students' argument writing in high school English language arts**
- Department of Education, Institute for Education Sciences
 - Co-PI with A. Godley, D. Litman, & R. Correnti
 - Total costs: \$1,399,968
- submitted 11/18 **Using peer assessment to improve middle school mathematical communication**
- National Science Foundation, Discovery Research PreK-12
 - PI with K. Rambo-Hernandez & J. Bolyard
 - Total costs: \$449,999
- submitted 08/18 **Online professional development for teaching peer review to improve students' argument writing in high school English language arts**
- Department of Education, Institute for Education Sciences
 - Co-PI with A. Godley, D. Litman, & R. Correnti
 - Total costs: \$1,398,369

- submitted 04/18 ***Peer-to-Peer Learning Lab***
- Women of WVU Enrichment Fund
 - Total costs: \$5,000
- submitted 01/18 ***CIRCL: Supporting vocational training and career growth of rural adults on crowd work marketplaces***
- National Science Foundation, Cyberlearning & Future Learning Technologies
 - Co-PI with S. Savage
 - Total costs: \$242,778
- submitted 11/17 ***Using peer assessment to improve middle school mathematical communication***
- National Science Foundation, Discovery Research PreK-12
 - PI with K. Rambo-Hernandez & S. Saiph
 - Total costs: \$449,257
- submitted 08/17 ***Evaluative misalignment of adolescents' writing assessment criteria: Exploring cognitive, metacognitive, and motivational contributions***
- Department of Education, Institute for Education Sciences
 - Co-PI with R. Roscoe, S. Crossley, & L. Branum-Martin
 - Total costs: \$1,379,103
- submitted 05/17 ***Peer assessment of problem posing: Improving middle school mathematical competency***
- WVU Research Office (PSCoR)
 - PI with K. Rambo-Hernandez
 - Total costs: \$23,854
- submitted 05/17 ***Improving students' understanding of their writing problems during peer assessment***
- Spencer Foundation, Teaching, Learning, & Instructional Resources
 - PI with K. Rambo-Hernandez
 - Total costs: \$50,000
- submitted 12/16 ***Using problem posing and peer assessment to improve middle school students' mathematical competency***
- National Science Foundation, Discovery Research PreK-12
 - PI with K. Rambo-Hernandez & E. Gehringer
 - Total costs: \$449,766

Journal Articles (* denotes student co-author)

1. Roscoe, R. D., Wilson, J., **Patchan, M. M.**, Chen, D., & Johnson, A. C. (2020). Modeling student evaluations of writing and authors as a function of writing errors. *Journal of Language and Education*, 6(2), 147-164. <https://doi.org/10.17323/jle.2020.10316>
2. **Patchan, M. M.**, Rambo-Hernandez, K. A., Dietz, B., & McNeill, J. (under review). Using peer assessment to improve middle school mathematical communication: A pilot study.
3. **Patchan, M. M.**, Schunn, C. D., & Clark, R. J. (2018). Accountability in peer assessment: Examining the effects of reviewing grades on peer ratings and peer feedback. *Studies in Higher Education*, 43(12), 2263-2278. doi: 10.1080/03075079.2017.1320374

