

CURRICULUM VITAE

Enrique Ortiz

Professor

Mathematics Education

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ACADEMIC BACKGROUND

- Ed.D. Louisiana State University, Baton Rouge, Louisiana
1982-1987 Secondary School Mathematics with Statistics
Honors: Department of Curriculum and Instruction Assistantship
Dissertation: A comparative study of a computer programming approach and a textbook approach in teaching the concept of variable, 300 pp.
Co-Major Advisors: Drs. Susan Kim McGregor and L. Diane Miller.
Retrieved from https://digitalcommons.lsu.edu/gradschool_disstheses/4414/. **192 Downloads since 2017**
- M.A. Phoenix University, Puerto Rico Resident Center
1978-1981 Administration and Supervision of Schools with Statistics
Honors: Puerto Rico Department of Instruction Scholarship
- B.A. Interamerican University of Puerto Rico, Rio Piedras, Puerto Rico
1973-1976 Secondary Education Minor: Mathematics
Honors: Magna Cum Laude, Mathematics Achievement Medal and Received the Puerto Rico Legislative Scholarship

PROFESSIONAL EXPERIENCE

- 08/2020-Present **Professor** – School of Teacher Education, College of Community Innovation and Education, University of Central Florida, Orlando Campus.
- 08/1994-2020 **Associate Professor** – School of Teacher Education, College of Community Innovation and Education, University of Central Florida (1994-1999, Daytona Beach Campus; 1999-present, Orlando Campus).
- 08/89-07/94 **Assistant Professor** - Department of Instructional Programs, College of Education, University of Central Florida, Daytona Beach Campus, Florida.
- 08/87-07/89 **Assistant Professor** – Department of Curriculum and Instruction, College of Education, University of New Orleans, New Orleans, Louisiana.
- 08/83-07/87 **Instructor** - Department of Curriculum and Instruction, College of Education, Louisiana State University, Baton Rouge, Louisiana.
- 08/86-12/86 **Mathematics Teacher** (part time) – Glen Oaks Middle School, East Baton Rouge Parish, Baton Rouge, Louisiana. Taught mathematics to sixth-grade students through computer programming.

- 04/86-05/86 **Evaluator** – Department of Mathematics, East Baton Rouge Parish, Baton Rouge, Louisiana. Evaluated elementary school teachers’ performance after in-service training on using manipulatives to teach mathematics.
- 08/81-07/82 **Research Evaluator** – Project Follow Through, Puerto Rico Department of Education Central Office, Hato Rey, Puerto Rico. Developed and administered criterion-referenced elementary school mathematics tests (K-8); participated in the analysis of data and development of reports; provided in-service training to teachers; and served as Acting Assistant Superintendent for one (1) semester (January–July, 1982).
- 06/81-07/81 **Mathematics Teacher** – Facundo Bueso Intermediate School, San Juan II School District, San Juan, Puerto Rico. This was a one-month position for an intensive summer camp for secondary school students struggling with mathematics.
- 08/80-05/81 **Mathematics Specialist** – Chapter II Federal Program, San Juan II School District, San Juan, Puerto Rico. Provided in-service training to teachers (K-12); provided performance evaluation of teachers; and developed instructional materials for mathematics teaching (K-12).
- 05/80-08/80 **Mathematics Supervisor (Grades 7-12)** – Rio Piedras IV School District, Department of Education, Rio Piedras, Puerto Rico.
- 08/76-05/80 **Mathematics Teacher (Grades 7-12)** – Rio Piedras II School District, Department of Education, Rio Piedras, Puerto Rico.

HONORS, AWARDS AND RECOGNITIONS

University Level:

- *University of Central Florida Scroll & Quill Society* (October 29, 2019). I was inducted into the UCF Scroll and Quill Society. This distinct honor was bestowed in recognition of sustained and outstanding achievements in research and/or creative activities at UCF, which have played an important role in bringing national/international recognition to UCF. During Spring 2016, Faculty Excellence relaunched a streamlined and contemporary UCF Scroll & Quill Society. This society is based on two prestigious faculty clubs established in the 1980s to honor faculty members who brought recognition to the university through: (a) The Quill, to recognize authored books and (b) The Scroll, to recognize significant and sustained peer reviewed publications in national and international journals.
- *Scholarship of Teaching and Learning (SoTL) Award of the State University System of Florida* (2013-2014, 2006-2007). The *UCF SoTL* awards recognize discovery, reflection, and using evidence-based methods to research effective teaching and student learning. While the implementation of SoTL outcomes may result in teaching excellence and increased teaching effectiveness, this award recognizes scholarly efforts beyond teaching excellence. Award recipients receive \$5,000 increase to their salary.
- *Teaching Incentive Program (TIP) of the State University System of Florida* (2021-2022, 2015-2016, 2009-2010, 2004-2005, 1999-2000, 1995-96). The *UCF TIP* rewards teaching productivity and excellence. It recognizes in-unit employee contributions to the university’s key goals of offering the best undergraduate education available in Florida and achieving international prominence in key programs of graduate study. Award recipients receive \$5,000 increase to their salary.
- *Research Incentive Award (RIA) of the State University System of Florida* (2006-2007, 2001-2002). The *UCF RIA* program supports outstanding research, scholarly, and creative activity that advances the body of knowledge in a particular field, including interdisciplinary research and collaborations. This award recognizes employee contributions to UCF’s key goal of achieving international prominence in research and creative activities. Award recipients receive \$5,000 increase to their salary.

- *University Excellence in Graduate Teaching Award* of the University of Central Florida (2013-2014). In order to receive this award, recipients must also receive the *College Excellence in Graduate Teaching Award*.
- *University Excellence in Faculty Advising Award* of the University of Central Florida (2003-2004). In order to receive this award, recipients must also receive the *College Excellence in Graduate Teaching Award*.

College Level:

- College of Community Innovation and Education *Excellence in Graduate Teaching Award* of the University of Central Florida (2018-2019). The criteria for evaluating applicants' files include three major categories: innovations to improve graduate teaching, graduate teaching accomplishments/honors and evidence of impact on graduate teaching.
- College of Community Innovation and Education *Excellence in Undergraduate Teaching Award* of the State University System of Florida (2017-2018). The criteria for evaluating applicants' files include three major categories: innovations to improve undergraduate teaching, undergraduate teaching accomplishments/honors and evidence of impact on undergraduate teaching.
- College of Education and Human Performance *Excellence in Graduate Teaching Award* of the University of Central Florida (2013-2014, 2004-2005).
- *UCF Excellence in Research Award* (2002-2003). The criteria for evaluating applicants' files include three major categories: cumulative value and impact of research efforts at UCF within the discipline and to society, recognition of research impact by the individual's peers in the same or in related disciplines and publication/dissemination and presentation of research results.
- College of Education *Excellence in Faculty Advising Award* of the University of Central Florida (2003-2004). UCF sponsors the *Excellence in Faculty Academic Advising* awards to recognize the outstanding efforts of UCF's faculty advisors in retaining undergraduate students, improving communication of information to peers and students, and helping undergraduate students realize their potential. Each academic college submits materials for up to two candidates for consideration.
- College of Education and Human Performance *Excellence in Undergraduate Teaching Award* of the State University System of Florida (1999-2000, and 1995-1996).

External Level:

- *The Triangle Puzzle* was selected to be showcased as one of the games competing in the Serious Play Awards (June 13-17, 2022). *Serious Play 2022 Conference*. UCF Downtown Campus, Orlando, FL.
- Retro Art Competition @ [Artpreneur](https://artpreneur.com) (2022, November)
The Gumball Machine by Enrique Ortiz Honorable Mention
Award Website: <https://artpreneur.com/winnersList/Retro%20Art>
- Illustrated Word Competition: One of Three Winners @ [Artpreneur](https://artpreneur.com) (2022, January)
Love Loves to Love was one of three winners of Artpreneur Open Call: Illustrated Word.
Award Website: <https://artpreneur.com/winners/Illustrated%20Word>
- Artpreneur Abstraction Competition: Honorable Mention: @ [Artpreneur](https://artpreneur.com) (2022, February)
Connections was one of the four honorable mentions of Artpreneur Abstractions Open Call.
Award Website: <https://artpreneur.com/winners/Abstractions>
- Teaching Children Mathematics Journal Editorial Panel, National Council of Teacher of Mathematics (NCTM) – *Year Favorite Selection, Volume 23* (2017). The editorial panel of each NCTM journal selected one article as the favorite. The article “Get the Goof” by Michelle H. Pace, a graduate student of the UCF K-8 Mathematics and Science M.Ed. (2014) and Enrique Ortiz was selected for this recognition. We collaborated in this project as part of mentoring activity.

RESEARCH AND CREATIVE ACTIVITIES

Research and Foci

- Investigating the use of the *TeachLive* immersive, mixed-reality classroom simulator, which includes the features of real classroom with desks, teaching materials, whiteboards, and students. While not seen by the teacher, the avatars are operated by an adult TeachLive “interactor.” This unique platform provides teachers the opportunity to practice their pedagogy in a no-risk yet realistic environment. (See the simulator in action at <https://vimeo.com/95448615>.) *TeachLive* was developed by the University of Central Florida. In this environment, participants are presented with real and virtual worlds that are combined to give them a sense of immersion and presence, and interaction with student-avatars in real time, holding authentic discussions. I have conducted studies involving undergraduate and graduate students using this approach in mathematics diagnostic tasks. It also involves the development of the Mathematics Diagnostic and Assessment Self-efficacy scale, a protocol to help students conduct effective diagnostic tasks and a checklist of expected behaviors during and assessment or diagnostic task. Developing and investigating assessment/diagnostic and learning interventions that will help understand students’ strengths and weaknesses as they learn mathematics. Part of these efforts are supported by a *QEP Funded Award Project: Program Innovation Award. What’s Next*. This research area includes the *Optical Topography/functional Near Infrared (fNIR)* (a helmet type brain scanning devise) to study students’ development of mathematics ability (a research publication and professional presentations have resulted from these efforts involving *fNIR*), development of a *Math Clinic* involving volunteers from mathematics methods courses and elementary school students from Orange and Seminole Counties, and development of *TeachLive* diagnostic episodes. NSF funding is being pursued to support these research activities involving *TeachLive*.
- Investigating students’ use of learning levels, Concrete (C), Pictorial (P) and Abstract (A) (also known as CPA levels), with the proposed addition of the Virtual level (V) (*CPAV*), as they learn mathematics (K-12 students) and develop mathematics instruction (pre- and in-service teachers). The virtual level involves virtual manipulatives in the form of Apps and Applets. This area of research has been supported through the Toni Jennings Exceptional Education Special Initiative Award. I have used findings from this study to analyze my teaching practices. I am in the process of developing follow up study involving the implementation of the findings from this study. The *CPVA* studies have resulted in two research publications and professional presentations. This area of research also involves developing and researching best teaching practices (e.g., using games, puzzles, manipulative materials, creative curriculum approaches and technology) that promote students’ mathematics learning, and help pre- and in-service teachers develop content, pedagogical and pedagogical content knowledge (make decisions about how to help students learn at different cognitive levels). These activities include the development of the *Triangle Puzzle*, *Rectangularix Puzzle*, *Origami Interactive Handouts* and *Teaching Mathematics for Social Justice (TMfSJ)* tasks.
- In some ways related to the use of the pictorial (representative) cognitive level in teaching mathematics, I incorporate an innovative approach involving the use of *art education concepts* into the teaching of mathematics. As a way to increase appreciation and artistic problem-solving teaching strategies, this approach includes the creation, exhibition and presentation of original artwork involving the geometric abstraction art style. This artwork includes oil, acrylic, string art and digital images. I have published three articles related to these creative efforts.

Publications

Google Scholar Citations and Index Levels (updated on 05/18/2023):

Retrieved from <https://scholar.google.com/citations?hl=en&user=O4xxNi4AAAAJ>

Citations: 259

h-index: 8

i10-index: 5

Articles:

National/International:

- **Ortiz, E.** (October, 2023). Triangle Puzzle Challenges. *Mathematics Teacher: Learning and Teaching Pre-K-12*. 116(10), pp. xx. (double-blind peer-review process) Retrieve from -----.
- **Ortiz, E.** (May, 2023). See, think, wonder Geoboard Art. In the *For the Love of Mathematics Department of the Mathematics Teacher: Learning and Teaching Pre-K-12*, 116(5), p. 404. (double-blind peer-review process) Retrieve from <https://doi.org/10.5951/MTLT.2022.0164>.
- **Ortiz, E.** (November, 2022). Mathematical Connections: Many Faces of the Truncated Icosahedron. In the *For the Love of Mathematics Department of the Mathematics Teacher: Learning and Teaching Pre-K-12*, 115(11), p. 844. **DOI:** <https://doi.org/10.5951/MTLT.2022.0193> (double-blind peer-review process)
- **Ortiz, E.** (March, 2022). *The discovery of wonderful ideas*. In the *For the Love of Mathematics Department of the Mathematics Teacher: Learning and Teaching Pre-K-12*, 115(3), p. 244. <https://doi.org/10.5951/MTLT.2021.0265> (double-blind peer-review process)
- Dieker, Lisa, Butler, Malcolm, B., **Ortiz, E.**, and Gao, Su (December, 2021). Reflecting upon 30 years of STEM partnership between industry, university, and public schools: Past lessons, current successes, and future dreams. *Education Science*, 11(12), 760, pp. 1-12. Retrieve from <https://doi.org/10.3390/educsci11120760>.
Special issue invited article: Integrated STEM and STEM partnerships: Teaching and learning. *Education Sciences* is an international peer-reviewed open access journal published monthly online by Multidisciplinary Digital Publishing Institute (MDPI).
- **Ortiz, E.** (January, 2021). *The shape of art: Mathematics connections*. In the *For the Love of Mathematics Department of the Mathematics Teacher: Learning and Teaching Pre-K-12*, 114(1), 88-89. (double-blind peer-review process) Retrieved from <https://doi.org/10.5951/MTLT.2020.0197>
Instagram link: https://www.instagram.com/p/CC_Y0qMHBji/?utm_source=ig_web_copy_link
- **Ortiz, E.** (2020). The beauty of mathematics and art. In *For the Love of Mathematics Department of the Mathematics Teacher: Learning and Teaching Pre-K-12*, 113(8), p. 684. Retrieved from <https://pubs.nctm.org/view/journals/mtlt/mtlt-overview.xml>. (double-blind peer-review process) This is a new journal published by the National Council of Teachers of Mathematics (NCTM).
Instagram link: https://www.instagram.com/p/B5372vFnT-s/?utm_source=ig_web_copy_link
- **Ortiz, E.** (July, 2020). Preservice teachers involvement in the dynamic, messy and nonlinear problem-solving process. *Issues in the Undergraduate Mathematics Preparation of School Teachers (IUMPST): The Journal (Pedagogy)*, 2, pp. 1-15, Retrieved from <http://www.k-12prep.math.ttu.edu/journal/2.pedagogy/volume.shtml> or pdf: <http://www.k-12prep.math.ttu.edu/journal/2.pedagogy/ortiz01/article.pdf> (double-blind peer-review process) (online journal) ISSN 2165-7874 (30% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics). This article provides a model for further study of the problem-solving process with national and international implications.
- **Ortiz, E.**, Eisenreich, Heidi & Tapp, Laura (2019). Physical and virtual manipulative framework conceptions of undergraduate pre-service teachers. *International Journal for Mathematics Teaching and Learning*, 20(1), 62-84. Retrieved from <https://www.cimtl.org.uk/ijmtl/index.php/IJMTL/article/view/116>. (double-blind peer-review process) (acceptance rate was under 30% according to editorial panel for 2017-2018)

Drs. Eisenreich and Tapp were Ph. D. Mathematics Education at UCF. It is based on an original framework developed as a **research study** involving undergraduate pre-service students in the mathematics methods course for elementary education. These efforts were supported in part by a Toni Jennings internal grant.

