Curriculum Vita

Allison L. Roxburgh, Ph.D.

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EDUCATION

Ph.D. May 2023
Education, Utah State University
Specialization: Curriculum and Instruction
Concentration: Mathematics Education and Leadership
Dissertation: *How Preservice Teachers' Develop Awareness and Beliefs About Design Features and Academic Language Features When Choosing and Evaluating Digital Math Games for English Language Learners*.
(Chair: Patricia S. Moyer-Packenham)

M.Ed. December 2022
Masters of Education, Utah State University
Concentration: Educational Technology and Learning Sciences

M.Ed. December 2016
Masters of Education, Utah State University
Mathematics Endorsement

B.S. December 2012
Elementary Education, Utah State University
Level 2 Elementary Teaching Certificate (1-8), Utah

PROFESSIONAL HISTORY

Assistant Professor **2023- present**
Department of Teaching and Educational Studies.
College of Education, Idaho State University.

Adjunct Professor **2022-2023**
School of Teacher Education and Leadership
EEJ College of Education and Human Services, Utah State University

Graduate Research & Teaching Assistant **2017-2022**
Presidential Doctoral Research Fellow (2018-2022)
School of Teacher Education and Leadership, Utah State University.

Adjunct Professor & Teacher Candidate Supervisor **Fall 2022**
School of Teacher Education.
College of Education and Behavioral Sciences,
University of Northern Colorado

Elementary School Teacher, Grade 3 **2014-2017**
Logan City School District, Utah

Elementary School Teacher, Grade 4 **2013-2014**

Tooele County School District, Utah

AWARDS & PROFESSIONAL RECOGNITION

STaR Fellowship, Mathematics Education "Service, Teaching and Research" (STaR) Program (2024).

Presidential Doctoral Research Fellowship ($20,000 annually). Graduate Research and Teaching Assistantship, Utah State University, Logan, UT (2018-2022).

Teacher of the Year Graduate Student Award (2021). Teacher Education and Leadership, Utah State University, Logan, UT.

Outstanding Paper Award (2018). Society for Information Technology and Teacher Education (SITE). Paper: Moyer-Packenham, P. S., Lommatsch, C., Litster, K., Ashby, M. J., & **Roxburgh, A.** (2018). The role of design features in the affordances of digital math games. In E. Langran & J. Borup (Eds.), *Proceedings of the Society for Information Technology and Teacher Education (SITE) International Conference* (pp. 465-473), Waynesville, NC: Association for the Advancement of Computing in Education (AACE).

School of Teacher Education and Leadership (TEAL) Scholarship ($17,000). Graduate Research and Teaching Assistantship, Utah State University, Logan, UT (2017-2018).

RESEARCH

Research Interests:

- Socio-cultural and linguistic issues related to how students learn mathematics.
- How technology mediates mathematics learning.
- Elementary mathematics teacher education.

Research Projects:

Investigating TPACK Development: Action Research on Elementary Preservice Teachers' Integration of Digital Games and Coding Technologies in Math Inquiry (2024-present). Improve teaching strategies of preparing preservice teachers to integrate technology and increase their TPACK, implement course improvements based on iterations of the design, and develop and lead presentations and publications. Principal Investigator. Idaho State University.

Preservice Teachers' Lesson Planning: A Comparison of AI-Generated and Traditional Curriculum Lesson Plans in Mathematics (2024-present). Principal Investigator. Developing tasks for preservice teachers to use AI for lesson planning and think critically about the lesson produced, and develop and lead collaborative presentations and publications. Idaho State University (with Co-PI Cory Bennett, Teaching and Educational Studies).

Developing STEM Skills Through Project-Based Learning (2023-2024). Co-Principal Investigator. Collaboratively designing STEM learning experiences for elementary students in

grades K-5, developing assessment items to evaluate outcomes, and develop and lead collaborative presentations and publications. This project is funded by Idaho STEM Action Center. Idaho State University (with PI Esther Ntuli, Co-PI's Jen Gallup, Beverly Ray, Emma Wood, Celal Perihan, and Wendy Ruchti, Teaching and Educational Studies).