4. Puranik, C. S., **Patchan, M. M.**, Lemons, C. J., & Al Otaiba, S. (2017). Using peer assisted strategies to teach early writing: Results of a pilot study to examine feasibility and promise. *Reading and Writing*, 30(1), 25-50. doi:10.1007/s11145-016-9661-9
5. Puranik, C. S., **Patchan, M. M.**, *Sears, M. M., & McMaster, K. L. (2017). Examining alphabet writing fluency in kindergarten: Exploring the issue of time on task. *Assessment for Effective Intervention*, 42(2), 81-96. doi: 10.1177/1534508416665324
6. **Patchan, M. M.** & Puranik, C. S. (2016). Using tablet computers to teach preschool children to write letters: Exploring the impact of extrinsic and intrinsic feedback. *Computers & Education*, 102, 128-137. doi: 10.1016/j.compedu.2016.07.007
7. **Patchan, M. M.** & Schunn, C. D. (2016). Understanding the effects of receiving peer feedback for text revision: Relations between author and reviewer ability. *Journal of Writing Research*, 8(2), 227-265. doi:10.17239/jowr-2016-08.02.03
8. **Patchan, M. M.**, Schunn, C. D., & Correnti, R. J. (2016). The nature of feedback: How feedback features affect students' implementation rate and quality of revisions. *Journal of Educational Psychology*, 108(8), 1098-1120. doi:10.1037/edu0000103
9. **Patchan, M. M.**, Schunn, C. D., Sieg, W., & McLaughlin, D. (2016). The effect of blended instruction on accelerated learning. *Technology, Pedagogy, & Learning*, 25(3), 269-286. doi:10.1080/1475939X.2015.1013977
10. **Patchan, M. M.** & Schunn, C. D. (2015). Understanding the benefits of providing peer feedback: How students respond to peers' texts of varying quality. *Instructional Science*, 43(5), 591-614. doi:10.1080/1475939X.2015.1013977
11. **Patchan, M. M.**, *Hawk, B., *Stevens, C. A., & Schunn, C. D. (2013). The effects of skill diversity on commenting and revisions. *Instructional Science*, 41(2), 381-405. doi:10.1007/s11251-012-9236-3
12. **Patchan, M. M.**, Schunn, C. D., & Clark, R. J. (2011). Writing in natural sciences: Understanding the effects of different types of reviewers on the writing process. *Journal of Writing Research*, 2(3), 365-393. doi:10.17239/jowr-2011.02.03.4
- reprinted in S. Parks, B. Glascott, B. Bailie, H. Christiansen, & S. Waite (Eds.) (2011), *The best of the independent rhetoric and composition journals 2011*. Anderson, SC: Parlor Press.
13. **Patchan, M. M.**, Charney, D. & Schunn, C. D. (2009). A validation study of students' end comments: Comparing comments by students, a writing instructor, and a content instructor. *Journal of Writing Research*, 1(2), 124-152. doi:10.17239/jowr-2009.01.02.2
14. ¹**Nelson, M. M.** & Schunn, C. D. (2009). The nature of feedback: How different types of peer feedback affect writing performance. *Instructional Science*, 37(4), 375-401. doi:10.1007/s11251-008-9053-x
15. Steinberg, D., **Patchan, M. M.**, Schunn, C. D., Landis, A. (2009). Determining adequate information for green building occupant training materials. *Journal of Green Building*, 4(3), 143-150. doi: 10.3992/jgb.4.3.143

¹maiden name

16. Steinberg, D., **Patchan, M. M.**, Schunn, C., & Landis, A. (2009). Developing a focus for green building occupant training materials. *Journal of Green Building*, 4(2), 175-184. doi: 10.3992/jgb.4.2.175

Book Chapters

1. Roscoe, R. D., Walker, E. A., **Patchan, M. M.** (2018). Facilitating peer tutoring and assessment in intelligent learning systems. In S. D. Craig (Ed.), *Tutoring and intelligent tutoring systems*. Hauppauge, NY: Nova Science Publishers, Inc.
2. Schunn, C. D. & **Nelson, M. M.** (2008). Expert-novice studies: An educational perspective. In E. M. Anderman & L. H. Anderman (Eds.), *Psychology of classroom learning: An encyclopedia*. Detroit, MI: Macmillan Reference.

Manuscripts in Preparation

1. *Altman, N. P., *Weiss, A. E., **Patchan, M. M.**, & Rambo-Hernandez, K. E. (revise to resubmit). Using qualities of revision to predict composition improvement.
2. *Mikesell, M. & **Patchan, M. M.** (in prep). Understanding student attitudes about peer feedback.
3. Godley, A., *DeMartino, S., *Loretto, A., & **Patchan, M. M.** (in prep). A description of high school students' peer review and revision practices: Relationships between peer feedback received, reviews of peers' essays, and essay revisions.