- **Ortiz, E.** (2018). The secret life of prime numbers. *Teaching Children Mathematics*, 24(4), pp. 228-234. (double-blind peer-review process) (17% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics) (over 60,000 member) NCTM Website: <https://www.nctm.org/Publications/Teaching-Children-Mathematics/2018/Vol24/Issue4/The-Secret-Life-of-Prime-Numbers/>
- **Ortiz, E.** (2017). Pre-service teachers' ability to identify and implement cognitive levels in mathematics learning. *Issues in the Undergraduate Mathematics Preparation of School Teachers (IUMPST): The Journal (Technology)*, 3, pp. 1–14, Retrieved from <http://www.k-12prep.math.ttu.edu/journal/3.technology/volume.shtml> or pdf: <http://www.k-12prep.math.ttu.edu/journal/3.technology/ortiz01/article.pdf> (double-blind peer-review process) ISSN 2165-7874 (30% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics).
- Pace, Michelle H. & **Ortiz, E.** (2016). Get the goof. *Teaching Children Mathematics*, 23(3), pp. 138-143. (double-blind peer-review process) (17% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics) NCTM website: <http://www.nctm.org/Publications/Teaching-Children-Mathematics/2016/Vol23/Issue3/Get-the-Goof!/>.

Selected by the **TCM Editorial Panel - Year Favorite - Volume 23** – *NCTM TCM Journal* (August, 2017). The editorial panel looks back at the past volume year and selects one published article to highlight. It was made available for general/free distribution.

- Goodwin, Chris & **Ortiz, E.** (May, 2015). It's a Girl: Random Numbers, Simulations, and the Law of Large Numbers. *Mathematics Teaching in the Middle School, Mathematical Explorations Department: Classroom-ready activities*, 20(9), pp. 561-564. (double-blind peer-review process) Retrieved from <https://www.nctm.org/Publications/Mathematics-Teaching-in-Middle-School/2015/Vol20/Issue9/It-s-a-Girl!-Random-Numbers,-Simulations,-and-the-Law-of-Large-Numbers/>. (25% acceptance rate from Journal Citation Reports by Cabell's Scholarly Analytics).
- Pace, Michelle H. & **Ortiz, E.** (2015). Oral language needs: Making math meaningful. *Teaching Children Mathematics*, 21(8), pp. 495-500. Retrieved from <https://www.nctm.org/Publications/teaching-children-mathematics/2015/Vol21/Issue8/Oral-Language-Needs-Making-Math-Meaningful/>. (double-blind peer-review process) (17% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics).
- **Ortiz, E.** (2014). Optical topography of evoked brain activity during mental tasks involving whole number operations. *International Journal for Mathematics Teaching and Learning* (online journal), pp. 1-36. Retrieved from <http://www.cimt.org.uk/journal> or pdf: <http://www.cimt.org.uk/journal/ortiz2.pdf>. (double-blind peer-review process) (27.5% acceptance rate according to editorial panel for 2014).
- Avila, Cheryl & **Ortiz, E.** (2012). Produce intrigue with Crypto! *Teaching Middle School Mathematics*, 18(4) 212-220. Retrieved from <https://www.nctm.org/Publications/mathematics-teaching-in-middle-school/2012/Vol18/Issue4/Produce-Intrigue-with-Crypto!/>. (double-blind peer-review process) (25% acceptance rate from Journal Citation Reports by Cabell's Scholarly Analytics)
- Siegel, Aryn, & **Ortiz, E.** (2012). Perimeter and beyond! *Teaching Children Mathematics*, 19(1) 38-41. Retrieved from <https://www.nctm.org/Publications/teaching-children-mathematics/2012/Vol19/Issue1/Perimeter-and-Beyond/>. (double-blind peer-review process) (17% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics).
- **Ortiz, E.** (2011). An analysis of Middle School Mathematics Pre-service Teachers' Assessment of Teaching Goals. *International Journal for Mathematics Teaching and Learning* (online journal) (<http://www.cimt.org.uk/journal/>), pp. 1-14. Retrieved from <http://www.cimt.org.uk/journal/ortiz.pdf>. ISSN 1473 – 0111. (double-blind peer-review process) (27.5% acceptance rate according to editorial panel).

- Tobias, Jennifer & **Ortiz, E.** (2007). Using science to promote preservice teachers understanding of problem solving in mathematics. *Issues in the Undergraduate Mathematics Preparation of School Teachers (IUMPST): The Journal, (Pedagogy)* (online journal), 2. Retrieved from <http://www.k-12prep.math.ttu.edu/journal/2.pedagogy/volume.shtml>. (double-blind peer-review process) (30% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics).
- Thrift, Michelle L. & **Ortiz, E.** (2007). Memorable menu math: One teacher's journey from procedural teaching to conceptual teaching. In *From the Classroom Department, Teaching Children Mathematics*, 14(1) 58-60. Retrieve from https://www.nctm.org/Publications/teaching-children-mathematics/2007/Vol14/Issue1/From-the-Classroom_-Memorable-Menu-Math_-The-Journey-from-Teaching-Procedurally-to-Teaching-Conceptually/. (double-blind peer-review process) (17% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics).
- **Ortiz, E.** (2006). Roll out fractions game: Comparing fractions. *Teaching Children Mathematics*, 13(1), pp. 56-62. Retrieve from https://www.nctm.org/Publications/Teaching-Children-Mathematics/2006/Vol13/Issue1/The-Roll-Out-Fractions-Game_-Comparing-Fractions/. (double-blind peer-review process) (17% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics).
- **Ortiz, E.** (2005). Learning levels of learning in mathematics teaching. *Journal of College Teaching & Learning*, 2(4) 65-71. Retrieved from <http://www.cluteinstitute.com/ojs/index.php/TLC/article/view/1809>. (double-blind peer-review process) (11% to 20% overall acceptance rate).
- **Ortiz, E.** & Popovich, Angela (2005). Solving a volume problem using the Geometer's Sketchpad. *ON-Math: Online Journal of School Mathematics*, 4. (double-blind peer-review process).
- **Ortiz, E.** (2000). A game involving fraction squares. *Teaching Children Mathematics*, 7(4), pp. 218-222. Retrieved from <https://www.nctm.org/Publications/teaching-children-mathematics/2000/Vol7/Issue4/A-Game-Involving-Fraction-Squares/>. (double-blind peer-review process) (17% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics)
- **Ortiz, E.** (1994). Teacher to Teacher: A geometry game. *Teaching Children Mathematics*. 1(4), 231-233. Retrieved from <https://eric.ed.gov/?id=EJ500159>. (double-blind peer-review process) (17% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics).
- **Ortiz, E.** (June, 1993). "Veo, veo" game: Practicing vocabulary in a fun way. *Journal of Reading Education* 18. (double-blind peer-review process)
- **Ortiz, E.** & MacGregor, K. (1991). Effects of Logo programming on understanding of variables. *Journal of Educational Computing Research*, 7(1), pp. 37-49. (double-blind peer-review process) (17% acceptance rate from Journal Citation Reports by Cabells Scholarly Analytics).

Florida:

- **Ortiz, E.** (Winter, 2016). The problem-solving process in a mathematics classroom. *Transformations, a publication by Florida Association of Mathematics Teachers (FAMTE)* (online journal), 1(1), pp. 4-14. Retrieved from http://www.amazon.com/Transformations-Publication-Association-Mathematics-Educators/dp/1523495936/ref=sr_1_1?ie=UTF8&qid=1456099123&sr=8-1&keywords=Transformations%3A+FAMTE, and <https://nsuworks.nova.edu/cgi/viewcontent.cgi?article=1000&context=transformations>. (single-blind peer-review process).
- **Ortiz, E.** (Spring, 2015). The development of fraction ideas and use of learning levels: Part II. *Dimension in Mathematics*, 35(1), pp. 23-31 (single-blind peer-review process).

This article is **based on my expertise as a practitioner and researcher** in the area of fractions. I have pilot tested these activities in elementary school classrooms and mathematics methods courses for elementary school.

- **Ortiz, E.** (Fall, 2014). The development of fraction ideas and use of learning levels: Part I. *Dimension in Mathematics*, 34(2) pp. 17-26. (single-blind peer-review process)
- **Ortiz, E.** (Summer Issue, 2008). Vice President for College Report. In *Additional Dimensions: Official Newsletter of the Florida Council of Teachers of Mathematics*, 17(2).
- **Ortiz, E.** (Fall Issue, 2008). Vice President for College Report. In *Additional Dimensions: Official Newsletter of the Florida Council of Teachers of Mathematics*, 17(1).
- **Ortiz, E.** (Fall Issue, 2007). Vice President for College Report. In *Additional Dimensions: Official Newsletter of the Florida Council of Teachers of Mathematics*, 16(1).
- Dixon, J. & **Ortiz, E.** (2004). The Florida Association of Mathematics Teacher Educators (FAMTE). *Dimension in Mathematics*, 24(2), p. 6. (single-blind peer-review process)
- **Ortiz, E.** (Fall, 2002). Games for teaching basic facts operations. *Dimensions in Mathematics*. (single-blind peer-review process)
- **Ortiz, E.** (1997). An interdisciplinary activity involving hats and show-and-tell. *Dimensions in Mathematics*, 17(2), pp. 9-13. (single-blind peer-review process)
- **Ortiz, E.**, Everett, R., & Holt, L. (1994). Results of a College of Education technology survey: A follow-up study. *Florida Science Teacher Journal*, 9(2), pp. 18-20. (single-blind peer-review process)
- **Ortiz, E.**, Holt, L., & Everett, R. (1993). InTech training final report: The infusion of technology in the methods courses (graduate and undergraduate). *Florida Science Teacher Journal*, 8(2), pp. 16-22. (single-blind peer-review process)
- **Ortiz, E.** (1992). Talking about connections: The NCTM Standards, some human developments and the mathematics curriculum needs for change. *Dimensions in Mathematics*, 12(3), pp. 17-21. (single-blind peer-review process)
- **Ortiz, E.** (1990). Using Logo to teach the mathematics concept “variable”. *Dimensions in Mathematics*, 10(2), 13-20. (single-blind peer-review process).

Monograph:

A monograph is a special type of book written on a single specialized topic, devoted mainly for research works. A Monograph has some common characteristics with books and review papers.

- **Ortiz, E.** (1992). Perceived robustness in a computer-managed learning environment. In B. Fraser (Ed.). *The Study of Learning Environments Monographs*, 7 (double-blind peer-review process).
- **Ortiz, E.** & Ellett, C. (1990). Learning, retention, and perceived robustness in a computer-assisted learning environment. In B. Fraser (Ed.). *The Study of Learning Environments Monographs*, 4, 32-39 (double-blind peer-review process).

Bibliography:

- Kitchen, Richard, Rodriguez, Rita, & **Ortiz, E.** (Editors) (Spring, 2007). *TODOS: Mathematics for ALL: Bibliography of Diversity and Equity in Mathematics Education*, Second Edition. The second edition of the bibliography was published as part of volunteer work for the TODOS: Mathematics for ALL, which is an international organization. The document is also available digitally. <https://www.todos-math.org/assets/documents/Bibliography/todosbibliography2007.pdf>.

Conference Proceedings:

- **Ortiz, E.** (2021). Preservice teachers’ development of diagnosis competence using virtual reality simulations. Conference Proceedings of the 2021 Virtual American Educational Research

Association Annual Meeting. Online Paper Repository: <https://www.aera.net/Publications/Online-Paper-Repository>, DOI: 10.3102/1678599

- **Ortiz, E.** (2018). Use of mixed reality simulation to assess diagnostic competence self-efficacy. In Fulchini, A. & Hynes, M. C. (Conference Organizing Committee), Virtual Human Interactive Performance. Paper presented at the Sixth Annual TeachLive 2018 Conference, University of Central Florida, Orlando, FL, May 23-24 (pp. 64-84). Retrieved from <http://teachlive.org/wp-content/uploads/2018/09/2018TeachliveProceedings.pdf>.
- **Ortiz, E.** (2017). Preservice Teachers' Understanding of an Interpretive Framework for Analyzing Virtual Manipulatives in the Mathematics Classroom. Conference Proceedings of the 2021 American Educational Research Association Annual Meeting. San Antonio, Texas. AERA Online Paper Repository: <https://www.aera.net/Publications/Online-Paper-Repository>, DOI: 10.3102/1174692
- **Ortiz, E.** & Pace, Michelle H. (February 18–20, 2016). Wealth distribution as a context for teaching mathematics for social justice. Proceedings of the *International Conference on Poverty, Globalization and Schooling: A Holistic Approach*. University of Central Florida campus, Orlando, FL.
- **Ortiz, E.** (January 4–6, 2016). A framework for using virtual manipulative tools such as apps and applets. Proceedings of the 2016 *International Education Conference*, Orlando, FL.
- **Ortiz, E.** (February 26–28, 2015). Challenges and opportunities of teaching mathematics for social justice. Proceedings of the *International Conference on Poverty, Globalization and Schooling: A Holistic Approach*. University of Central Florida campus, Orlando, FL. http://education.ucf.edu/form/PGS_reg.cfm?id=4, http://education.ucf.edu/form/docs/2015PGS_proceedings.pdf, or http://education.ucf.edu/form/docs/2015PGS_papers.pdf.
- This publication is based on is an original mathematical activity based on the *Teaching Mathematics for Social Justice (TMfSJ)* framework for elementary school students. It is a based on my expertise as a **practitioner and researcher** in this area.
- **Ortiz, E.** (April 8–12, 2011). How the brain's performance during mathematics and reading fluency tests compare. The ERIC Clearinghouse on Teaching and Teacher Education. Washington, D.C. This article is included in ERIC as ED520161 <http://eric.ed.gov/?q=enrique+ortiz&id=ED520161>, and AERA Online Paper Repository (<http://www.aera.net/repository/>).
- **Ortiz, E.** (2010). Use of Neuroimaging to Clarify How Human Brains Perform Mental Calculations. Conference Proceedings of the 2021 American Educational Research Association Annual Meeting. Denver, Colorado. AERA Online Paper Repository: <https://www.aera.net/Publications/Online-Paper-Repository>.
- **Ortiz, E.** (2010). How the Brain Performs Mental Calculations. Conference Proceedings of the 2021 American Educational Research Association Annual Meeting. Denver, Colorado. AERA Online Paper Repository: <https://www.aera.net/Publications/Online-Paper-Repository>.
- **Ortiz, E.** (April 30–May 4, 2010). The Use of Neuroimaging to clarify how human brains perform mental calculations. The ERIC Clearinghouse on Teaching and Teacher Education. Washington, D.C. This article is included in ERIC as ED511223 <http://eric.ed.gov/?q=enrique+ortiz&id=ED511223>, and AERA Online Paper Repository (<http://www.aera.net/repository/>).
- **Ortiz, E.** (2007). Using *CRA* levels for the development of learning activities and SoTL. Proceedings of the 5th *International Conference on the Scholarship of Teaching and Learning (SoTL)*. London, England.
- **Ortiz, E.** (February, 2003). Research findings from games involving basic fact operations and algebraic thinking at a PDS. Paper presented at the *Annual Holmes Partnership Conference*. Washington, D.C. <https://eric.ed.gov/?id=ED476699>.

Invited Book Reviews Published in Journals:

- **Ortiz, E.** (2011). Reviewing and viewing: Review of Math Jokes 4 Mathy Folks by Patrick Vennebush, Corwin Press. *Teaching Children Mathematics*, 17(8), 508.
- **Ortiz, E.** (2008). Reviewing and Viewing: Review of Math Matters en Español Books: Henry Lleva la Cuenta by Daphne Skinner and ¡A Limpiar el Campamento! by Lucile Recht Penner. *Teaching Children Mathematics*, 14(9), 547-548.
- **Ortiz, E.** (2007). Reviewing and Viewing: Review of Math Matters en Español Books: La limonada de Lulú by Barbara deRubertis and ¡Ya era hora, Max! by Kitty Richards. *Teaching Children Mathematics*, 13(7), 398.