Affordances of Virtual Manipulatives Grades 3-6 (2017-2022). Analyze and code data (qualitatively code videos of interviews with interaction of mathematics iPad apps), and develop and lead collaborative presentations and publications. Utah State University (with PI Patricia Moyer-Packenham and the Virtual Manipulatives Research Group).

Early Count Grade 1 (2018-2019). Witness early count activities with first grade students, help determine activities for students, analyze and code video data, and collaborative presentations and publications. Utah State University (with PI Beth MacDonald).

PUBLICATIONS

JOURNAL ARTICLES (Refereed)

2023

1. Moyer-Packenham, P.S., Lommatsch, C., Litster, K., Harmon, M. J., & **Roxburgh A.** (2023). The role of design features in the affordance of digital math games. *Journal of Computers in Mathematics and Science Teaching, 42*(3), 247-259.

2022

1. Moyer-Packenham, P.S., **Roxburgh, A.L**., Litster, K., & Kozlowski, J.S. (2022). Relationships between semiotic representational transformations and performance outcomes in digital math games. *Technology, Knowledge, and Learning*, 27, 223-253. https://doi.org/10.1007/s10758-021-09506-5

2021

1. Bullock, E.P., **Roxburgh, A.,** Moyer-Packenham, P.S., & Bektas, E. (2021). Connecting the dots: Understanding the interrelated impact of type, quality and children's awareness of design features and mathematics content learning goals in digital math games and related learning outcomes. *Journal of Computer Assisted Learning, 37*(2), 557-586. https://doi.org/10.1111/jcal.12508

2020

1. Moyer-Packenham, P. S., Ashby, M. J., Litster, K., **Roxburgh, A. L**., & Kozlowski, J. S. (2020). Examining how design features promote children's awareness of affordances in digital math games. *Journal of Computers in Mathematics and Science Teaching, 39*(2), 169-180.

2. MacDonald, B., Hunt, J., Litster, K., **Roxburgh, A.,** & Leitch, M. (2020). Diego's number understanding development through subitizing and counting. *Investigations in Mathematics Learning, 12*(4), 275-288. https://doi.org/10.1080/19477503.2020.1824287

3. Litster, K., Lommatsch, C. W., Novak, J. R., Moyer-Packenham, P. S., Harmon, M. J., **Roxburgh, A. L.,** & Bullock, E.P. (2020). The role of gender on the associations among children's attitudes, mathematics knowledge, digital game use, perceptions of affordances, and achievement. *International Journal of Science and Mathematics Education.* https://doi.org/10.1007/s10763-020-10111-8

2019

1. Moyer-Packenham, P., Lommatsch, C. W., Litster, K., Ashby, M. J., **Roxburgh, A.,** Shumway, J., Speed, E., Covington, B., Hartmann, C. Clarke-Midura, J., Skaria, J., Westenshow, A., MacDonald, B., Symanzik, J., & Jordan, K. (2019) How design features in digital math games support learning and mathematics connections. *Computers in Human Behavior, 91,* 316-332. https://doi.org/10.1016/j.chb.2018.09.036

BOOK CHAPTER

2019

1. Moyer-Packenham, P. S., Litster, K., **Roxburgh, A. L.,** Kozlowski, J. S., & Ashby, M. J. (2019). Relationships between mathematical language, representation connections, and learning outcomes in digital games. In D. C. Gibson & M. N. Ochoa (Eds.), *Research highlights in technology and teacher education 2019* (pp. 55-64). Association for the Advancement of Computing in Education (AACE).

CONFERENCE PROCEEDINGS

2024

1. **Roxburgh, A.** (2024). Elementary preservice teachers evaluation of design features and language features in digital math games. In J. Cohen & G. Solano (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 2453-2461). Las Vegas, Nevada, United States: Association for the Advancement of Computing in Education (AACE). Retrieved from https://www.learntechlib.org/primary/p/224323/.