Invited Talks

1. **Patchan, M. M.** (2017, October). *The nature of peer feedback: A learning sciences perspective*. Invited talk at the 4th annual Learning with MOOCs Conference, Austin, TX.

Presentations and Posters (*denotes student co-author)

1. *Ashton, J. M. & **Patchan, M. M.** (2019, July). *Novice & expert differences in reviewing student work*. Poster presented at the Summer Undergraduate Research Symposium, West Virginia University.
2. *Ashton, J. M., *Goode, M., & **Patchan, M. M.** (2019, April). *Peer feedback: Revisions and Implementation*. Poster presented at WVU's 3rd Annual Undergraduate Spring Symposium.
3. *Uscola, C. & **Patchan, M. M.** (2019, April). *Coding a path through high-quality feedback*. Poster presented at 2019 National Conference on Undergraduate Research, Kennesaw, GA. - also presented at CEHS Student Scholars Symposium
4. *Tracewell, E. & **Patchan, M. M.** (2019, February). *The effects of instructional rubrics on essay quality*. Poster presented at 2019 Undergraduate Research Day at the Capital, Charleston, WV.
5. Roscoe, R. D., *Novak, K., *King, A., & **Patchan, M. M.** (2018, October). *Exploring higher agency roles for learning with educational technology and multimedia*. Paper presented at the 62nd International Annual Meeting of Human Factors and Ergonomics Society (HFES), Philadelphia, PA.

6. **Patchan, M. M.**, Rambo-Hernandez, K. A., *Dietz, B. N. & *Hathaway, K. A. (2018, June). *Assessing the validity of peer feedback in a sixth-grade mathematics class*. Poster presented at the 2018 annual meeting of the International Conference of the Learning Sciences, London, England.
7. *Anderson, G., *Modrak, C., *Kiser, A., Mikesell, M., Rambo-Hernandez, K., & **Patchan, M.** (2018, April). The relationship between accuracy of feedback and writing quality among students. Poster presented at the CEHS Celebration of Scholars, West Virginia University.
- also presented at WVU's 2nd Annual Undergraduate Spring Symposium
8. *McNeill, J., *Dietz, B., Mikesell, M., Rambo-Hernandez, K., & **Patchan, M.** (2018, April). *Peer vs. teacher feedback: Comparing apples to oranges?* Poster presented at the CEHS Celebration of Scholars, West Virginia University.
- also presented at WVU's 2nd Annual Undergraduate Spring Symposium
9. *Weiss, A., Altman, N., & **Patchan, M. M.** (2018, February). *Analyzing revisions to inform composition improvement*. Poster presented at 2018 Undergraduate Research Day at the Capital, Charleston, WV.
10. *Altman, N., *Tracewell, E., *Kiser, A., *Mikesell, M., *Carowick, Z., & **Patchan, M.** (2017, April). *Peer feedback among high-ability versus low-ability reviewers*. Poster presented at the CEHS Celebration of Scholars, West Virginia University.
- also presented at WVU's 1st Annual Undergraduate Spring Symposium
11. *McNeill, J., *Westley, H., *Kwan, B., *Mikesell, M., *Carowick, Z., & **Patchan, M.** (2017, April). *How peer reviewer ability influences praise and critical feedback*. Poster presented at the CEHS Celebration of Scholars, West Virginia University.
- also presented at WVU's 1st Annual Undergraduate Spring Symposium
12. *Weiss, A., *Wild, C., *Mikesell, M., *Carowick, Z., & **Patchan, M.** (2017, April). *Comparing the content of peer feedback comments between subsequent papers*. Poster presented at the CEHS Celebration of Scholars, West Virginia University.
- also presented at WVU's 1st Annual Undergraduate Spring Symposium
13. **Patchan, M. M.**, Schunn, C. D., & Clark, R. J. (2016, June). *When trying to be helpful, peer reviews are also more accurate*. Proceedings of Computer-Supported Peer Review in Education (EDM Workshop), Raleigh, NC.
14. Roscoe, R. D., *Allen L. K., & **Patchan, M. M.** (2016, April). *Evaluative misalignment: Hypothesized consequences and causes of students' faulty writing assessment criteria*. Poster presented at the 2016 annual meeting of the American Educational Research Association (AERA 2016), Washington DC.
15. Branum-Martin, L. & **Patchan, M. M.** (2016, March). *In the pen of the author or eye of the beholder? A measurement framework for understanding peer evaluation in writing assignments*. Paper presented at the spring conference for the Society for Research on Educational Effectiveness (SREE 2016), Washington, DC.
16. Branum-Martin, L. & **Patchan, M. M.** (2015, December). *A measurement model to assess bias, construct validity, and effectiveness in peer evaluations of writing*. Poster presented at the Atlanta Computational Social Science Workshop (CSS 2015), Atlanta, GA.