Books

- Andreasen, J., Spalding, Lee-Anne, & **Ortiz, E.** (February, 2015). *CliffsNotes FTCE: Elementary Education K-6: Test Prep*, Second Edition. Boston, MA: Houghton Mifflin Harcourt. 360 pages, and online exam. ISBN-13: 978-0544313538, Paperback: http://www.amazon.com/CliffsNotes-FTCE-Elementary-Education-Second/dp/0544313534/ref=sr_1_1?ie=UTF8&qid=1425833226&sr=8-1&keywords=enrique+ortiz.
- Andreasen, J., Spalding, Lee-Anne, & **Ortiz, E.** (2010). *CliffsNotes FTCE: Elementary Education K-6: Test Prep*. Indianapolis, IN: Wiley Publishing, Inc. 360 pages. ISBN: 978-0-470-49906-1, Paperback.
- **Ortiz, E.**, Little, Mary and Robertson, Shelby (2009). *Mathematics Concepts and Skills Checklist by Grade Level (Grades K-8)*. Effective Instruction Practices Grant, RTI Teaching Learning Connections. Exceptional Education and Student Services, Florida Department of Education. Tallahassee, FL.
- Feldman, C., Heeres, D., **Ortiz, E.**, Kallemeyn, E., Regis, T., & Singer, M. (2008). *Pre-Transition Mathematics*. Usiskin, A., Project Director and McConnell, J., Team Leader. University of Chicago School Mathematics Project (UCSMP). Upper Saddle River, New Jersey: Prentice Hall Publishing Company. ISBN-13: 978-0076185696
Visit the following website for more details: <http://ucsmp.uchicago.edu/secondary/curriculum/pre-transition/>
- **Ortiz, E.**, & Andreasen, J. (2007). *CliffsTest Prep CSET Mathematics*. Indianapolis, IN: Wiley Publishing, Inc. 240 pages.
- Feldman, C., Heeres, D., Kallemeyn, E., **Ortiz, E.**, Regis, T., & Singer, M. (Field-Test Version, 2006-2007). *Pre-Transition Mathematics*. Usiskin, A., Project Director and McConnell, J., Team Leader. University of Chicago School Mathematics Project (UCSMP). Upper Saddle River, New Jersey: Prentice Hall Publishing Company.
- Feldman, C., Kallemeyn, E., **Ortiz, E.**, Regis, T. P., & Singer, M. F. (Pilot Version, 2005). *Pre-Transition Mathematics*. Usiskin, Z., Project Director & McConnell, J., Team Leader. University of Chicago School Mathematics Project (UCSMP). Upper Saddle River, New Jersey: Prentice Hall Publishing Company.
- **Ortiz, E.**, & Davenport, T. (2006). *CliffsTest Prep FCAT Grade 10 Math and Reading*. Indianapolis, IN: Wiley Publishing, Inc. 298 pages. This book is to be used to prepare for the FCAT Grade 10 around Florida.
- Brumbaugh, D., **Ortiz, E.**, & Gresham, G. (2006). *Teaching Middle School Mathematics*. Mahwah, NJ: Lawrence Earbaum Associates, Inc. 328 pages. (double-blind peer-review process)
- **Ortiz, E.**, & others (2006). *The Best Teachers' Test Preparation for the Florida Teacher Certification Exam (FTCE): Professional Education Test*, 4th Ed. Piscataway, NJ: Research & Education Associates.
- **Ortiz, E.** & others (2006). *The Best Teachers' Test Preparation for the Florida Teacher Certification Exam (FTCE) with CD-ROM: Professional Education Test*, 4th Ed. Piscataway, NJ: Research & Education Associates.

- **Ortiz, E.** & others (2005). *The Best Teachers' Test Preparation for the Florida Teacher Certification Exam (FTCE): Professional Education Test*, 3rd Ed. Piscataway, NJ: Research & Education Associates.
- **Ortiz, E.** & others (2005). *The Best Teachers' Test Preparation for the Florida Teacher Certification Exam (FTCE) with CD-ROM: Professional Education Test*, 3rd Ed. Piscataway, NJ: Research & Education Associates.
- Young, S. & **Ortiz, E.** (1987). *Mathematics with calculators: Resources for teachers, Fifth Grade*. California: Addison-Wesley.
- Young, S. & **Ortiz, E.** (1987). *Mathematics with calculators: Resources for teachers, Sixth Grade*. California: Addison-Wesley.
- Young, S. & **Ortiz, E.** (1987). *Mathematics with calculators: Resources for teachers, Seventh Grade*. California: Addison-Wesley.
- Young, S. & **Ortiz, E.** (1987). *Mathematics with calculators: Resources for teachers, Eighth Grade*. California: Addison-Wesley.

Book Chapter:

- **Ortiz, E.** (2020). Pat II: Social justice mathematics lessons: 5.4 Estimated wealth distribution in the United States and the World. In Berry III, Robert Q., Conway IV, Basil M., Lawler, Brian R., & Staley, John W., Eds. *High School Mathematics Lessons to Explore, Understand, and Respond to Social Justice*, pp. 99-108. Thousand Oaks, CA: Joint publication: Corwin Press (SAGE Publications) and National Council of Teachers of Mathematics. (single-blind peer-review process).
Link to the information pages: Corwin
<https://us.corwin.com/en-us/nam/high-school-mathematics-lessons-to-explore-understand-and-respond-to-social-injustice/book262378> and at NCTM <https://www.nctm.org/Store/Products/High-School-Mathematics-Lessons-to-Explore,-Understand,-and-Respond-to-Social-Injustice/>
Preview:
https://www.google.com/books/edition/High_School_Mathematics_Lessons_to_Explo/IHjEDwAAQB_AJ?hl=en&gbpv=0
Resources:
<https://resources.corwin.com/tmsj-highschool/student-resources/chapter-5/lesson-54-estimated-wealth-distribution-in-the-united>
- **Ortiz, E.** (2001). Logo computer language. In Louisen S. Grinstein, and Sally Lipsey, Editors. *Encyclopedia of Mathematics Education*. New York, NY: Garland Publishing. (Peer reviewed.) I was *invited* to write an entry for this work because of my research background in this area.

Activity in a Book:

- **Ortiz, E.** (2006). Calculus Activity. In Douglas K. Brumbaugh, & David Rock, Authors. *Teaching Secondary Mathematics, 3rd Edition*. Mahwah, NJ: Lawrence Earbaum Associates, Inc. (blind refereed reviewing process).

Self-published Books/Documents:

- **Ortiz, E.** (January, 2023). *Triangle Puzzle Game Card Template*. Google doc.
<https://docs.google.com/document/d/1V20p7PLDBwJjvhTCn3OT3qDOzeB4Jovx4i82vp5zDpk/edit?usp=sharing>
- **Ortiz, E.** (2023, January). *Triangle Puzzle Challenges* (2nd Edition). Google doc.
https://docs.google.com/document/d/1mcV7Ms0MDE4286cBODO_gcnLrqgkNab6RbxkBLDZ7o8/edit?usp=sharing
- **Ortiz, E.** (2023, January). *Triangle Puzzle Challenge* (2nd Edition). Google doc.
https://docs.google.com/document/d/1mcV7Ms0MDE4286cBODO_gcnLrqgkNab6RbxkBLDZ7o8/edit?usp=sharing

Available for free at https://www.facebook.com/triangle.puzzle/?ref=pages_you_manage. Puzzle challenges are added frequently to this Facebook page. It has over 2,000 followers (12/06/2021).

- **Ortiz, E.** (2018). *Ten elephants and a spider's web: A traditional Latin American counting rhyme and other activities: Spanish/English: Second Edition*. Morrisville, NC: Lulu Publishing (<http://www.lulu.com/shop/enrique-ortiz/ten-elephants-and-a-spiders-web-a-traditional-latin-american-counting-rhyme-and-other-activities-spanishenglish-second-edition/ebook/product-23276991.html>). ISBN: 978-1-387-13155-6. 24 pages. **Copies sold: 19.** 20 pages.
- **Ortiz, E.** (2018). *Playing with shapes*. Morrisville, NC: Lulu Publishing (<http://www.lulu.com/shop/enrique-ortiz/playing-with-shapes/hardcover/product-23529326.html>). ISBN: 978-1-387-60317-6. 20 pages. 32 pages. **Copies sold: 18.**
- **Ortiz, E.** (2009). *Ten elephants and a spider's web: A traditional Latin American counting rhyme and other activities: Spanish/English*. Morrisville, NC: Lulu Publishing (<http://www.lulu.com/content/4618650>). ISBN: 978-0-615-26124-9. 20 pages. **Copies sold: 55.**
- **Ortiz, E.** (2008). *Natalie and the gumball machine: A counting model for understanding the value of quarters*. Morrisville, NC: Lulu Publishing (<http://www.lulu.com/content/4280796>). ISBN: 978-0-578-00135-7. 24 pages. **Copies sold: 60.**
- **Ortiz, E., Gresham, Gina, & Brumbaugh, Douglas** (2008). *TAG-Middle school math is it!* Morrisville, NC: Lulu Publishing (http://www.lulu.com/author/content_revise.php?fCID=4221270). ISBN: 978-0-615-25637-5. 120 pages. **Copies sold: 150.**
- **Gresham, Gina, Ortiz, E., Brumbaugh, & Douglas** (2008). *TAG-Math is it! Grades 3- 5*. Morrisville, NC: Lulu Publishing (http://www.lulu.com/author/content_revise.php?fCID=4250285). ISBN: 978-0-615-25622-1. 91 pages. **Copies sold: 618.**

Infographics:

Each infographic is a clipped compound of "information" and "graphics." It is a graphic visual representation of information, data or knowledge intended to present information quickly and clearly.

- **Ortiz, E.** (2016). *Problem Solving Process – Second Edition*. Canvas Infogram. Retrieved from https://www.canva.com/design/DACAPA2cSg8/YvjqlAqxBudWdUH-4c7zIA/view?utm_content=DACAPA2cSg8&utm_campaign=designshare&utm_medium=link&utm_source=sharebutton. This Infogram was developed to help students visualize the problem-solving process and has been used in classes and conferences. I have shared with teachers over 800 free hard copies.
- **Ortiz, E.** (2016). *Proceso de Solución de Problemas*. Canvas Infogram. Retrieved from https://www.canva.com/design/DACA6z4dj6w/5zlfV5VDKAWnDTdZJpRYgQ/view?utm_content=DACA6z4dj6w&utm_campaign=designshare&utm_medium=link&utm_source=sharebutton. This Spanish version of the problem-solving Infogram has been used in combination with the English version in classes and conferences. I have shared with teachers over 800 free hard copies.
- **Ortiz, E.** (2016). *Problem Solving Process*. Canvas Infogram. Retrieved from https://www.canva.com/design/DACAPA2cSg8/YvjqlAqxBudWdUH-4c7zIA/view?utm_content=DACAPA2cSg8&utm_campaign=designshare&utm_medium=facebook&utm_source=publish. This Infogram has been used in classes and conferences. I have shared with teachers over 500 free copies.

Modules/Documents:

These are documents and modules developed for instructional purposes and disseminated in three-ring binders and/or digital files as part of workshops offer as professional development to pre and inservice teachers in the areas of special, elementary or secondary education.

- **Ortiz, E.** (2018). *Mathematics Concepts and Skills Checklist by Grade Level (Grades K-8): Revised to align with the Common Core State Standards.*
- **Ortiz, E.** (2010). *Problem Solving Modules: UCARE Inventory.* Project Central Grant. Florida Department of Education. This is a Likert scale for assessing activities based on the book *Adding it up!* UCARE stands for the following: understanding, computing, assessing, reasoning, and engaging. It used as a resource for graduate and undergraduate courses. We use it to evaluate commercially available resources and original activities.
- **Ortiz, E.** (2008). *Assessment of algebraic thinking.* Project Central Grant. State of Florida, Department of State. This is an assessment guide for teachers in the area of algebraic thinking.
- **Ortiz, E.** (2008). Introduction to Lesson Plans for Algebra Success Keys. In *Algebra Success Keys (ASK): Lesson Plans for ASK Facilitators.* Project Central Grant. Florida Department of Education.
- **Ortiz, E.** (2007). *Lesson plans for Tabula's Mission Electronic Games. Lesson plans that cover Missions 1 – 20* (of the Single Player Pre-Algebra Tabula Digita product) and include the following items: objectives, alignment with NCTM and Florida Sunshine State Standards, definition of important concepts, assessment items, teacher-directed lesson plans, and inquiry-based lesson plans. NY: Tabula Digita, Inc.
- Ringler, M., **Ortiz, E.**, & Little, M. (2007). *Algebra Success Keys (ASK) (grades K-12).* Project Central Grant. Florida Department of Education. This is a teacher-training guide for grades K-12. It will be used to train teachers that will in turn train other teachers in the area of algebraic thinking.
- **Ortiz, E.** (2003). *Algebraic thinking checklist: A section of the algebraic thinking toolbox.* Project Central Grant. Florida Department of Education.
- **Ortiz, E.** (2003). *Using manipulative and ESOL strategies in Math Education: A section of the algebraic thinking toolbox.* Project Central.
- **Ortiz, E.** (1992). *Module for MAE 4326, and MAE 5318. In Multicultural teaching modules: A curriculum source of multicultural experiences for pre-school through high school students.* Margaret G. Miller, Project Director. Sponsored by Dr. Phillips Foundation and the College of Education, University of Central Florida, Orlando, Florida.

Report

- Kersaint, Gladis, **Ortiz, E.**, & Adams, Thomasenia L. (Summer 2007). *Final Report: Voyages Elementary Mathematics Program: The Florida Standards-Based Mathematics Program Research Evaluation Grant.* School District of Hillsborough County, Tampa, Florida.

Creative Artwork/Designs and Expositions

- **Ortiz, E.** (fall, 2022). *DebriefScape Observation Tool Templates: Ortiz Math Questioning Template.* In Dieker, L., Hines, R., Hughes, C., & Vasquez (2021-2026). *DebriefScape™ Suite: Personalized Dashboard and Open Education Resources for STEM Coaches to Support Special Education Teachers Stepping-Up Technology Implementation Grant.* Retrieved from <https://sreal.ucf.edu/CREST/DSCAPE/>.
- **Ortiz, E.** (fall, 2022). *Zig Zag, Burbujas (Bubbles), and Los Peces en el Rio (The Fishes in the River)* [Exhibition of three acrylic on canvas paintings]. Exhibited at the Orlando Museum of Art: First Thursday Art Exposition: Eclectic Knights XIV, October 6, 2022. These art pieces represent explorations of Geometry Abstractions. Geometric abstraction is a form of abstract art based on the use of geometric forms sometimes, though not always, placed in non-illusionistic space and combined into non-objective (non-representational) compositions.

The exhibition was sponsored and curated by the UCF's College of Arts and Humanities. Knight of Art featuring works by UCF alumni, faculty, staff, and students on any subject or medium. This is their 14th annual show celebrating visual arts at the University of Central Florida.