2. **Roxburgh, A.,** & Moyer-Packenham. (2024, January). Preservice teachers evaluation of design features and language features in digital math games for English language learners. *Proceedings of the 22nd Annual Hawaii International Conference on Education.* Waikola, Hawaii:HICE.

2022

1. **Roxburgh, A.** & Moyer-Packenham, P.S. (2022). Preservice teachers' beliefs and awareness about design features and academic language features when choosing and evaluating digital math games for English language learners. In E. Langran (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 1549-1558). San Diego, CA, United States: Association for the Advancement of Computing in Education (AACE).

2. **Roxburgh, A.,** Moyer-Packenham, P.S., & Bullock, E. P. (2022). Relationships between students' use of gestures and learning outcomes in digital math games. In E. Langran

(Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 528-532). San Diego, CA, United States: Association for the Advancement of Computing in Education (AACE).

2021

1. **Roxburgh, A. L.,** Moyer-Packenham, P., & Bullock, E. (2021). Children's use of systemic functional linguistic metafunctions during digital math gameplay. In E. Langran & L. Archambault (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 1164-1170). Online, United States: Association for the Advancement of Computing in Education (AACE).

2019

1. Litster, K., Moyer-Packenham, P., Ashby, J., **Roxburgh, A.** & Kozlowski, J. (2019). Digital math games: Importance of strategy and perseverance on elementary children's learning opportunities. In K. Graziano (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 2157-2162). Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE).

2. Moyer-Packenham, P., Ashby, M.J., Litster, K., **Roxburgh, A.** & Kozlowski, J.S. (2019). How design features promote children's awareness of affordances in digital math games. In K. Graziano (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 2192-2200). Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE).

2018

1. Moyer-Packenham, P. S., Lommatsch, C., Litster, K., Ashby, M. J., & **Roxburgh, A.** (2018, March). The role of design features in the affordances of digital math games. In E. Langran & J. Borup (Eds.), *Proceedings of the Society for Information Technology and Teacher Education (SITE) International Conference* (pp. 465-473), Waynesville, NC: Association for the Advancement of Computing in Education (AACE).
   OUTSTANDING PAPER AWARD

2. Moyer-Packenham, P. S., Litster, K., Lommatsch, C., Ashby, M. J., & **Roxburgh, A**. (2018, March). Mediators of learning in game-based mathematics apps. In E. Langran & J. Borup (Eds.), *Proceedings of the Society for Information Technology and Teacher Education (SITE) International Conference* (pp. 454-464), Waynesville, NC: Association for the Advancement of Computing in Education (AACE).

MANUSCRUPTS IN PREPARATION.

1. **Roxburgh, A.** & Moyer-Packenham. *How Preservice Teachers' Develop Awareness and Beliefs About Design Features and Academic Language When Choosing and Evaluating Digital Math Games for English Language Learners*.

2. **Roxburgh, A.** (In Progress) Preservice Teachers Identification of Fraction Content and Evaluation of Design Features in Digital Math Games. Expected submission: Spring, 2025 to the *Contemporary Issues in Technology and Teacher Education (CITE).*

TEACHING

UNIVERSITY TEACHING

Idaho State University, Pocatello, Idaho (2023-Current)
College of Education

EDMT 3370- Mathematics Methods I (*Fall 2023, Fall 2024*)
Undergraduate course. Introduces and extends methods for teaching all children topics in arithmetic, geometry, algebra, probability, and statistics in elementary grades. Focuses on using manipulatives and technologies to explore mathematics and solve problem.

EDUC 3311 Instructional Technology (*Fall 2024*)
Undergraduate course. Analysis of content, strategies, and evaluation for integrating technology into school curricula. Includes use of educationally appropriate software and apps.

EDUC 6601 Research and Writing (*Fall 2024*)
Graduate course. Examination of methods for designing/conducting research in education and related fields and of procedures for formal report writing using APA style and format.

EDUC 6622 Education Assessment and Evaluation (*Summer 2024*)
Graduate course. Construction, administration and interpretation of educational assessments for the systematic analysis of student learning and teaching practice. Emphasis is placed on the use of assessment results in planning and valuation of curriculum leadership.