17. **Patchan, M. M.** & Puranik, C. (2015, July). *Teaching early writing skills: A comparison between three conditions*. Paper presented at the 22nd annual meeting of the Society for the Scientific Study of Reading, The Big Island, Hawaii.
18. Puranik, C., **Patchan, M. M.**, Lemons, C. J. & Al Otaiba, S. (2014, August). *Peer-assisted writing strategies: Comparing effectiveness in small group versus whole class instruction*. Paper presented at the SIG Writing Conference 2014, Amsterdam, Netherlands.
19. **Patchan, M. M.**, Puranik, C., *Talbot, C., & *Digon, S. (2014, July). *Understanding the benefits of providing feedback: Improving letter writing ability by providing specific feedback*. Poster presented at the 36th annual Cognitive Science Society, Quebec City, Canada.
20. *Wronkovich, M., *Mylin, S., **Patchan, M. M.**, & Puranik, C. (2014, April). *Assessing the quality of apps for letter writing instruction*. Poster presented at the First Experiences in Research Symposium, University of Pittsburgh.
21. *Digon, S., *Talbot, C., **Patchan, M. M.**, & Puranik, C. (2014, April). *Evaluating errors in kindergarteners' letter writing*. Poster presented at the First Experiences in Research Symposium, University of Pittsburgh.
22. Puranik, C., **Patchan, M. M.**, Lemons, C. J., & Al Otaiba, S. (2013, July). *Examining the effect of using peer assisted strategies to improve writing outcomes for kindergarten children*. Paper presented at the 20th annual meeting of the Society for the Scientific Study of Reading, Hong Kong, China.
23. *Guinness, K., *McClatchey, M., *Kirby, C., **Patchan, M. M.**, & Puranik, C. (2013, April). *Evaluating effectiveness of peer learning*. Poster presented at the First Experiences in Research Symposium, University of Pittsburgh.
24. **Patchan, M. M.** & Schunn, C. D. (2010, September). *Impact of group diversity on learning to write through peer-review*. Paper presented at the SIG Writing Conference 2010, Heidelberg, Germany.
25. **Patchan, M. M.** & Schunn, C. D. (2010, August). *Impact of diverse abilities on learning to write through peer-review*. Poster presented at the 32nd annual Cognitive Science Society, Portland OR.
26. **Patchan, M. M.**, Charney, D., & Schunn, C. D. (2010, March). *Researching writing feedback: Commenting strategies & their impact*. Symposium talk presented at the 61st annual Conference on College Composition and Communication. Louisville, KY.
27. Steinberg, D., **Patchan, M. M.**, Schunn, C. D., & Landis, A. (2009, April). *Developing quality sustainability training materials*. Poster presented at the Engineering Sustainability 2009 conference. Pittsburgh, PA.
28. **Patchan, M. M.** & Schunn, C. D. (2009, March). *Writing in natural sciences: The battle between content knowledge and language fluency*. Symposium talk presented at the 60th annual Conference on College Composition and Communication. San Francisco, CA.
29. **Nelson, M. M.** & Schunn, C. D. (2008, April). *What types of comments motivate students to revise?* Symposium talk presented at the 59th annual Conference on College Composition and Communication. New Orleans, LA.