- **Ortiz, E.** (2017-present). Instagram account. This account is updated frequently with original paintings. Over 600 followers. <https://www.instagram.com/enrique.ortiz.art/>.
- **Ortiz, E.** (fall, 2021). Re-Designed of logo for the Florida Association of Mathematics Teacher Educators (FAMTE). This logo is used as an alternative to the original FAMTE logo as part of the FAMTE website and letterhead.
- **Ortiz, E.** (fall, 2021). *The Juggler, The Butterfly Effect, and Latitude* [Exhibition of three acrylic on canvas paintings]. Exhibited at the Orlando Museum of Art: First Thursday Art Exposition: Eclectic Knights XIII, September 2, 2021.
These art pieces represent explorations of Geometry Abstractions. Geometric abstraction is a form of abstract art based on the use of geometric forms sometimes, though not always, placed in non-illusionistic space and combined into non-objective (non-representational) compositions. This exhibition was in response to an invitation from the UCF College of Arts and Humanities Alumni Chapter to submit artwork for this event. This was UCF's 13 annual show celebrating visual arts at This "Knight" of art featured works by UCF alumni, faculty, staff, and students on any subject in all varieties of media.
- **Ortiz, E.** (fall, 2002). Designed of logo for the Florida Association of Mathematics Teacher Educators (FAMTE) (Fall, 2002). This logo is used as part of the FAMTE website and letterhead.

Manuscripts Submitted/In Preparation for Peer Review Publication:

- **Ortiz, E.** (submitted, 2022). The virtuality of virtual manipulatives: Lessons learned. Mathematics Teacher: Learning and Teaching Pre-K-12
- Venning, Megan & **Ortiz, E.** (submitted, 2022). Digital, to be or not to be? That is the question! Paper- or computer-based learning for fifth-grade students' multiplication facts fluency. *Journal of Teacher Action Research*.
- Lumpkin, Sarah, Hart, Lori, & **Ortiz, Enrique** (in progress, 2022). The impact of iReady mathematical games on first- and fourth-grade students; whole number computation learning. *Journal of Teacher Action Research*. They are graduates of the Lockheed Martin Academy (LMA) M.Ed. K-8 Mathematics and Science Education program.
- (in progress, 2021). Self-efficacy mathematics assessment competence survey. Based on a research study about pre- and in-service teachers' mathematics diagnosis/assessment self-efficacy.
- **Ortiz, Enrique** (in progress, 2022). Using action research as a vehicle for teacher reflection: A social reconstructionist approach.
- **Ortiz, Enrique** (2022). Effects of instructional games on students' knowledge of operation facts and use of variables. (double-blind peer-review process).
- **Ortiz, Enrique** (April, 2022). Games for teaching addition and subtraction operations and algebraic thinking. *Teaching Children Mathematics*. (double-blind peer-review process)
- **Ortiz, Enrique** (2022). Diagnosing students' algebraic knowledge. *Mathematics Teacher* (double-blind peer-review process).

Books Submitted:

- **Ortiz, Enrique** (2021). *24 Rectangular Puzzles*. Hand2Mind Company.
- **Ortiz, Enrique** (2021). *Triangle Puzzle Activities*. Hand2Mind Company.

Presentations/Workshops/Posters at Meetings or Conferences

International:

Paper Presentations:

- (April, 2021). Leveraging Mixed-reality Classroom Simulators for Professional Development to Support Student-centered STEM Learning Environments. Projects conducted at UCF using TeachLive simulations. Paper presentations at the National Association for Research in Science Teaching (NARST) 2021 Annual International Conference. NARST is a global organization for improving science education through research.
 - **Paper #1:**
Title: How do GTAs conceptualize and utilize error framing in a mixed-reality classroom simulator
Authors: Ashley A. Geraets, Constance M. Doty, Andrew J. Cheshire, Tong Wan, Jacquelyn J. Chini, Erin K. H. Saitta
 - **Paper #2:**
Title: Impact of GTA Practice with Questioning Strategies using a Mixed-reality Simulator
Authors: Constance M. Doty, Ashley A. Geraets, Tong Wan, Erin K. H. Saitta, Jacquelyn J. Chini
 - **Paper #3:**
Title: Using TeachLivE mathematics diagnosis simulations with pre-service elementary teachers
Author: Enrique Ortiz
 - **Paper #4: Fengfeng Ke (MILE with STEM GTAs)**
Title: Impact of GTA Practice with Questioning Strategies using a Mixed-reality Simulator
Authors: Fengfeng Ke, Zhaihuan Dai, Chih-Pu Dai, Luke West, & Xin Yuan
- (May 20-22, 2020). Preservice teachers' reflections after a TeachLive math diagnostic simulation. Paper presentation at the 1st Center for Research in Education Simulation Technology (CREST) 2020 Conference. Orlando, Florida. <http://teachlive.org> (Conference Cancelled)
- (May 22-24, 2019). Using TeachLive for pre-service teachers' development of diagnosis assessment self-efficacy. Paper presentation at the 7th Annual International TeachLive Conference. Orlando, FL.
- (May 23-25, 2018). Using TeachLive for pre-service teachers' development of diagnosis assessment self-efficacy. Paper presentation at the 6th Annual International TeachLive Conference. Orlando, FL.
- With Pace, Michelle H. (February 18–20, 2016). Wealth distribution as context for teaching mathematics for social justice. Research paper presentation at the *International Conference on Poverty, Globalization and Schooling: A Holistic Approach*. University of Central Florida campus, Orlando, Florida.
- (January 4–6, 2016). A framework for using virtual manipulative tools such as apps and applets. 2016 International Education Conference in Orlando. Disney's Boardwalk Inn, Lake Buena Vista, Florida.
- (February 26–28, 2015). Challenges and opportunities of teaching mathematics for social justice. Research paper presentation at the *International Conference on Poverty, Globalization and Schooling: A Holistic Approach*. University of Central Florida campus, Orlando, Florida.
- (May 31–June 3, 2012). Important Ideas Related to Matching Teaching Goals to Teaching and Assessment Practices. Research paper presentation at the 2012 Lilly Conference on College and University Teaching. Washington, D.C.
- (November, 2006). Assessing the development of teaching goals of pre-service teachers. Paper presentation at the Lilly Conference on College Teaching. Miami University, Oxford, Ohio.
- (May 12-13, 2005). Learning levels of teaching and learning. Paper presentation at the 5th International Conference on the Scholarship of Teaching and Learning (SoTL). London, England.

National:***Paper Presentations/Demonstrations:***

- (February 8-10, 2024, submitted). Teachers' Perception of Challenges Involved in the Implementation of Culturally Relevant Pedagogy. 2024 AMTE Conference. Orlando, FL.
- (October, 2023). Exploring The Challenges of Culturally Relevant Pedagogy Using a Family Pizza Problem. Paper presentation at the 2022 *National Council of Teachers of Mathematics (NCTM)* Annual Meeting and Exposition and TODOS: Mathematics for All Association Social Justice Strand in the 2022 NCTM conference. Los Angeles, California.
- (October, 2023). Triangle puzzle game paper presentation. *Serious Play 2023 Conference*. Toronto, Canada.
- (October, 2023). Triangle puzzle game demonstration. *Serious Play 2023 Conference*. Toronto, Canada.
- (March 26-29, 2023). Use of virtual reality simulations for teachers' development of diagnostic competence. Paper presentation at the 2023 Association of Teacher Educators Annual Meeting, Jacksonville, FL.
- (September 28 – October 1, 2022). My Family Pizza Problem: The Challenges of Culturally Relevant Pedagogy. Paper presentation at the 2022 *National Council of Teachers of Mathematics (NCTM)* Annual Meeting and Exposition and TODOS: Mathematics for All Association Social Justice Strand in the 2022 NCTM conference. Los Angeles, California. (Presentation cancelled due to storm.)
- (June 13-17, 2022). Triangle puzzle demonstration. *Serious Play 2022 Conference*. UCF Downtown Campus, Orlando, FL.
Serious Play Conference is a leadership conference for professionals who are exploring the use of game-based learning for training and education. Serious Play is the only conference offering sessions on virtually every application of serious games and simulations. The 3-day conference offers more than 100+ practical sessions and workshops on the use of game-based learning in Military, Government, Healthcare, Business, Higher Education, and K-12 as well as a full track for instructional designers and game developers.
- (September, 2022). A study involving diagnostic competence and virtual-reality simulations. Paper presentation at the 2022 National Council of Teachers of Mathematics Research Conference.
- (March 3-5, 2022). Virtual reality simulations and preservice teachers' diagnostic competence. Paper presentation at the *Research Council for Mathematics Learning Annual Conference*. 49th Annual RCML Conference, Grapevine, Texas.
- (April 9-12, 2021). Preservice teachers' development of diagnosis competence using virtual reality simulations. Research roundtable presentation at the 2021 *Virtual American Educational Research Association (AERA) Annual Meeting*.
- (April 21-24, 2021). Supporting all students' development of geometric understanding. Annual Meeting of the National Council of Teachers of Mathematics. St. Louis. Presented virtually.
- (April 1, 2020). Pre-service teachers' development of mathematics diagnostic competence. Research report at the 2020 *Research Symposium of the National Council of Teachers of Mathematics*. Chicago, IL. <https://www.nctm.org/Conferences-and-Professional-Development/Research-Conference/> or <https://www.nctm.org/News-and-Calendar/News/NCTM-News-Releases/NCTM-Events-and-COVID-19/> (Conference cancelled)
- (April 1-4, 2020). Have you read any good math for social justice lately? Paper presentation. *Annual Meeting of the National Council of Teachers of Mathematics*. Chicago, IL. <https://www.nctm.org/100/> or <https://www.nctm.org/News-and-Calendar/News/NCTM-News-Releases/NCTM-Events-and-COVID-19/> (Conference cancelled)
- (February, 2019). Preservice teachers' participation in a virtual classroom simulator involving mathematics diagnostic tasks. *Association of Mathematics Teacher Educators Annual Conference*. Orlando, Florida.
- (April 3-6, 2019). Have you read any good math lately? *Annual Meeting of the National Council of Teachers of Mathematics*. San Diego, CA.

- With Eisenreich, Heidi, and Tapp, Laura (April 27-May 1, 2017). Pre-service Teachers' Implementation of Cognitive Levels in Mathematics. Research roundtable presentation at the *2017 American Educational Research Association Annual Meeting*. San Antonio, Texas.
- With Eisenreich, Heidi, and Tapp, Laura (April 3-5, 2017). Pre-service teachers' conceptions of virtual manipulatives. Research paper presentation at the *National Council of Teachers of Mathematics 2017 Research Conference*. San Antonio, Texas.
- With Eisenreich, Heidi, and Tapp, Laura (February 9-11, 2017). Pre-service teachers' conceptions and misconceptions of physical and virtual manipulatives. Paper presentation at the *Twenty-First Annual Association of Mathematics Teacher Educators Conference*. Orlando, FL.
- With Pace, Michelle H. (April 13-16, 2016). Wealth distribution as a context for mathematics for social justice. *Annual Meeting of the National Council of Teachers of Mathematics and TODOS Annual Conference* strand. San Francisco, CA.
- (February 25-27, 2016). Pre-service teachers' implementation of physical and virtual manipulatives. Paper presentation at the *Research Council for Mathematics Learning Annual Conference*. Orlando, Florida.
- (January 4-7, 2016). A framework for using virtual manipulative tools such as apps and applets. Paper presentation at the *Annual Meeting of the College Teaching and Learning Conference*. Orlando, Florida.
- (February, 2015). Challenges and Opportunities of Teaching Mathematics for Social Justice. *Association of Mathematics Teacher Educators Annual Conference*. Orlando, Florida.
- (April, 2014). Teaching Mathematics for Social Justice as a context for CCSS. *Annual Meeting of the National Council of Teachers of Mathematics and TODOS Annual Conference* strand. New Orleans, Louisiana.
- (April 15–April, 19, 2013). How the brain's performance during mathematics and reading fluency tests compare. Research poster and paper presentation at the *Annual Research Pre-session Meeting of the National Council of Teachers of Mathematics*. Denver, Colorado.
- (April 25–28, 2012). Using Origami Activities to Teach Mathematics. Paper presentation at the *Annual Meeting of the National Council of Teachers of Mathematics*. Philadelphia, Pennsylvania.
- (April, 2011). The Problem Solving-Response to Intervention alternative to meet students' needs. Paper presentation at the *Annual Meeting of the National Council of Teachers of Mathematics*. Indianapolis, Indiana.
- Little, Mary and Ortiz, Enrique (July 19-21, 2010). Response to Intervention (RtI) developments at a higher education institution. *Invited* presentation at the *Annual OSEP Project Directors' Conference of the U.S. Office of Special Education (OSEP) Programs*. Washington, D.C.
- (July 7–9, 2010). Using a teaching goals inventory to analyze Noyce Scholars' development of teaching and assessment practices. Workshop presentation at the Noyce Foundation Principal Investigators Conference. Washington, D.C.
- (April 30–May 4, 2010). Use of Neuroimaging to Clarify How Human Brains Perform Mental Calculations. Research paper presentation at the *Annual Meeting of the American Educational Research Association*, Denver, Colorado.
- (April 30–May 4, 2010). How the Human Brain Performs Mental Calculations. Poster presentation at the *Annual Meeting of the American Educational Research Association*, Denver, CO.
- (July 1–3, 2009). Noyce Scholars' Perceived Teaching Goals and Implementation. Paper presentation at the Noyce Foundation Principal Investigators Conference. Washington, D.C.
- (April 22–25, 2009). Optical Topography of Evoked Brain Activity During Mental Tasks Involving Whole Number Operations. Research paper presentation at the *Annual Meeting of the National Council of Teachers of Mathematics*. Washington, D.C.
- (June 27-June 29, 2008). Assessing the development of teaching goals of pre-service teachers. Paper presentation at the *Noyce Foundation Principal Investigators Conference*. Washington, D.C.

- (April, 2008). Pre-service Teachers' Use of Representation Models for Mathematics Learning. Research paper presentation at the *Annual Meeting of the National Council of Teachers of Mathematics*. Salt Lake City, Utah.
- (April, 2007). Research finding related to pre-service middle school mathematics teachers' development of teaching goals. Research paper presentation at the *Annual Meeting of the National Council of Teachers of Mathematics*. Atlanta, Georgia.
- (April, 2005). Roll out fractions game: Comparison and equivalent fractions. Paper presentation at the *Annual Meeting of the National Council of Teachers of Mathematics*. Anaheim, CA.
- (January 3-7, 2005). Levels of learning in mathematics teaching and learning. Paper presentation at the *Annual Meeting of the College Teaching and Learning Conference*. Orlando, Florida. This paper was selected as one of the Best Conference Papers.
- (April, 2004). Research findings involving number operations and algebraic thinking games. Research paper presentation at the Annual Meeting of the *National Council of Teachers of Mathematics*.
- (April, 2003). Algebraic thinking in the elementary schools. Paper presentation at the Annual Meeting of the National Council of Teachers of Mathematics. San Antonio, Texas.
- (March, 2003). Research findings from games involving basic fact operations and algebraic thinking at a Professional Development School (PDS). Paper presentation at the 2003 Professional Development Schools National Conference. Orlando, Florida.
- (March, 2003). Roundtable discussant during the Professional Development Schools National Conference, Orlando, Florida.
- (February, 2003). Research findings from games involving basic fact operations and algebraic thinking at a Professional Development School (PDS). Tabletop paper presentation at the *Holmes Partnership Seventh Annual Conference*. Washington, D.C.
- (April, 2002). Strategies and games for memorizing basic facts. Paper presentation at the Annual Meeting of the National Council of Teachers of Mathematics. Las Vegas, Nevada.
- (June, 2002). Research findings from games involving basic fact operations and algebraic thinking. Paper presentation at the Renaissance Group annual meeting. Washington, D.C.
- (February, 2002). Development and validation of the concept of variable instrument. Paper presentation at the *Research Council for Mathematics Learning*. Las Vegas, Nevada.
- (April, 2001). Fraction squares: A game involving fraction concepts and operations. Paper presentation at the Annual Meeting of the *National Council of Teachers of Mathematics*. Orlando, FL.
- (February, 2000). Assessing pre-service teachers' learning to use manipulatives to teach operations involving fractions and decimals. Paper presentation at the *Research Council for Mathematics Learning*. Nevada, Las Vegas.
- (February, 1999). Pre-service teachers' learning to use manipulatives to teach operations involving fractions and decimals. Paper presentation at the *Research Council for Mathematics Learning*. Annual Conference. College Station, Texas.
- (April, 1998). A geometry game that involves problem solving and cooperative learning. Paper presentation at the *Annual Meeting of the National Council of Teachers of Mathematics*. Washington, DC.
- (February, 1998). Pre-service teachers' learning to use manipulatives to teach whole number operations. Paper presentation at the *Research Council of Diagnostic and Prescriptive Mathematics Annual Conference*. College Park, Maryland.
- (February, 1997). Assessing pre-service teachers' knowledge of the concept of variable. Paper presentation at the *Research Council of Diagnostic and Prescriptive Mathematics Annual Conference*. Oklahoma City, OK.
- (April, 1995). Computers! Music! Fractions? Paper presentation at the *Annual Meeting of the National Council of Teachers of Mathematics*. Boston, Massachusetts.
- (February, 1995). Diagnosing the environmental robustness of the mathematics classroom. Paper presentation at the *Research Council of Diagnostic and Prescriptive Mathematics Annual Conference*. Nevada, Las Vegas