EDUC 4485 Independent Problems in Education (*Spring 2024*)
Undergraduate Independent Study. Individual work under staff guidance. Field and/or library research on specific educational problems of interest to majors in education. Experience in research composition.

EDMT 2271 Teaching K-8 Mathematics II (*Spring 2024*)
Undergraduate course. Investigations of mathematics topics that focus on geometry, measurement, proportional thinking, and statistical reasoning. Emphasis on problem solving, the use of manipulatives and computing technologies, remediation, assessment and resource materials, and optimal pedagogical techniques that help students learn quality mathematics. Satisfies Objective 3 of the General Education Requirements.

EDUC 4408- Pre-Internship Field Experience Seminar (*Fall 2023, Spring 2024*)
Undergraduate course. Teacher candidates synthesize and apply knowledge gained in previous core teacher education coursework through documenting teaching performances by planning, assessing, and instructing learners in a K-12 school setting. During a field

experience, candidates will work collaboratively with other teacher candidates, classroom teachers, and university faculty to develop and teach lessons to meet diverse student needs, Idaho Core and Content Standards, and classroom learning goals.

Utah State University, Logan, Utah (2017-2022)
College of Education and Human Services

TEAL 6521/5521- Mathematics for Teaching K-8: Numbers and Operations (*Spring 2018, Spring 2020, Fall 2021, Fall 2022)*
Graduate course. This course, for K-8 teachers, will cover the content of Number and Operations to develop comprehensive understanding of our number system and relate its structure to computation, arithmetic, algebra, and problem solving. Online Course.

TEAL 6522/5522-Mathematics for Teaching K-8: Rational Numbers and Proportional Reasoning (*Spring 2018, Spring 2020, Fall 2021, Fall 2022*)
Graduate course. To provide practicing teachers a deeper understanding of rational numbers, operations with rational umbers, and proportionality, and instructional strategies to facilitate the instruction of this content for elementary students. Online course.

TEAL 6523/5523 - Mathematics for Teaching K-8: Algebraic Reasoning (*Spring 2018, Spring 2020, Fall 2021, Fall 2022)*
Graduate course. To provide practicing teachers a deeper understanding of algebraic expressions, equations, functions, real numbers, and instructional strategies to facilitate the instruction of this content for elementary students. Online Course.

TEAL 6524/5524 – Mathematics for Teaching K-8: Geometry and Measurement (*Spring 2018, Spring 2020, Fall 2021, Fall 2022)*
Graduate course. To provide practicing teachers a deeper understanding of the geometry and measurement context that exists in the state core and instructional strategies to facilitate the instruction of this content. Online Course.

TEAL 6525/5525- Mathematics for Teaching K-8: Data Analysis and Problem Solving (*Spring 2020, Fall 2021, Fall 2022)*
Graduate course. To provide practicing teachers a deeper understanding of probability and data representation and analysis. Online course.

TEAL 6551/5551 - Mathematics for Teaching K-8: Assessment and Intervention (*Spring 2018, Spring 2020, Fall 2021, Fall 2022)*
Graduate course. To provide practicing teachers a deeper understanding of the various types of assessment and their appropriate use for guiding instruction, intervention and evaluation of student learning. Online Course.

TEAL 6552- Mathematics Education Leadership Knowledge and Skills (*Spring 2020, Fall 2021, Fall 2022)*

Graduate course. To develop the following mathematics education leadership knowledge and skills: policy and curriculum issues; research informing instructional practice; implementation and evaluation of professional development; evaluation of educational structures that affect equity; and responsibilities of math coaches and mentors. Online course.

TEAL 6300/5560 - Special Topics: Elementary Mathematics Teaching Academy (*Spring 2018, Spring 2020, Fall 2021, Fall 2022)*
Graduate course. Field-based program focusing upon characteristics of effective teaching methodologies, teaching performance, curriculum decision making, value guidelines, and the characteristics of the learner. Online course.