30. **Nelson, M. M.,** *Melot, B. N., *Stevens, C. A., & Schunn, C. D. (2008, July). *The effects of skill diversity in peer feedback: It's what you don't know*. Poster session presented at the 30th annual Cognitive Science Society, Washington DC.
31. **Nelson, M. M.** & Schunn, C. D. (2007, August). *The nature of feedback: Investigating how different types of feedback affect writing performance*. Poster session presented at the 29th annual Cognitive Science Society, Nashville, TN.
32. Charney, D., **Nelson, M. M.,** & Schunn, C. D. (2007, March). *How and how helpfully do peers comment on student writing?* Symposium talk presented at the 58th annual Conference on College Composition and Communication. New York, NY.
33. **Nelson, M. M.** & Noll, J. A. (2005, January). *The effects of test format on performance and retention*. Poster presented at the 27th annual National Institute on the Teaching of Psychology, St. Petersburg Beach, FL.

Professional Service

National/International

2011-current Ad hoc reviewer, Journals

Computers & Education • Distance Education • Instructional Science • Journal of Writing Research • Reading and Writing • Studies in Educational Evaluation • Transactions on Learning Technologies

2017-2018 Ad hoc reviewer, Grants

Research Foundation Flanders (FWO), Belgium

Education Research & Development Centers, Institute of Education Science

2016-2017 Ad hoc reviewer, Conferences

Computer-Supported Peer Review in Education (EDM Workshop) • SIG Writing

University

2018-2019 Panelist on *Things I Wish I Had Known My First Year at WVU* at New Faculty Orientation

2017-2019 Guest lecturer on Learning Theories, WVU Health Science Center's Teaching Scholars Program. West Virginia University

College

2019 Lead Coordinator for the CEHS Student Scholars Symposium, West Virginia University

2017 Judging Coordinator and Faculty Judge for the CEHS Celebration of Scholars poster session, West Virginia University

Departmental

2017-current Teaching, Learning, & Development Brown Bag Series Co-Coordinator, West Virginia University

2018 Faculty Search Committee Member, Educational Psychology, West Virginia University

- 2016-2017 Learning Sciences Degrees Planning Committee, West Virginia University
- 2016-2017 LSHD Annual Evaluation Committee, West Virginia University
- 2008-2009 Cognitive Psychology Brown Bag Coordinator, University of Pittsburgh
- 2007-2008 Cognitive Psychology Graduate Student Representative, University of Pittsburgh
- 2006-2009 Undergraduate Education Committee, University of Pittsburgh

Honors & Awards

- Nominated for the 2017 Faculty Award for Distinction in Undergraduate Research Mentoring
- Nominated for the best article in Journal of Writing Research, 2010-2012
- Nominated for the best article in Journal of Writing Research, 2008-2010
- Nominated for the 2010 Elizabeth Baranger Excellence in Teaching Award
- Nominated for the 2007 Elizabeth Baranger Excellence in Teaching Award

Teaching Experience

West Virginia University

- EDP 101: Learning Strategies for Academic Success (Spring 2018)
- EDP 293a: College Success Strategies (Fall 2018, Fall 2019)
- EDP 600: Educational Psychology (Fall 2017, Fall 2018, Spring 2019)
- EDP 693D: Introduction to Learning Sciences (Fall 2017)
- EDP 730: Cognition & Learning (Spring 2017)
- EDP 700: Psychological Foundations of Learning (Fall 2016)

University of Pittsburgh

- PSY 0035: Research Methods Lab (Fall 2010)
- PSY 0035: Research Methods (Fall 2009)
- PSY 0420: Laboratory in Human Cognitive Psychology (Fall 2005; Spring 2006; Fall 2006; Spring 2009)