- (February, 1994). A trip to Puerto Rico: A simulation activity developed to raise awareness of cultural pluralism and diversity in the classrooms. Paper presentation at the *Fourth Annual National Conference of the National Association of Multicultural Education*. Detroit, MI.
- (April, 1994). Learning environments and problem solving. Roundtable discussion leader at the *Annual Meeting of the American Educational Research Association*, New Orleans, LA.
- (April, 1994). Linking music, mathematics and multicultural education. Paper presentation at the *Annual Meeting of the National Council of Teachers of Mathematics*. Indianapolis, IN.
- (February, 1993). Alternative assessment methods used in a graduate level diagnostic/prescriptive mathematics course. Paper presentation at the *Research Council of Diagnostic and Prescriptive Mathematics Annual Conference*. Melbourne, Florida.
- (April, 1992). Perceived robustness in a computer-managed learning environment. Paper presentation at the *Annual American Educational Research Association: Special Interest Group meeting of the Study of Learning Environments*, San Francisco.
- (February, 1992). Using Logo to help students overcome difficulties with variables. Paper presentation at the *Research Council of Diagnostic & Prescriptive Mathematics Annual Conference*. NJ.
- With Miller, D. (April, 1991). A comparison of a Logo computer programming and a textbook approach in teaching the mathematics concept "variable". Paper presentation at the Annual Meeting of the *National Council of Teachers of Mathematics*, New Orleans, Louisiana.
- (February, 1991). Assessing students' algebraic knowledge. Paper presentation at the *Annual Conference of the Research Council for Diagnostic and Prescriptive Mathematics*, Pomona, CA.
- (October, 1989). Using Logo to teach mathematics concepts. Paper presentation at the *Annual Meeting of the Southeastern Regional National Council of Teachers of Mathematics*, San Juan, P.R.
- With Ellett, C. (April, 1988). *Environmental robustness and the use of computers on the mathematics classroom*. Paper presentation at the *Annual Meeting of the American Educational Research Association*, New Orleans, Louisiana.
- With MacGregor, K. (April, 1988). A comparative study of a computer programming approach and a textbook approach in teaching the concept of variable. Paper presentation at the *Annual Meeting of the American Educational Research Association*, New Orleans, Louisiana.

International and National Poster Presentations:

- (May 23-25, 2018). Use of Mixed Reality Simulation to Assess Diagnostic Competence Self-efficacy. Poster presentations at the *6th International Annual TeachLive Conference*. Orlando, FL.
- (April 8–April 12, 2011). How the brain's performance during mathematics and reading fluency tests compare. Research poster and paper presentation at the *Annual Meeting of the American Educational Research Association*. New Orleans, Louisiana.
- (July 7–10, 2010). *Update of Research Findings Related to the Transition into Mathematics and Science Teaching (T-MAST) Scholars*. Poster presentation at the Noyce Foundation Principal Investigators Conference. Washington, D.C.
- (September 24–27, 2009). How the Human Brain Performs Mental Calculations. Poster presentation at the *Ninth Annual Lilly Conference on College Teaching*. Traverse City, Michigan.
- (July 1–3, 2009). Research Findings Related to the *Transition into Mathematics and Science Teaching (T-MAST) Scholars*. Poster presentation at the *Noyce Foundation Principal Investigators Conference*. Washington, D.C.
- (May 28–30, 2009). How the Human Brain Performs Mental Calculations. Poster presentation at the *Second Biennial of the International Mind, Brain and Education Society*. Philadelphia, PA.
- (June 27-June 29, 2008). Research Findings Related to the *Transition into Mathematics and Science Teaching (T-MAST) Scholars*. Poster presentation at the *Noyce Foundation Principal Investigators Conference*. Washington, D.C.
- (June 27-June 29, 2007). *Transition into Mathematics and Science Teaching (T-MAST) Scholars*. Poster presentation at the *Noyce Foundation Principal Investigators Conference*. Washington, D.C.

- (January 26-28, 2006). Using the levels of learning as an interpretive framework for mathematics methods. Poster presentation at the *Association of Mathematics Teacher Educators*. Tampa, Florida.
- (October 13-15, 2005). Using CRA levels for the development of learning activities and SoTL. Poster presentation at the *35th Annual Conference of the International Society for Exploring Teaching and Learning*. Hilton Cocoa Beach Oceanfront, Cocoa Beach.

Florida State:

Paper Presentations:

- (2024, January, submitted). Using word problems as a primary source to analyze culturally relevant challenges. 2024 SOURCES Annual Conference, University of Central Florida, Orlando, Florida.
- (June, 2023). *Games that support geometric and visual reasoning*. Paper presentation at the *Annual Meeting of the Florida Council of Teachers of Mathematics*. Orlando, Florida.
- (March, 2023). Mathematics games involving visualization thinking. Paper presentation at the 2023 Florida Engineering Education Conference (FEEC): Innovations in STEM Education.
- (January, 2023). Triangle Puzzle Game. Proposal presentation at the GameLab 2023 Project Presentations to develop a Minimum Viable Product/Prototype game. The Bridge Classroom, Florida Interactive Entertainment Academy, Downtown Orlando Campus, University of Central Florida.
- (June, 2022). *Games that support socialization and socio-mathematical discourse*. Paper presentation at the *Annual Meeting of the Florida Council of Teachers of Mathematics*. Downtown St. Petersburg, Florida.
- (June, 2021). *Supporting all students' geometric thought using geometry puzzle activities*. Paper presentation at the *Annual Meeting of the Florida Council of Teachers of Mathematics*. Orlando, Florida.
- (September 29 – October 1, 2021). Facilitating the development of pre-service teachers' diagnostic competence using TeachLive virtual-reality simulations. Florida Distance Learning Association (FDLA) and Florida Association of Mathematics Teacher Educators (FAMTE) 2021 Virtual Conference.
- (October 1-3, 2020). Teaching mathematics for social justice. Recorded session at the Florida Council of Teacher of Mathematics Annual Conference: Virtual Conference. Orlando, Florida. Friday, Recorded Session #3, 4:00-4:50.
- (October 17-19, 2019). Have you read any good math lately? Paper presentation at the Florida Council of Teacher of Mathematics Annual Conference. Jacksonville, Florida.
- (October 6, 2018). Pre-service teachers' participation in a virtual classroom simulator for math diagnostic task. Paper presentation at the *Annual Meeting of the Florida Council of Teachers of Mathematics*. Daytona Beach, Florida.
- (October 6, 2018). Have you read any good math lately? Paper presentation at the Annual Meeting of the *Florida Council of Teachers of Mathematics*. Daytona Beach, Florida.
- (April 6, 2018). Have you read any good math lately? Paper presentation at the 20th Annual Literacy Symposium. University of Central Florida, Orlando, Florida.
- (April 7, 2017). Reading in a mathematics context: What do we mean by mathematics language? Paper presentation at the 19th Annual Literacy Symposium. University of Central Florida, Orlando, Florida.
- (October 20-22, 2016). Using a new triangular-pieces puzzle to teach mathematics. Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. Orlando, FL.
- (April 1, 2016). Going bananas with mathematics: Challenges children may have when learning the language of mathematics. Paper presentation at the 18th Annual Literacy Symposium. University of Central Florida, Orlando, Florida.
- (November 6-8, 2015). *Teacher Efficacy Academy II. Delta Foundation Conference. Teaching mathematics for social justice*. UCF Florida. This presentation was presented twice.

- (October 15-17, 2015). Using a new triangular-pieces puzzle to teach mathematics. Paper presentation at the Annual Meeting of the *Florida Council of Teachers of Mathematics*. Orlando, Florida.
- (April 3, 2015). Possible connections between writing and mathematical thinking. Paper presentation at the 17th Annual Literacy Symposium. University of Central Florida, Orlando, Florida.
- (October 23-25, 2014). Supporting creative and innovative thinking with outside the box mathematical reasoning. Paper presentation at the *Annual Meeting of the Florida Council of Teachers of Mathematics*. Orlando, Florida.
- (October 17-19, 2013). Teaching Mathematics for Social Justice (TMfSJ) as a context for the CCSS Mathematics Practice Standards. Paper presentation at the *Annual Meeting of the Florida Council of Teachers of Mathematics*. Orlando, Florida.
- (July 23-24, 2013). Content-Based English Language Learning Strategies: Mathematics: Workshop. English Language Certificate Program. Business Administration Building, *UCF*, Orlando, Florida. (51 participants from Brazil)
- (July 22, 2013). Teaching Mathematics for Social Justice (TMfSJ) as a context for implementing the *Common Core State Standards for Mathematical Practices*. Presentation for the LAE 5337 students who are part of the RTP3 Grant: STEM Science 6-12: Mathematics and Science. Teaching Academy, *UCF*, Orlando, Florida. (80 participants)
- (April 5, 2013). Teaching Mathematics for Social Justice (TMfSJ) as a context for implementing the CCSS Mathematical Practices. Paper presentation at the 15th Annual Literacy Symposium. *UCF*, Orlando, Florida.
- With Levin, Judith, Walker-Hopp, Carolyn, Stewart-Lue, Martha, and (April 5, 2013). Common Core, Diverse and Urban Learners: Challenges and Opportunities. Presentation at the 15th Annual Literacy Symposium. *UCF*, Orlando, Florida.
- Ehren, Barbara, Clements, Taylor, Skipper, Suzanne (SCPS Representative), Ortiz, Enrique, Puig, Enrique, Alvarez, Jasmin (April 5, 2013). Common Core State Standards (CCSS) Panel Presentation. *Invited* panel presentation at the *15th Annual Literacy Symposium*. *UCF*, Orlando, FL.
- (October 18-20, 2012). Games That Support Students' Development of Reasoning and Proof. Paper presentation at the *Annual Meeting of the Florida Council of Teachers of Mathematics*. Orlando, Florida.
- (April 6, 2012). Brain activity and students' efficiency with solving arithmetic mental tasks. Paper presentation at the 14th Annual Literacy Symposium. *UCF*, Orlando, Florida.
- (November 1-4, 2011). Optical Topography of Evoked Brain Activity during Mental Tasks Involving Whole Number Operations. *56th Annual Meeting of the Florida Educational Research Association*. Orlando, Florida.
- (October 13–15, 2011). Using Origami Activities to Teach Math. Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. Jacksonville, Florida.
- Chancellor, Carrie (Brevard Schools), Hoover, John (University of Colorado at Boulder), Little, Mary, Kelley, Michelle, Puig, Enrique, Oliver, Edwards, Ortiz, Enrique (April 1, 2011). Response to Instruction/Intervention (RtI) Panel Presentation and Town Hall Celebration. Panel presentation at the *13th Annual Literacy Symposium*. *UCF*, Orlando, Florida.
- (April 1, 2011). Problem Solving, RtI and Mathematics Education. *Invited* paper presentation at the 13th Annual Literacy Symposium. University of Central Florida, Orlando, Florida.
- (Sept. 30–Oct. 2, 2010). How to use the Problem Solving-Response to Intervention alternative. Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. Champions Gate, Florida.
- (June 29-30, 2010). Mathematics Concepts and Skills Checklist by Grade Level (Grades K-8). Presentation at the *Summer Mathematics Institute 2010 of the RtI-TLC Grant*. Lake Buena Vista, Florida.
- (December 4–5, 2009). A Study of How the Human Brain Performs Basic Mental Calculations. Paper presentations at the *Third International Brain Conference: New Frontiers*

sponsored by the Orlando Health, Florida Hospital and University of Central Florida. Lake Buena Vista, Florida.

- (April 7, 2009). Pre-service Teachers' Use of Learning Levels for Categorizing Learning Activities. Round table presentation and discussion at the UCF SoTL Conference: Faculty Showcase, Orlando, Florida.
- Schnackenberg, Joerg, and Ortiz, Enrique (October, 26, 2010). Near Infra-Red Spectroscopy and Optical Topography Research Opportunities. Presentation sponsored by Hitachi Medical Corporation, Japan and UCF/Toni Jennings Exceptional Education Institute. UCF Teaching Academy, Room 117.
- (October 1–3, 2009). Using Tangrams and Fraction Tiles to Teach Fraction Concepts. Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. West Palm Beach, Florida.
- (October 1–3, 2009). How the Brain Works During Mental Tasks Involving Whole Number Operations. Research paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. West Palm Beach, Florida.
- (April 15, 2009). How the Human Brain Performs Mental Calculations. Poster presentation at the UCF-CED 2nd Annual Faculty and Student Research Symposium, UCF Academy for Teaching, Learning, and Leadership.
- (April 1, 2009). How the Human Brain Performs Mental Calculations. Poster presentation at the UCF SoTL Conference: Faculty Showcase, Orlando, Florida.
- With Hunt, Jessica (November, 2008). Whole number computation and logic games. Paper presentation at the “Speak with Hank Kepner, NCTM President at UCF: Teaching to Depth: Implementing the Next Generation mathematics Standards” Conference, Orlando, Florida.
- (October, 2008). Using Origami Activities to Teach Math. Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. Jacksonville, Florida.
- (April, 2008). Transition into Mathematics and Science Teaching (T-MAST) Scholars. Poster presentation at the Florida Association of Mathematics Teacher Educators Conference at UCF, Orlando, Florida.
- (April, 2008). Transition into Mathematics and Science Teaching (T-MAST) Scholars. Poster presentation at the UCF SoTL Conference: Faculty Showcase, Orlando, Florida.
- (October, 2007). Algebraic Thinking Ideas for Middle School Mathematics. Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. Orlando, Florida.
- (April, 2007). Elementary Education Pre-service Teachers' Use of CRA Levels for Categorizing Mathematics Instructional Activities. Poster presentation at the UCF SoTL Conference: Faculty Showcase, Orlando, Florida.
- (October, 2006). Activities for teaching fraction operations. Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. Orlando, Florida.
- (January, 2006). Continuous learning: Self-assessment and action. *Invited* keynote speaker at the Algebra Success Keys Update Conference as part of the Project Central initiatives. Orlando, FL.
- (November, 2005). Using the levels of teaching and learning as an interpretive framework of instructional activities. Paper presentation at the First Fall Drive-In Conference. Orlando, Florida.
- (October, 2005). Using the CRA Levels in the Mathematics Classroom. Paper presentation at the Annual Meeting of the Florida Council of Teacher of Mathematics. Palm Beach, Florida.
- (October, 2004). Roll out fractions game: Comparison of fractions for grades 3-5. Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. Indialantic, FL.
- (October, 2003). Using Geoboards to Teach Fraction Concepts and Operations. Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. Indialantic, FL.
- (February, 2002). Algebraic thinking in the elementary school grades (K-6). Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. Orlando, FL.
- (February, 2001). Strategies and games for memorizing basic facts. Paper presentation at the Annual Meeting of the Florida Council of Teachers of Mathematics. Sarasota, Florida.
- (October, 2000). Proportional coins using a dollar bill as a base. Paper presentation at the annual conference of the Florida Council of Teachers of Mathematics. Sarasota, Florida.