EDUC 4061 – Teaching Elementary School Mathematics I: Rational Numbers, Operations, and Proportional Reasoning (*Fall 2019, Fall 2020, Spring 2021, Spring 2022, Fall 2022*)
Undergraduate Course. Develop pedagogical content knowledge in rational number, operations, and proportional reasoning for teaching grades preschool to grade 6. Understanding characteristics of instruction, assessments, and intervention are considered critically. Online Course.

EDUC 4062 - Teaching Elementary School Mathematics II: Number, Operations, and Algebraic Reasoning *(Fall 2017, Fall 2018, Spring 2019, Spring 2022)*
Undergraduate Course. Development of pedagogical content knowledge in number, operations, and algebraic reasoning for teaching grades preschool to grade 6. Methods for designing and implementing mathematics instruction, assessment, remediation, and intervention will be applied in a field-based placement. Face-to-Face Course combined with Practicum Supervision.

ITLS 5500- Integration and Innovation of Technology in Education (*Fall 2018)*
Undergraduate course. Research and practice means to creatively and effectively integrate technology into teaching and learning, based on local and national standards. Develop methods and resources to implement standards using technologies pertinent to student's field of study. Produce a portfolio of artifacts. Online Course.

University of Northern Colorado, Greeley, Colorado (2022)
College of Education and Behavioral Sciences

EDEL 101- Elementary Teaching as a Profession (Fall 2022)
Undergraduate course. Introduces the Interdisciplinary Studies Elementary Teaching major (ISET) and the Elementary Professional Teacher Education Program (PTEP). Examines professional expectations of today's elementary teachers and how UNC coursework prepares candidates for teaching. Face-to-Face Course.

CURRICULUM DEVELOPMENT

Utah State University, Logan, Utah (Summer 2019)
College of Education and Human Services

TEAL 6551/TEPD 5551- Mathematics for Teaching K-8: Assessment and Intervention. Graduate course. To provide practicing teachers a deeper understanding of the various types of assessment and their appropriate use for guiding instruction, intervention and evaluation of student learning. Materials developed included readings, video lectures, application assignments, and assessments for online course delivery. Developed nine modules as equivalent to a 15-week 3-credit course.

INTERNAL AND EXTERNAL FUNDING

GRANTS FUNDED

External

Ntuli, E., Gallup, J., Ray, B., Wood, E., Perihan, C., **Roxburgh, A**. & Ruchti, W. (Summer, 2024). *K-5 STEM Summer Camp: Developing STEM Skills Through Project-Based Learning Activities.* Out of School STEM Programming Grant, sponsored by Idaho STEM Action Center, $48,500.

Internal

Roxburgh, A. (January, 2024). *Preservice Teachers' Evaluation of Design Features and Language Features in Digital Math Games for English Language Learners.* Travel Funds, sponsored by Dean's Research Funding, College of Education, Idaho State University, $2,979,05.

Roxburgh A. (2022). Travel Grant, sponsored by Research and Graduate Studies, School of Teacher Education and Leadership (TEAL), Utah State University, $600.

Roxburgh A. (2019). Travel Grant, sponsored by Research and Graduate Studies, School of Teacher Education and Leadership (TEAL), Utah State University, $500.

Roxburgh A. (2018). Travel Grant, sponsored by Research and Graduate Studies, School of Teacher Education and Leadership (TEAL), Utah State University, $600.

Roxburgh, A. (2016). Battle of the Books, sponsored by Logan City School District, $400.

Pending Internal Grants

Roxburgh, A. (Under Review). *Preparing Educators to Integrate Technology into Mathematics Instruction.* Travel Funds, sponsored by Dean's Research Funding, College of Education, Idaho State University, $3,742.67.

PRESENTATIONS

*Denotes undergraduate student co-presenter

International and National Presentations

2024

1. Bennett, C., & **Roxburgh, A.** (2024, March). *Creating Authentic Problem-Solving Experiences for Middle School.* MidSchoolMath National Conference, Santa Fe, NM.