Student Committees

Doctoral Committees—chair (1):

- Robin Spitznogle, West Virginia University, Department of Learning Sciences & Human Development, 2019-current

Doctoral Committees—member (4):

- Megan Mikesell, West Virginia University, Department of Learning Sciences & Human Development, 2019-current
- Atsuko Bealmear, West Virginia University, Department of Learning Sciences & Human Development, 2019-current
- Jennifer Laurito, West Virginia University, Department of Learning Sciences & Human Development, 2018-current
- Carlos Toxtli, West Virginia University, Department of Computer Science, 2018-current

- Claudia Flores-Saviaga, West Virginia University, Department of Computer Science, 2017-current
- Danielle Massullo, West Virginia University, Department of Learning Sciences & Human Development, 2017-current

Master's Thesis Committees—chair (4):

- Gwen Anderson, West Virginia University, Department of Learning Sciences & Human Development, 2018-current
- Joseph McNeill, West Virginia University, Department of Learning Sciences & Human Development, 2018-current
- Debby Lauwers, University of Antwerp, Department of Management, 2011
- Katrin Goethals, University of Antwerp, Department of Management, 2012

Master's Thesis Committees—member (1):

- Sabrina Hartman, West Virginia University, Department of Learning Sciences & Human Development, 2018-2019

Honors Thesis Committees (1):

- Mary Sears, University of Pittsburgh, Department of Communication Science and Disorders, 2014

Student Mentoring

Undergraduate Student Research Assistants

West Virginia University (27):

Nathan Altman • Joseph Ashton • Gwendolen Anderson • Billy Burgess • Nicholas Coker • Victoria Dannals • Brianna Dietz • Shedrick Garrett • Morgan Goode • Gage Graham • Kennedy Hathaway • Abriana Kiser • Bernadine Kwan • Olivia Lehki • Joseph McNeill • Cassandra Modrak • Madison Moore • Hannah Rhea • Heather Short • Mary Kevan Smith • Asia Taylor • Brandi Terry • Erica Tracewell • Colter Uscola • Audrey Weiss • Hannah Westley • Courtney Wild

University of Pittsburgh, Department of Communication Science & Disorders (25):

Megan Ballantyne • Elizabeth Brasch • Brittney Brueggman • Jennifer Cleary • Sadie Digon • Ellen Foley • Jessica Genkil • Kendra Guinness • Alexa Hamilton • Sarah Jacobson • Brittany Kachline • Elizabeth Kayda • Claire Kirby • Stephanie Leirer • Maria McClatchey • Katelyn McKenna • Lauren Montie • Joanna Murphy • Stacy Mylin • Emma Paschke • Christopher Talbot • Shante Talley • Shahnaz Terzi • Makenzie Wronkovich • Jiayi Zhang

University of Pittsburgh, Department of Psychology (18):

Mandy Babiak • Laura Berenson • Jason Bolton • Zach Grigsby • Sarah Haviland • Brandi Hawk • Kim Klimpel • Danikka Kopas • Katie Layendecker • Claire Laverne • Lindsay Marshall • Luree Miller • Cara Nicholson • Jennifer Papuga • Krista Schooley • Christopher Stevens • Gokce Yilmaz • Wanwan Zhang

Graduate Student Research Assistants

West Virginia University (3):

Zachary Carowick • Megan Mikesell • Rocio Astorga

Georgia State University (3):

Mikayla Mann • Lauren Martin • Jessica Moffett

University of Pittsburgh, Department of Communication Science & Disorders (13):

Erin Bailey • Ashley Freer • Kristine Gulla • Carly Lewandowski • Lauren Martin • Rebecca Miller • Jessica Moffet • Megan Pattera • Mikayla Smith Mann • Emily Sobeck • Kirsten Stevenson • Racheal Voskuhl • Kaylee Wynkoop

University of Pittsburgh, Department of Psychology (2):

Carolyn Commer • Tim Dawson