- (October, 1999). A new game involving fraction concepts and operations. Paper presentation at the annual conference of the Florida Council of Teachers of Mathematics. Miami, Florida.
- (October, 1998). Counting on coins. Paper presentation at the annual conference of the Florida Council of Teachers of Mathematics. Orlando, Florida.
- (October, 1997). Using tangrams to teach area ideas. Paper presentation at the annual conference of the Florida Council of Teachers of Mathematics. Fort Lauderdale, Florida.
- (October, 1996). Using music to teach math: A multicultural approach. Paper presentation at the annual conference of the Florida Council of Teachers of Mathematics. Daytona Beach, Florida.
- (February, 1994). The TechnoZoo activity: Integrating mathematics, science and technology. Paper presentation at the 14th Annual Florida Educational Technology Conference. Tampa, Florida.
- (October, 1993). Math hopscotch: Students practice basic facts as they hop. Paper presentation at the annual conference of the Florida Council of Teachers of Mathematics. Jacksonville, Florida.
- (October, 1993). Multicultural education and the teaching of mathematics activities. Workshop presentation at the annual conference of the Florida Council of Teachers of Mathematics. Jacksonville, Florida.
- With Everett, R., and Holt, L. (February, 1993). Integration of technology into teacher education programs. Paper presentation at the Florida Educational Technology Council Annual Conference. Tampa, Florida.
- (October, 1992). An exploratory study of a computer-managed instructional and a regular mathematics instructional environment. Paper presentation at the annual conference of the Florida Council of Teachers of Mathematics. Ft. Walton Beach, Florida.
- Everett, Robert, Holt, Larry and **Ortiz, Enrique** (October, 1992). The integration of educational technology into the undergraduate teacher education curriculum. Paper presentation at the annual conference of the Florida Association of Science Teachers.
- (October, 1991). Assessing students' algebraic knowledge. Paper presentation at the Annual Conference of the Florida Council of Teachers of Mathematics. St. Petersburg, Florida.
- (February, 1991). Using Logo programming to teach the mathematics concept "variable". Paper presentation at *Florida Educational Technology Conference*, Tampa, Florida.

Poster Presentations:

- (January 24-27, 2017). Analyzing Virtual Manipulatives used for Teaching and Learning. Poster presentation at the 37th Annual National Future of Education Technology Conference (FETC). Orange County Convention Center in Orlando, FL.
- (December 4–5, 2009). A Study of How the Human Brain Performs Basic Mental Calculations. Poster presentations at the Third International Brain Conference: New Frontiers sponsored by the Orlando Health, Florida Hospital and University of Central Florida. Lake Buena Vista, Florida.
- (March, 2006). Research efforts in mathematics education. Poster presentation at the Faculty Research Appreciation Day and Vendor Fair. Faculty Showcase, 2006 UCF Research Week: The Best Minds in Action. Orlando, Florida.
- (April, 2006). Middle school mathematics pre-service teachers' assessment of teaching goals. Poster presentation at the *UCF SoTL Conference: Faculty Showcase*, Orlando, Florida.
- (April, 2005). Levels of learning in mathematics teaching and learning. Poster presentation at the UCF SoTL Conference: Year of the Scholarship of Teaching and Learning: Faculty Showcase, Orlando, Florida.

Funded Research Grants/Endowments/Contracts/Initiatives/ In-kind Contribution

External:

- Dieker, L. (Director) (Summer, 2002-present). *Transition to Mathematics and Science Teaching (T-MAST) program*. \$2.5 million **endowment** from *Lockheed Martin Corporation*. **Faculty Advisory Committee: Ortiz, E.** (Coordinator of the *T-MAST* program, Summer 2012), and other mathematics and science education faculty members.

This endowment is part of the *Lockheed/UCF Academy/Endowment* programs. It provides monetary support to students accepted in the *T-MAST* program. The graduate students in this program become part of a cohort involving the middle or secondary school mathematics or science teacher certification. These are students who have completed their bachelor's degrees in an area other than mathematics or science education (*STEM areas*), want to complete a *Master of Arts in Middle School Mathematics or Science Education* and transition into the middle or secondary school teaching profession.

The *Faculty Advisory Committee* is charged with the task of developing the *T-MAST program*. This committee developed this program, has regular meetings for the development of courses, research activities and program sequence.

In 2011, the *American Association of Colleges for Teacher Education* President, Sharon Robinson cited the *STLL Mathematics Education* master's degree program, TMAST, as an example of a program that is responsive to achievement goals for PK-12 students and related needs for the teacher workforce. She made this comment in her response to the movement that master's degree attainment will no longer be considered as part of the reward system for teachers. Also, the *American Association of State Colleges & Universities* Innovations Exchange noted TMAST as a national exemplary program (2011).
- Dieker, L. (Director); & Associate Directors (**Ortiz, E.** et al.) (Spring, 1992-present). *K-8 Lockheed/UCF Academy for Teaching Science and Mathematics*. \$500,000 **endowment** from *Lockheed Martin Corporation*.

Faculty Advisory Committee: Ortiz, E. (Director of the *M.Ed. in K-8 Mathematics and Science program*, Summer 2019) and other mathematics and science faculty members. *Lockheed/Martin (LM)* agreed to contribute \$1,005,000 over four years to the UCF foundation for the purpose of endowing the Academy. UCF has been granted to the *State University System* through its *Eminent Scholars Program* for money (\$758,000) to match the LM gift when it is complete. Funds for start-up phase of the Academy have been received through the *Teacher Enhancement program of NSF* (\$875,000), and additional partners have been sought to support the start-up phase of the Academy and to augment the planned activities of the Academy. The purpose of the Academy is to assist school districts in the improvement of the teaching and learning of mathematics and science. In the program elementary and middle school teachers known as *Scholars* will be trained to serve as school-based leaders in mathematics and science education. While in the Academy, *Scholars* will improve their content knowledge, learn about new methods of instruction, and receive leadership training. This partnership involves LM and UCF as sponsors, *Orange, Seminole and Osceola Counties*, the *State University System*, and the *National Science Foundation*. The funding concept provides for the longevity of the program. The candidate's involvement and association with the Academy has been in terms of curriculum, research and program developments. The *Math/Science Group* has been formed and meets regularly in order to create and take action in different initiatives. I have participated in development of the Strategic Plan and the *LM/UCF Program Brochure*. In terms of research, I have collected and analyze qualitative data regarding some of the *Scholars'* personal curriculum knowledge and teaching goal development. Paper presentations and articles have been developed based on research efforts.

Awards:

 - *Dr. Shirley Schwartz Urban Education Impact Award* (2022).
On October 21, 2022, the partnerships between the University of Central Florida's School of Teacher Education and Orange County Public Schools were awarded the Dr. Shirley Schwartz Urban Education Impact Award by the Council of Great City Schools, a national educational leadership organization of more than eighty national members of the largest school districts in the US. The Dr. Shirley Schwartz Urban Education Impact Award was created in honor of Dr. Shirley Schwartz, who acted as a liaison for collegiate education and held the title of the Council of Great

City Schools' Director of Special Projects for many years. The UCF and OCPS partnership were recognized for significant impacts on student learning with the focus on the urban teacher pipeline. The UCF and OCPS recognized collaborative projects include the OCPS/**Lockheed Martin/UCF Academy for Mathematics and Science** Tuition-free Master's Program and the OCPS/UCF/Noyce STEM Tuition-free Doctoral Program.

- *Christa McAuliffe Award for Excellence in Teacher Education* (2004).
UCF received this national award from the American Association of State Colleges and Universities. This was given in recognition of its efforts to improve mathematics and science education.
- **Ortiz, E.** (Fall 2009-Spring 2019). *Optical Topography of Evoke Brain Activity During Mathematics Fluency and Reading Fluency Tasks*. Testing of Optical Topography System (also known as fNIRS) (\$350,000.00) from the *Hitachi Medical Corporation*, Japan. *Hitachi Medical Corporation* provided access to the Optical Topography System at UCF, and **in-kind contribution** to UCF, including follow-up training from an expert from Japan. I **presented** the **research findings** at *2011 Annual Meeting of AERA* and *2013 Annual Meeting of the NCTM* (see *Presentation section* for more details); and a **published** them in the *International Journal for Mathematics Teaching and Learning* (Optical topography of evoked brain activity during mental tasks involving whole number operations, 2014; see the *Publications section* for more details).
- PI: Little, Mary, Co-PIs: **Ortiz, E.**, and Scharlach, Tabatha (Fall 2009-Summer 2010). *Response to Intervention - Teaching Learning Connections (RtI-TLC)* - Account Number: 14277072. NSF Grant managed by FL Department of Education. \$887,000.00. Materials from this grant are being used as resources in my graduate and undergraduate courses.
- **Ortiz, E.** (2004-2010). *Robert Noyce Foundation Teacher Scholarship Program for Transition to Mathematics and Science Teaching (T-MAST) Scholars*. This is an NSF grant managed by the *Noyce Foundation*. \$352,939.00. PI - #14236004.
- Kersaint, Gladis, **Ortiz, E.**, and Adams, Thomasenia L. (Spring 2007 – Summer 2007). *Voyages Elementary Mathematics Program: The Florida Standards-Based Mathematics Program Research Evaluation Grant*. School District of Hillsborough County, Tampa, Florida. \$45,000.00
- PI: Little, Mary (Summer 2000-Spring 2009). *Project Central. Bureau of Instructional Service and Community Support at the Department of Education, Florida Department of Education*. Multi-Year: 900,000.00
Consultant and Advisory Committee: **Ortiz, E.**
- Partnership to Rejuvenate and Optimize Mathematics and Science Education in Florida (PROMiSE) Review Team Facilitator. The main responsibility was to facilitate the review of the Professional Development Modules created by Design Teams to be delivered to classroom teachers across the State. Gainesville, FL (Summer, 2008). \$5,000.00 learning. Also, the participants used *Action Research* in their classrooms.
- Consultant for Tabula Digita. Lesson plans for Tabula's Mission Electronic Games. Development of lesson plans that cover Missions 1 – 20 (of the Single Player Pre-Algebra Tabula Digita product) to be adapted as introduction of the games (2006-2007). \$15,000.00
- **Ortiz, E.** (Fall 2001-Summer 2002). The Renaissance Group Research Fellowships for Faculty, 2001-2002. \$4,500 + \$1,225 UCF matching funds = \$5,725 total funds.
- West, Gail, PI, Co-PIs: Blanes, Maria, **Ortiz, E.**, Pagan, Magie, Hutchinson, Cyndee, and others (2000-2004). *Jericho Project*. \$150,000.00. Five faculty members developed this grant for a United State Office of Education federal grant related to infusion of *ESOL (English for Speakers of Other Languages)* strategies in the teacher certification programs.
- PI: West, Gail, and Co-PIs: **Ortiz, E.**, Blanes, Maria, Pagan, Magie, Hutchinson, Cyndee, and others) (2000-2005). Summer Institute Proposal. Infusing ESOL Competencies Across the Teacher Education Curriculum.
- Mitchell, Debbie, Principal Investigator. *Teacher Technology Learning Community Grant*. Faculty Consultant: **Enrique Ortiz** (Fall 1999-Spring 2002). \$188,000.00.

- PI: **Ortiz, E.**, & Co-PI: Johnson, J. (Summer, 1993). Multicultural workshop for K-8 teachers of mathematics and science. *Eisenhower Grants*. Florida Department of Education. \$62,595.
- Miller, Margaret (Director) (Summer, 1992-Fall, 1992). Development of modules for integrating multicultural education into several of the College of Education courses. Faculty Associates and Multicultural Modules Development Team: Kay Allen, Beckey Bailey, Marty Bell, Karen Biraimah, Donna Camp, Lee Cross, Cyndee Hutchinson, Judy Johnson, **Ortiz, Enrique**, Joanne Ratliff, and Maureen Robinson. \$15,000.
- Bozeman, Bill (Director) (Summer, 1991-Spring, 1992). Integrating technology into elementary and secondary math and science (InTech). Faculty Associates: Larry Holt, Robert Everett, and **Ortiz, E.** Department of Education, Tallahassee. \$65,000.
- **Ortiz, E.** (Spring, 1988). Computer programming effects on fifth and sixth grade students' learning and retention of the concept of variable. *College of Education Committee on Organized Research*, University of New Orleans. New Orleans, Louisiana. \$120.

Internal Funds:

- **Ortiz, E.** (Summer, 2023). Triangle Puzzle – Classroom Edition. Funded by internal funds *School of Teacher Education Student Success & Innovation Grants (STE SSIG)*. Funds were used to continue improvement of a digital version of the Triangle Puzzle. \$5,000.00
- **Ortiz, E.** (Summer, 2018-Summer, 2020). Preservice Teachers' Diagnostic Competence and Virtual Classroom Participation. *2018 QEP Funded Award Project: Program Innovation Award. What's Next*. Poster and paper presentations to be presented at *2019 Annual International TeachLive Conference*. \$10,000.00
- **Ortiz, E.** (Fall, 2017 – Spring, 2018). Pilot: Integration of TeachLive and Diagnostic Episodes into Mathematics Methods courses and Math Clinic. *UCF CEDHP Dean's Academic Program Improvement Initiative*. Poster and paper presentations were presented at 2018 Annual International TeachLive Conference. Received course reassignment to support this research efforts.
- PI: Little, Mary; Co-PIs: Drs. Wenzel, Taylor, Farshid, Safi & **Ortiz, Enrique** (Fall 2016-Summer 2017). Implementing Intensive Interventions in Reading and Mathematics to Improve Student Learning. *Toni Jennings Funds*. \$15,000.00
- PI: **Ortiz, E.**; Co-PIs: Drs. Wenzel, Taylor & Little, Mary (Fall 2015-Summer 2016). Improving Rigor and Impact of Reading and Mathematics Interventions with Students. *Toni Jennings Funds*. \$3,500.00
- **Ortiz, Enrique** (Fall 2016). Research Coach Scholarships for High-Impact Undergraduate Research Experiences. \$300.00 for an undergraduate student work as a research coach. Research coaches are undergraduate or graduate students who are hired by faculty exclusively to assist undergraduate students with course-integrated research projects.
- **Ortiz, E.** (Spring, 2014-Summer 2014). Use of the concrete, pictorial, abstract and virtual levels in mathematics teaching by pre-service teachers. (Two Doctoral students participated in the data collection and analyses of the data from this study and writing an article and research paper presentations). *Toni Jennings Funds*, \$3,587.00
- **Ortiz, E.** (Spring, 2014-Summer, 2014). Brain activity of students during mental calculations. *CEDHP Major Grants Development Stimulus Initiative*. (Graduate and undergraduate students participated). One course reassignment and \$500 for travel were provided.
- Hynes, Mike, **Ortiz, E.**, Lewis, Nancy, & Jeanpierre, B. (Fall 2005 – Spring 2008). *Provost's Targeted program award*. \$69,000.00 for three years.
- **Ortiz, E.**, & others (Fall 2000-Spring, 2001). Graduate Studies Recruitment and Enhancement Grant. UCF. \$5,000.00. This grant provided support to develop a web-site (<http://reach.ucf.edu/~elemed2>), recruit new students, research the needs of graduate students, hire a graduate assistant to help in the collection of data, and revise the program sequence and offerings within the Master of Education in Elementary Education.
- **Ortiz, Enrique** (Fall, 2000-Spring, 2001). *IDL 6543: UCF Course Development Grant*. \$2,000. This included training in the use and development of webpage and internet technology to enhance and support teaching. A laptop computer was provided to the participant.