2. **Roxburgh, A.** (2024, March). *Preservice Teachers Use of Rubrics to Evaluate Design Features and Language Features in Digital Math Games*, Research Paper Presentation, Society for Information Technology and Teacher Education (SITE), Las Vegas, NV.

3. **Roxburgh, A.,** & Moyer-Packenham. (2024, January). *Preservice Teachers Evaluation of Design Features and Language Features in Digital Math Games for English Language Learners.* Research Paper Presentation, Hawaii International Conference on Education, Waikoloa, Hawaii.

2022

1. **Roxburgh, A.** & Moyer-Packenham, P.S. (2022, April). *Preservice Teachers' Beliefs and Awareness about Design Features and Academic Language Features when Choosing and Evaluating Digital Math Games for English Language Learners.* 33rd annual conference of the Society for Information Technology and Teacher Education (SITE), San Diego, CA.

2. **Roxburgh, A.,** Moyer-Packenham, P.S., & Bullock, E. P. (2022, April). *Relationships Between Students' Use of Gestures and Learning Outcomes in Digital Math Games.* 33rd annual conference of the Society for Information Technology and Teacher Education (SITE), San Diego, CA.

2021

1. **Roxburgh, A**., Moyer-Packenham, P. & Bullock, E. (2021, April). *Children's use of systemic functional linguistic metafunctions during digital math gameplay.* Virtual Research Paper Presentation, 31st Society for Information Technology & Teacher Education International Conference.

2020

1. Moyer-Packenham, P., S., **Roxburgh, A.,** Litster, K., & Kozloweski, J. S. (2020, April). *Students Connections Among Semiotic Representation in Digital Games and Their Influence on Mathematics Learning.* Research Paper Presentation, American Educational Research Association (AERA) Annual Meeting, San Francisco, CA. [Conference Cancelled].

2. Bullock, E. K., **Roxburgh A.,** Moyer-Packenham, P. S. (2020, April). *The Importance of Quality of Design Features in Digital Math Games.* Research Paper Presentation,

American Educational Research Association (AERA) Annual Meeting, San Francisco, CA. [Conference Cancelled].

2019

1. Moyer-Packenham, P. S., **Roxburgh, A. L.**, & Kozlowski, J. S. (2019, November). *Students' Uses of Mathematical Representations and Their Learning Outcomes in Digital Games.* Research Paper Presentation, School Science and Mathematics Association (SSMA) Convention, Salt Lake City, UT.

2. Bullock, E.P., **Roxburgh, A.,** Moyer-Packenham, P.S., & Bektas, E. (2019, November). *The Impact of High-Quality Features in Digital Math Games on Children's Learning.* School Paper Presentation, Science and Mathematics Association (SSMA) Convention, Salt Lake City, UT.

3. Kozlowski, J. S., Shumway, J., **Roxburgh, A. L.** (2019, October). *Adapting Textbook Lessons to Help Students Construct Mathematics and to Access Diverse Mathematical Knowledge.* Presentation, National Council of Teachers of Mathematics Research Conference (NCTM) Regional Conference and Exposition, Salt Lake City, UT.

4. MacDonald, B. L., Litster, K., & **Roxburgh, A.** (2019, October). *Students' Actions with Early Number to Guide Educators' Instruction.* Presentation, National Council of Teachers of Mathematics (NCTM) Regional Conference and Exposition, Salt Lake City, UT.

5. MacDonald, B. L., Urbanek-Carney, S., & **Roxburgh, A.** (2019, October). *Supporting Students with Severe Special Education Needs in Early Number Development*. Presentation, National Council of Teachers of Mathematics (NCTM) Regional Conference and Exposition, Salt Lake City, UT.

6. MacDonald, B. L., **Roxburgh, A.**, & Jenson, A. (2019, October). *Tasks Which Leverage Conceptual Number Understanding for Students Identified as Low-Achieving.* Presentation, National Council of Teachers of Mathematics (NCTM) Regional Conference and Exposition, Salt Lake City, UT.