- **Ortiz, E.** (1992-1994). Development and validation of the knowledge of the concept of variable instrument. *DRS In-House Research Grant Program*. \$4,960.00.
- Miller, Margaret (Director) (1992-1993). *Global perspectives: In-service workshop component of the multicultural modules for Dr. Phillips High School*. *Dr. Phillips Foundation Grant, Orange County Public Schools, Orlando, Florida. Faculty Associates: Allen, K., Hutchinson, C., Johnson, J., Ortiz, E., & Robinson, M.* \$900.

Initiatives

- Instructors: Ben Noel and Erik Sand; 2023 GameLab Team Lead: Nicky Barroso; 2023 GameLab Team Members: Shi Chengxi, Eddy Kyra, Olivia Jacques-Baker, Ryan Peyton, and Immaneni Amritha; Proposer: **Ortiz, E.** (Spring, 2023). *Triangle Puzzle: Classroom Edition*. My proposal was selected out of seven potential projects for the GameLab 2023 project development. The team members will develop a Minimum Viable Product (MVP)/Prototype game involving technology. Team members are students at the Florida Interactive Entertainment Academy, Downtown Orlando Campus, University of Central Florida.

Independent Research:

- **Ortiz, E.** (Summer, 2020 – present). Pizza Problem: Culturally relevant mathematics. This problem is about fraction skills and concepts. The results of this effort will be presented as part of the NCTM annual conference, and an article is being developed for publication.
- **Ortiz, E.** (Fall, 2019 – present). Using action research as a vehicle for teacher reflection: A social reconstructionist approach. This study involves students in the M.Ed. K-8 Mathematics and Science Education program. They are part of a capstone course, which requires the completion of an action research project. This study will use the action research projects as qualitative data to analyze teachers' reflections and learning as they complete the action research studies. The teachers in this program have been supported by the Lockheed Martin endowment and the Orange County Public Schools, and are mainly teaching at Title 1 schools.
- **Ortiz, E.** (January, 2019-present). Development of the *Rectangularix Puzzle*. The puzzle involves a ten-by-ten matrix divided in six rectangular areas. The students are provided an incomplete matrix with some hints. Each area has a given number of squares of given color (yellow, red, blue, green, purple or orange). The students need to figure out where the rectangles are located by using the hints (identification of the color of some of the squares in the matrix), logic, multiples, factors, ideas of rectangles and rectangular areas and multiplication concepts. Multiplication and division fluency, fraction and percent ideas could also be included as part of the puzzle solution process. The idea of the puzzle came to me after a discussion related to the diagnosis of students' understanding ideas related to area of a rectangle. The activities have been implemented and studied in the MAE 6517 (Diagnosis and prescription of mathematics). The students ($n=24$) were able to complete the activity. The main challenge was that the instructions need to be clarified.

I have developed 24 Rectangularix puzzles so far. I am planning to try the puzzle with elementary school students in spring 2020.

- **Ortiz, E.** (January 2019-present). A study of in-service teachers' mathematics and science curricular perspectives. This **research study** is based on archived data from the IDS 6939 (Seminar in Mathematics and Science Education), which I adapted as a mixed-mode course in spring 2019. The teachers ($n=38$) in two sections of this course developed a report about their curricular perspective as they analyzed their teaching practices in terms of teaching goals, classroom practice dispositions, epistemic beliefs and teacher beliefs. The curricular perspective report is based on three phases. The last phase involves the implementation of a curricular activity based on their analysis of teaching beliefs and practices.
- **Ortiz, E. & Bai, Haiyan** (January, 2018-present). Development and validation of the Mathematics Diagnostic and Assessment (MDA) Self-efficacy scale.

Dr. Bai is a professor in the Department of Learning Sciences & Educational Research, College of Community Innovation and Education and helped with the statistical analysis of the MDA self-efficacy scale. The scale measures are based on Bandura' (2006) guide for constructing self-efficacy scales. The participants were presented with 20 situations related to diagnosing/assessing a student's strengths and weaknesses during a mathematics diagnostic/assessment task. As it relates to mathematics diagnosis/assessment, they rated their degree of confidence by recording a number from 0 (or cannot do at all) to 100 (or highly certain can do) using the scale from 0 to 100. They rated how certain they were of attending to each of the diagnosis/assessment behaviors/situations. A total of 191 participants completed the scale during the fall 2018 and spring 2019 semester. The preliminary findings were submitted for a research paper presentation at the AERA 2022 Annual Conference, and a manuscript is in progress for publication submission.

- **Ortiz, E.,** Azevedo, Roger, & doctoral students (August, 2018-Fall 2019). Preservice teachers' ability to diagnose elementary school error patterns in a TeachLive simulation environment. Doctoral students in Dr. Azevedo's research team: Elizabeth Cloude, Daryn Dever, Ana Cecilia Maciel, and Megan Wiedbusch. This project is a collaboration with one of the UCF's Faculty Cluster. Dr. Azevedo is a professor and lead scientist in the Department of Learning Sciences and Educational Research, College Community Innovation and Education.
- **Ortiz, E.** (January, 2018-present). Development of checklist and protocol for assessing behaviors during mathematics diagnostic and assessment tasks. Both the checklist and protocol for diagnostic/assessment performances are based on the review of the literature. Using the checklist including 27 different possible behaviors, the participants used tally marks to identify occurrences of questioning skills and behaviors during diagnostic/assessment/intervention tasks, and at the end indicate the number of tally marks for each item in the total column. There might be a degree of overlap between some sections. The protocol lists a set of possible behaviors the participants should consider when conducting diagnostic/ assessment tasks. The checklist and the protocol were used as part of the TeachLive/Face-to-face project in the MAE 4326 (How Children Learn Mathematics) course. There are possible opportunities to adapt the checklist and protocol for diagnostic/assessment behaviors during other content areas (such as reading diagnostic tasks).

The TeachLive lab activities are supported through a Technology Fee. This includes support for the inter-actors and simulation technology. The revenue from this fee is used to enhance instructional technology resources for students and faculty. Revenue generated by the Technology Fee is allocated by the UCF Technology Fee Committee.

- **Ortiz, E.** (Spring 2017-Spring 2019). *UCF Math Clinic*.
The following is the clinicians' and K-5 students' participation in the UCF Math Clinic:
 - *Spring 2019*: 4 undergraduate clinicians and 4 K-5 students (1 Kindergarten, 1 first grade, 1 third grade and 1 fifth grade);
 - *Fall 2018*: 4 graduate clinicians and 4 K-5 students (1 first, 2 third and 1 fourth);
 - *Spring 2018*: 2 undergraduate clinicians and 2 K-5 students (1 Kindergarten and 1 fifth);
 - *Fall 2017*: 5 graduate clinicians and 5 K-5 students (1 first, 1 second, 1 third, 2 fifth);
 - *Spring 2017*: 2 undergraduate clinicians and 2 K-5 students (1 Kindergarten and 1 first).
 In part, the Math Clinic facilitates the implementation of diagnostic and intervention practice, which are part of case studies implemented by graduate and undergraduate students. Elementary education students are diagnosed and taught in a six weeks 45-minute on-campus sessions. They are brought by their parents to the UCF main campus (4:30 p.m.-5:45 p.m.). The clinicians are volunteers from the mathematics methods courses and have the opportunity to work face-to-face with K-5 students. Portion of the diagnostic activities are video recorded for further analysis by clinicians and researchers. This portion of the data will be used as part of a research study on students' perceptions of diagnostic/assessment self-efficacy.
- **Ortiz, E.** (Summer, 2017-Fall, 2018). *Pilot Test: Pre- and In-service Teachers' Diagnostic Competence and TeachLive Virtual Classroom Participation*. This project involved the development the use *TeachLive virtual classroom* in undergraduate and graduate elementary education mathematics methods courses (*MAE 4326 Helping children learn mathematics* and *MAE 6517 Diagnosis of Mathematics*) ($n=54$). A TeachLive protocol involving three different scenarios was developed to conduct the TeachLive session for the inter-actors and student avatars. Participants had 10 minutes to interview one of the three characters' scenarios. Each scenario involved a different error

pattern based on Ashlock's (2009) error pattern book, but the exercises are the same. The purpose of the interview is to gain as much information about the character's strengths and weaknesses, and a better understanding of the student's thinking process. This process includes understanding of prerequisites. You can also ask about interests and any other information you feel is pertinent. The idea is not to teach the computation algorithm, but to gain as much information as possible from the character. The participants communicated with avatar through a camera available in the room. Also, they were able to communicate with the characters using the *BaiBoard 3 Interactive Whiteboard app*. On command, the student avatars were able to write and manipulate the Base-ten block icon available in the app. The participants were also able to write and manipulate the icons in the app. The sessions were recorded and used for data analysis by the researchers and participants.

- **Ortiz, E.** (Spring 2016-Fall 2017). *A study of fifth-grade students' understanding of prime numbers using a game*. This original activity was developed and researched with fifth grade students ($n=25$) at elementary school, Sanford, Florida.
- **Ortiz, E.** (Fall 2016-Summer 2019). *Lessons Learned from Pre-service Teacher's Assessment Reports: Response to Intervention (RtI)/Multi-Tiered Support System (MTSS) in Mathematics Case Studies and Diagnostic/Prescriptive Reports*.
- **Ortiz, E.** (Spring 2016-present). Development of the *Triangle Puzzle*. Facebook page: <https://www.facebook.com/triangle.puzzle>; http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Daps&field-keywords=triangle+puzzle+enrique+ortiz&rh=i%3Aaps%2Ck%3Atriangle+puzzle+enrique+ortiz. Based on my practitioner and researcher background, I have developed this creative and original puzzle involving triangle pieces. The puzzle set includes 14 pieces (see image on the top of Activity 12 on next page), which I call *Triangle Puzzle* or *Trianagrams*, representing triangles based on size (small and large), sides (equilateral, scalene and isosceles) and angles (right, acute and obtuse): 1 large and 2 small equilateral/acute triangles, 2 large and 3 small isosceles/obtuse and 2 large and 4 small scalene/right. It is based on logic, rectangular shapes and area of rectangles. It is based on the *CPAV* cognitive learning levels (concrete, pictorial, abstract and virtual), and the Van Hiele geometry development stages. In mathematics education, the *Van Hiele model* is a learning theory that describes how students learn geometry. This model has been used as a research framework in the area of geometry since it was published in 1957 by Van Hiele. I developed activities that illustrate each of the *Van Hiele geometry stages*. The activities have been implemented and studied in the MAE 4326 (Teaching Children Mathematics), which is an elementary education mathematics methods course; groups of fourth- and fifth-grade students at Goldsboro Elementary School, Sanford, Florida; and a group third-, fourth- and fifth-grade gifted students during a summer 2017 program at the UCF main campus. This research study involved the evaluation of qualitative data to improve the practical implementation of the puzzle. The results were used to improve the activities, and for professional presentations and workshops at different conferences nationally and locally.
- **Ortiz, E. & Pace, Michelle H.** (Spring 2015-Spring 2019). *Wealth distribution as a context for teaching mathematics for social justice*. Based on my practitioner and researcher background, this research study was conducted at the Goldsboro Elementary School, Sanford ($n=35$ elementary education students). It was based on a creative and original activity I developed based on a survey created by the *National Public Radio (NPR)*. It involved the evaluation of qualitative data to improve the practical implementation of the activity and possible students' misconceptions. The activities have been tested during mathematics methods courses and feedback from pre- and in-service teachers have been used to improve them. The graph on the right side was developed to help students visualize and model the current wealth distribution in USA. This feedback has provided information to improve the validity of the activities.
- **Ortiz, E.** (Spring 2015-Spring 2019). *Pre-service teachers' use of physical and virtual manipulative learning tools for a school-based culminating experience*. The purpose of this **research study** was to analyze pre-service teachers' use of physical and virtual manipulative learning tools during a school-based internship culminating experience. This study investigated UCF CEDHP pre-service teachers' (graduate and undergraduate students') use of physical and virtual manipulative learning tools to meet K-12 grade students' learning needs in a capstone project previously completed during their internship (at public schools). Only the reports related to mathematics topics were included as part of the sample. These documents were archived in the UCF CEDHP Clinical

Experiences Office. The culminating experience involved the implementation of lesson plans for teaching a content area. The content area for this study is mathematics at the elementary and secondary school levels. An update framework (*concrete, pictorial, abstract and virtual or CPVA cognitive levels*) developed by the principal investigator was used to analyze the presence of physical and virtual manipulatives in mathematics learning activities.

- **Ortiz, E.** (Spring 2013-present). *A pre- and post-test comparison of the effectiveness of physical manipulatives versus virtual manipulatives (Apps) in elementary education students' learning and implementation of cognitive levels during a mathematics methods course.* Apps were installed in 50 iPads (free and other costing \$400 from overhead funds earned from previous grants). Two sections of MAE 4326, which is an elementary education mathematics methods course, will be involved in this project. One group will work with Apps and the other with physical manipulatives to learn about using cognitive levels of mathematics learning during the fall 2020 semester.
- **Ortiz, E. & Pace, Michelle H.** (Spring 2015-Fall 2016). *Second-grade students use of an error pattern assessment strategy.* This action research study involved second graders ($n=20$) using an original assessment strategy we called "Get the Goof." It is a simple yet effective strategy in which a teacher presents a flawed solution to a math problem and students work together to identify the goof and fix it. Also, it is a versatile and effective learning strategy that can help students deepen their mathematical understanding, review concepts and algorithms they have already learned, and engage in meaningful word problems. First, the teacher invites students to write the work that contains an error on the board for all to see. Students can base their work on a word problem or an algorithm. Then, students are asked to collaborate in pairs or as a whole class to find the errors within the student's work and explain how they know they found the error. This study was carried out at *Goldsboro Elementary School*, Sanford. It involved the evaluation of qualitative data to improve the practical implementation of the activity.
- **Pace, Michelle H., and Ortiz, E.** (Spring 2014-Fall 2015). *An analysis of Title I Kindergarten students' oral language needs.* This action research study involved the analysis of second graders ($n=15$) oral language needs. A Title I kindergarten teacher (Pace) had seen firsthand how oral language can create roadblocks for students in all areas of the curriculum, both academically and socially. Her experience has placed a major focus of oral language solely on reading skills and standards. At the time of this study, the state of Florida had recently adopted the Common Core State Standards for Mathematics, providing an opportunity to address mathematical concepts with more depth and meaning.
- **Goodwin, Chris, and Ortiz, E.** (Spring 2014-Fall 2015). *Middle school students use of a simulation to learn about random numbers, simulations, and the law of large numbers.*
- **Avila, Cheryl, and Ortiz, E.** (Spring 2012-Fall 2013). *Middle school students' use of the Crypto game.*
- **Siegel, Aryn, and Ortiz, E.** (Spring 2012). *Analysis of third-grade students' understanding of perimeter ideas.*
- **Ortiz, E.** (Fall 2011). *Using Origami activities to teach mathematics.*
The objective of the origami activities I have developed is for students to use and identify geometric shapes as they construct *Origami* patterns. The ideas of fraction, decimals and percent have been imbedded in the activities. I called these activities "interactive handouts" because they provide a hands-on experience using the handouts. They also provide a way for students to learn how to follow instructions. The *Origami Samurai* is one of the patterns I have developed. The end result is illustrated in the top left corner of the handout. All of the instructions of the origami pattern end up in the back of the final product. Initially, I created these activities to help my daughter when she was in Kindergarten to make the folds and follow the instruction. I have presented these activities to my students and at professional conferences, including the *2012 Annual Meeting of the NCTM.*
- **Ortiz, E., and Little, Mary** (Fall 2009-Summer 2016). *Enhancing Pre-/In-service Mathematics Teacher RtI Data-Based Decision-Making Skills Assessment using Adaptive-Simulated Scenarios.* Undergraduate and graduate students were invited to participate in a study involving Response to Intervention (RtI) data-based decision-making skills assessment using adaptive-simulated scenarios. The participant received an account to enter the electronic simulations. Pre- and post-survey were completed by the participants. Participants completed web-based activities during

their own time at home or school computers, no class time was provided. The activities were designed to simulate decision-making procedures using various data sources. Avatars (digital characters) were used to simulate virtual reality.