7. **Roxburgh, A. L.,** & Kozlowski, J. S. (2019, October). *Fostering Mathematical Discourse Through Inquiry-Based Tasks.* Presentation, National Council of Teachers of Mathematics Research Conference (NCTM) Regional Conference and Exposition, Salt Lake City, UT.

8. MacDonald, B. L., Urbanek-Carney, S., & **Roxburgh, A.** (2019, April). *Supporting Students with Severe Special Education Needs in Early Number Development*. Presentation, National Council of Teachers of Mathematics (NCTM) Annual Conference and Exposition, San Diego, CA.

9. Hackenberg, A. J., Jones, R., Hunt, J. H., Silva, J., MacDonald, B. L., & **Roxburgh, A.** (2019, April). *Differentiating Instruction in Mathematics Education.* Research

Symposium at the Presentation, Annual National Council of Teachers of Mathematics Research Conference (NCTM-R), San Diego, CA.

10. Moyer-Packenham, P. S., Litster, K., Ashby, M. J., **Roxburgh, A. L.,** & Bullock, E. P. (2019, April). *Design Features of Digital Math Games through the Lens of ACAT.* Research Paper Presentation, National Council of Teachers of Mathematics Research Conference (NCTM-R), San Diego, CA.

11. Litster, K., Moyer-Packenham, P. S., Ashby, M. J., **Roxburgh, A. L**., & Kozlowski, J. S. (2019, March). *Digital Math Games: Importance of Strategy and Perseverance on Elementary Children's Learning Opportunities.* Research Paper Presentation, Society for Information Technology and Teacher Education (SITE), Las Vegas, NV.

12. Moyer-Packenham, P. S., Ashby, M. J., Litster, K., **Roxburgh, A. L.,** & Kozlowski, J. S. (2019, March). *How Design Features Promote Children's Awareness of Affordances in Digital Math Games.* Research Paper Presentation, Society for Information Technology and Teacher Education (SITE), Las Vegas, NV.

13. Moyer-Packenham, P. S., Litster, K., **Roxburgh, A. L.**, Kozlowski, J. S., & Ashby, M. J. (2019, March). *Relationships between Mathematical Language, Representation Connections, and Learning Outcomes in Digital Math Games.* Research Paper Presentation, Society for Information Technology and Teacher Education (SITE), Las Vegas, NV.

2018

1. Moyer-Packenham, P. S., Litster, K., Lommatsch, C., Ashby, M. J., & **Roxburgh, A**. (2018, March). *Mediators of Learning in Game-Based Mathematics Apps.* Research Paper Presentation, Society for Information Technology and Teacher Education (SITE) Conference, Washington D.C.

2. Moyer-Packenham, P. S., Lommatsch, C., Litster, K., Ashby, M. J., & **Roxburgh, A**. (2018, March). *The Role of Design Features in the Affordances of Digital Math Games*. Research Paper Presentation, Society for Information Technology and Teacher Education (SITE) Conference, Washington D.C.

National Presentations (Invited)

2024

1. Bennett, C., McGlone, C., & **Roxburgh, A**. (2024, September). *NCSM Position Paper: Empowering Educators by Expanding the Use of Technology*, 56th NCSM Annual Conference, Chicago, IL. (Invited Presenter)

Local and State Presentations

2024

1. **Roxburgh, A.,** (2024, April). *Preservice Teachers Evaluation of Design Features and Language Features in Digital Math Games for English Language Learners.* Poster Presentation, Celebrating Excellence, Idaho State University, Pocatello, Idaho.

2023

1. **Roxburgh, A.,** & Capp, K.* (2023, November). *Language Features in Digital Math Games.* Poster Presentation, Diversity, Equity, & Inclusion in Education (DEI) Conference, Idaho State University, Pocatello, Idaho.

2021

1. **Roxburgh, A.** (2021, April). *How Preservice Teachers' Awareness of Design Features and Academic Language Features Relates to Choosing and Evaluating Digital Math Games for English Language Learners.* Virtual Research Presentation, Student Research Symposium (SRS), Utah State University, Logan, UT.

2020

1. **Roxburgh, A.** (2020, April). *A Systemic Functional Linguistic Approach to Examining Children's Language use in Digital Math Games.* Virtual Research Presentation. Student Research Symposium (SRS), Utah State University, Logan, UT.

2019

1. **Roxburgh, A.** (2019, April). *Preliminary Findings on the Role of Feedback Design Features on Grade 4 Student Learning Outcomes and Student Awareness of Feedback Features.* Poster Presentation, Student Research Symposium (SRS), Utah State University, Logan, UT.

2018

1. **Roxburgh, A.** & Jensen, A. (2018, October). *Affordances in Early Conceptual Understanding Number Tasks in Grade 1 for Low-Achieving Students.* Presentation, Utah Council of Teachers of Mathematics (UCTM) Conference, Draper, UT.

2. Litster, K., MacDonald, B. L., & **Roxburgh, A**. (2018, August). *Virtual Cookies: Online Digital Resources and Strategies to Enhance In-Class and Distance Learning Experiences and Promote an Active Learning Environment.* Presentation, Together We Teach Conference, Utah State University, Logan, UT.

3. **Roxburgh, A.** (2018, April). *Preliminary Findings on the Role of App Design on Grade 4 Student Success and Learning.* Poster Presentation, Student Research Symposium (SRS), Utah State University, Logan, UT.

Pending Presentations

1. **Roxburgh, A.** (Accepted, February, 2025). *Preparing Preservice Teachers to Evaluate Fraction Digital Math Games*, Report Presentation, Association of Mathematics Teacher Educators (AMTE), Reno, NV.

SERVICE TO THE PROFESSION

Professional Support

Technological Pedagogical Content Knowledge (TPACK) Special Interest Group, Society for Information Technology and Teacher Education (SITE) association. TPACK Wikipedia page contributor (2024-present).

NCSM Position Paper: Empowering Educators by Expanding the Use of Technology. Writing team member (2024).

Editorial and Review Activities
Peer Reviewers for Academic Conferences

Reviewer (2024). Conference proposals, Association of Mathematics Teacher Educators (AMTE).

Institutional Leadership & Service
Idaho State University
University Level

- Experience the ROAR (2024, October)
- Experience ISU Presenter (October, 2023)

College Level

- Educators Rising Association Facilitator for Region 5 High Schools (2023-present).
- Collaborating on a course re-design EDUC 2215- Using Technology in a Digital World. Undergraduate course (2023-present).

Utah State University
University Level

- Application Reviewer, Undergraduate Research Fellow (April, 2021)
- Peer Reviewer, COMD 2600-Introduction to Communication Disorders (December, 2019)
- Judge, Fall Undergraduate Student Research Symposium (November, 2018)
- Reviewer, Undergraduate Research and Creative Opportunities (URCO) Grant (November, 2018)

Local
Idaho

- Pocatello-Chubbuck School District 24, Classroom support for teachers, Jefferson Elementary School (2023-present)
- Pocatello-Chubbuck School District 25, Library Book Board Member, Jefferson Elementary School (2023-Present)

Utah

- Granite School District, Utah. Application Reviewer, Utah PTA/PTSA Student Scholarship Cyprus High School (May 2021-May 2023)

CONSULTING

Utah State Board of Education (USBE)

Facilitator, Mathematics Summer Professional Learning- What the Tech (2019, May, June) Responsibilities include presenting material for technology incorporation in mathematics classrooms for secondary and elementary school practicing teachers, supply teachers with physical and online resources, and teach them the Triple E Framework.

CONTINUOUS LEARNING & SELF-DEVELOPMENT

PROFESSIONAL AFFILIATIONS

National Council of Teachers of Mathematics (Since 2018)
Society for Information Technology and Teacher Education (Since 2019)
NCSM (Since 2024)
American Educational Research Association (2018-2019)
School of Science and Mathematics Association (2019-2020)

CONTINUING EDUCATION UNITS

Reading Endorsement, Northern Utah Curriculum Consortium (Spring, 2017).
Intro R for Social Researchers (Fall, 2018)
Intermediate R (Fall, 2018)