- **Ortiz, E.** (Fall 2007-Summer 2013). *Optical Topography of Evoke Brain Activity During Mental Arithmetic Tasks Involving Different Operations Basic Facts*. Research involving the *Optical Topography System* (\$350,000.00) from the *Hitachi Medical Corporation*, Japan. The Hitachi Medical Corporation provided access to the *Optical Topography System* at UCF, and no cost to UCF, including training from an expert from Japan. Findings were presented at *2013 Annual Meeting of the NCTM*.
- **Ortiz, E.** (2005-present). *Assessing the elementary education pre-service teachers use of CPVA learning levels in teaching mathematics*.
- **Ortiz, E.** (2005-2019). *Assessing the development of teaching goals of middle school mathematics pre-service teachers*. This research effort has resulted in presentations, and an article that is in preparation.
- **Ortiz, E.** (Fall, 1999-Fall, 2016). *Pre-service elementary and secondary school teachers' knowledge of variables*. MAE 5318, MAE 2801, and 4326, University of Central Florida.
- **Ortiz, E.** (2003-2006). *Roll out fractions game*. This game was pilot tested and researched with fourth graders at the *Goldsboro Elementary School, Seminole County Public Schools*, Sanford, Florida. Modifications were made to the game for use as a training tool in graduate and undergraduate mathematics methods courses, and in-service teacher workshops. Students and teachers have used this game to develop lesson plans and instructional procedures.
- **Ortiz, E.** (1999-2000). *Fraction Squares Game*. This game was pilot tested and researched with several grade levels at schools in the *Seminole County Public Schools*, Florida. Modifications were made to the game for use as a training tool in graduate and undergraduate mathematics methods courses, and in-service teacher workshops. Students and teachers have used this game to develop lesson plans and instructional procedures.
- **Ortiz, E.,** Hopkins, Martha, Hutchinson, Cyndee, Little, Mary, Verkler, Karen, Miller, Kevin, & Robinson, Mike (Spring, 2002- Summer, 2003). *Experiences from Holmes Partnership Site-coordinators*. Every site-coordinator will keep a journal of day-to-day experiences at the school. This is a qualitative-research study. we are starting to do as a group. The *Holmes Partnership* is a network of universities, schools, community agencies and national professional organizations working in partnership to create high quality professional development and significant school renewal to improve teaching and learning for all children.
- **Ortiz, E.** (Fall, 1999). *Pre-service teachers' learning to use manipulatives to teach operations involving fractions and decimals*. MAE 5318, and MAE 4326, UCF.
- **Ortiz, E.** (Fall, 1998). *Pre-service teachers' learning to use manipulatives to teach whole number operations*. Pre-service elementary school teachers ($n=70$) will be assessed in their knowledge of the concept of variable.
- **Ortiz, E.** (1992-1994). *Geometry Game*. This game was tried out with first ($n=21$) and second ($n=23$) graders at the several schools, Volusia Schools County, Florida. Modifications were made to the game for use as a training tool in graduate and undergraduate mathematics methods courses, and in-service teacher workshops.
- **Ortiz, E.** (Fall, 1992). *Action Research: Students' portfolio including a class journal, an autobiography, a self-diagnostic/prescriptive report and the Youth Motivator Program*. MAE 2801, UCF.
- **Ortiz, E.** (Fall, 1992). *Pilot project: Development and evaluation of learning centers involving mathematics concepts*. MAE 4326 and MAE 5318, UCF.
- **Ortiz, E.** (Summer, 1992). *Pilot Project: Alternative assessment methods used in a graduate level diagnostic/prescriptive mathematics course*. MAE 6517, UCF.
- **Ortiz, E.** (Spring, 1992). *Pilot project: Integration of multicultural education, music, and mathematics (First Grade Students)*. MAE 4326 and MAE 5318, UCF.

- **Ortiz, E.**, and Ratliff, J. (Fall, 1990-Fall 1992). *Pilot Project: Students' portfolio (integrated diagnostic/prescriptive approach for mathematics, language arts and social studies as part of the junior year methods block for elementary school prospective teachers)*. MAE 4326, UCF.
- Ratliff, J., and **Ortiz, E.** (Summer, 1992). *Pilot project: Student teaching assignments during the Summer in a year-around school program*. Timbercrest Elementary School, Deltona, Florida.
- **Ortiz, E.** (Spring, 1992). *Pilot project: Development and pilot testing of a geometry game for K-2 grade students*.
- **Ortiz, E.** (Spring, 1992). *Pilot project: The development and pilot testing of the calculator mat for elementary school students*.
- **Ortiz, E.** (Spring, 1989). *The environmental robustness of a structured computer mathematics laboratory*. Bonner Elementary School, Volusia County, Daytona Beach, Florida.
- **Ortiz, E.** (Summer 1988, and Summer, 1989). *Tutoring Program as part of the elementary school methods course: A diagnostic-prescriptive approach to mathematics teaching*. University of New Orleans.

Proposals Submitted:

- Olan, Elsie L. Director, Co-Directors: Ortiz, Enrique, Warring, Scott; Project Leadership Team Members: Damico, Nicole, McGann, Debra, Regalia, Michele, Hartshorne, Richard, (Submitted, May 9, 2022). *Rethinking and Reforming Curricular Practices Across Content Areas: Development, Implementation and Evaluation of a Critical Thinking Education Minor*. National Endowment for the Humanities, Awards for Faculty at Hispanic-Serving Institutions. \$150,000.
- Ortiz, Enrique (resubmitted April 13, 2023). *My Family Pizza Sharing Challenge: Culturally Relevant Pedagogy Model*. National Endowment for the Humanities, Awards for Faculty at Hispanic-Serving Institutions. \$10,000. Start date:
- PI: Chen, Zhongzhou. Research Team: Drs. Enrique Ortiz, Roger Azevedo, and others (2019). *A Data-driven Approach Towards Creating a Personalized STEM Learning Environment*. NSF: Improving Undergraduate STEM Education: Hispanic-Serving Institutions (NSF-IUSE HSI) Program. Tentative budget: \$2.5M over a period of 5 years, about \$460K per year. The NSF-IUSE HSI Program seeks to enhance the quality of undergraduate STEM education at HSIs and to increase retention and graduation rates of undergraduate students pursuing degrees in science, technology, engineering, and mathematics (STEM) at HSIs.

TEACHING

Graduate Courses:

- **MAE 6946 – Graduate Internship**. University of Central Florida (3 semester hours). Fall 2021 (2 students).
- **EDG 6329 – Quality Teaching Practice**. University of Central Florida. Spring 2022 (3 students), **Spring 2021** (52 total students: 20 section 0M01 and 24 section 00M02), **Fall 2020** (26 students), **Spring 2020** ($n=17$), **Fall 2019** ($n=21$). (3 semester hours) – **Course Developer Shepherd**:
- **ESE 6427 – Capstone in Secondary Education**. University of Central Florida. Fall 2021 (4 students), **Fall 2020** (10 students, **Fall 2018** (5 students)). (3 semester hours) – **Course Developer and Shepherd**:
- **IDS 6939 – Curriculum Reform in Mathematics and Science**. University of Central Florida. **Spring 2020** (24 students), **Fall 2019** (17 students), Summer 2019, **Spring 2019** (21 students), Fall 2017, Fall 2012, Fall 2011, Fall 2010, Fall 2009, Fall 2008, Fall 2007, Fall 2006. (3 semester hours)
- **IDS 6937 – Teaching Mathematics and Science Using Reform Based Practices**. **Fall 2020** (27 students). (3 semester hours) This is a mixed mode course, which is offered using online and face-to-face approaches. I taught it in fall 2020 as a last-minute course load because of pandemic issues.
- **ESE 6935 – Introduction Seminar in Secondary Education**. University of Central Florida. **Spring 2021** (section 0M01: 10 students, and section 0W61: 5 students), Summer 2020, **Spring, 2020** (section

0M01: 3 students, and section 0W61: 5 students), Summer 2019, **Spring 2019** (section 0M01: 8 students, and section 0W61: 3 students), Spring 2018, Summer 2017, Spring 2017, Spring 2013, Fall 2012. (1 semester hour) This course was offered as mixed-mode and fully online (for the MAT in Secondary Education: Art Education track, which is a fully online program) approaches. **Course Co-developer and Shepherd:**

- **ESE 6256 - Critical Issues in Secondary Education.** University of Central Florida. Spring 2022 (1-3 semester hours, section 0W61: 16 students), Fall 2021 (section 0M01: 3 students, and section 0W61: 5 students), **Spring 2021** (section 0M02: 4 students, and section 0W61: 2 students), **Fall 2020** (sections 0M01 & 0M02: 10 students), Summer 2020, **Spring 2020** (sections 0M01 & 0M02: 14 students, and section 0W61: 3 students), **Fall 2019** (sections 0M01 & 2: 14 students, and section 0W61: 2 students), Summer 2019, **Spring 2019** (sections 0M01 & 0M02: 9 students, and section 0W61: 3 students), **Fall 2018** (sections 0M01 & 0M02: 11 students, and section 0W61: 2 students), **Spring 2018** (sections 0M01 & 0M02: 20 students), **Fall 2017** (sections 0M01 & 0M02: 16 students), Spring 2013, Fall 2012. (1 semester hour; 3 semester hours during and after fall 2021) This course was offered as mixed-mode and fully online (for the MAT in Secondary Education: Art Education track, which is a fully online program) approaches. **Course Co-developer and Shepherd:**
- **MAE 6517 – Diagnosis/Remediation of Difficulties in Mathematics for the Classroom Teacher.** University of Central Florida. **Fall 2020** (2 students), **Fall 2019** (1 student), Summer, 2020) (1 independent study student), Fall 2018, **Fall 2017** (27 students), Fall 2016, Fall 2011, Fall 2009, Fall 2007, Fall 2005. (3 semester hours) I redesigned this course to a mixed-mode approach and developed the necessary modules. **Course Shepherd:**
- **ESE 6936 – Capstone Seminar in Secondary Education.** University of Central Florida. Spring 2017, Spring 2013, Fall 2012. (2 semester hours) This was the previous capstone course (ESE 6256) for the MAT in Secondary Education program, and a mixed mode course, which was offered using online activities and face-to-face approaches.
- **IDS 6934 – Using Technology in Mathematics and Science.** University of Central Florida. Summer 2017, Summer 2011, Summer 2010, Summer 2009, Summer 2008, Summer 2007, Summer 2006. (3 semester hours). This is a mixed-mode course for the Lockheed/UCF Academy Endowment and other students, which is offered using online activities and face-to-face approaches.
- **MAE 6318 (previously MAE 5318) – Current Methods in Elementary School Mathematics.** University of Central Florida. Spring 2022 (11 students), Fall 2017 (1 student). (3 semester hours) This course is part of the program of study for the Master of Arts in Elementary Education and Master of Arts in Exceptional Education, and M.Ed. in K-8 Mathematics and Science Education.
- **MAE 5327 – Teaching Middle School Mathematics.** University of Central Florida. Summer 2012, Summer 2011, Summer 2010, Summer 2009, Summer 2008, Summer 2007, Summer 2006, Summer 2005. (3 semester hours) I taught this course a new course when I taught it for the first time as part of a newly created Master of Arts in Middle School Mathematics. Most of the students enrolled in this program are supported by the Transition in Mathematics and Science Teaching (T-MAST) program, which is part of the Lockheed/UCF Academy Endowment.
- **MAE 6641 – Problem Solving and Critical Thinking Skills.** University of Central Florida. Spring 2022 (14 students), Summer 2020, Spring 2012, Spring 2011, Spring 2009, Spring 2008, Spring 2007, Spring 2006. (3 semester hours) This course is part of the Lockheed/UCF Academy Endowment.
- **MAE 6337 – Teaching Algebra in the Secondary Schools.** University of Central Florida. Developed by the Instructor. (3 semester hours)
- **MAE 6656 – Design Instructional Computing.** University of Central Florida. (3 semester hours)
- **SSE 6616 – Mathematics/Science Curriculum and Instruction.** University of Central Florida. (3 semester hours)
- **EDE 6933 – Elementary Education Seminar I.** University of Central Florida. (3 semester hours)

- **EDE 6935 – Elementary Education Seminar II.** University of Central Florida. (3 semester hours)
- **EDCI 6240 – Readings on the Teaching of Secondary School Mathematics.** University of New Orleans. (3 semester hours)

Undergraduate Courses:

- **EDE 3942 – Internship I – Elementary Education** (3 semester hours) (5 students). Fall 2021.
- **MAE 3940 – Internship I – Secondary Education** (3 semester hours) (3 students). Fall 2021.
- **MAE 4941 – Internship II – Mathematics Education** (3 semester hours) (2 students). Fall 2021.
- **MAE 3311 - Elementary Mathematics for Teaching II.** University of Central Florida. Summer 2018. (3 semester hours)
- **MAE 4326 – How Children Learn Mathematics.** University of Central Florida. **Spring 2019** (this section received **High Impact Educational Practices** designation) (15 students), **Fall 2018** (this section received **High Impact Educational Practices** designation) (31 students), **Spring 2018** (36 students), Spring 2017, Fall 2016, Spring 2016, Fall 2015, Spring 2014, Fall 2014, Spring 2013, Fall 2013, Spring 2009, Fall 2008, Spring 2008, Spring 2007, Fall 2009, Fall 2006, Spring 2006. (3 semester hours)
- **EDF 2085 - Introduction to Diversity for Educators.** University of Central Florida. Summer 2018, Summer 2017, Summer 2016, Summer 2015. (3 semester hours)
- **MAE 4634 – Programs in Teaching of Mathematics.** University of Central Florida. **Summer 2012.** (3 semester hours)
- **MAE 2801 – Instruction of Mathematics in the Elementary School.** University of Central Florida. I taught this course fifteen times at the Orlando, Brevard, and Daytona Beach Campuses. (4 semester hours)
- **EDF 4282 – Application of Technology in Education.** University of Central Florida. (3 semester hours)
- **EDCI 3126 or 3140 - Materials and Methods in Elementary School Mathematics.** Louisiana State University or University of New Orleans respectively. It was taught ten times. (3 semester hours)
- **EDCI 3240 – Materials and Methods in Secondary School Mathematics.** University of New Orleans. It was taught two times. (3 semester hours)
- **EDCI 4744 – Introduction to Computer in the Content Areas.** University of New Orleans. (3 semester hours)
- **EDCI 4993 – Problem Solving in School Mathematics.** University of New Orleans. Developed by the Instructor. Summer, 1988. (3 semester hours)
- **EDCI 4993 – Teaching Mathematics in Middle/Junior High Schools.** University of New Orleans. Developed by the Instructor. (3 semester hours)

Graduate Independent Studies:

- **IDS 6979 – Thesis Research.** University of Central Florida. This course is part of the K-8 Master of Education program Lockheed/UCF Academy. Fall 2004-present. (3 semester hours)
- **MAE 7945 – Internship in Mathematics Education.** University of Central Florida. A Ph. D. student carried an internship under my guidance. We co-taught MAE 4634 during summer 2012 (Cheryl Avila, 3 s.h, Summer 2012).
- **MAE 7980 – Dissertation.** University of Central Florida.

- **MAE 5318 – Current Methods in Elementary School Mathematics.** University of Central Florida. (3 graduate students)
- **MAE 6608 – Independent Study.** Spring 2021 (1 student), Fall 2008 (1 student), (1 semester hour), Spring 2008, Fall 2011.
- **MAE 6909 – Independent Study.** One student Fall 2007 (Brendali Melgoza, 6 s.h.), 1 students Spring 2008 (Brendali Melgoza, 1 s.h.).
- **MAE 6517 – Diagnosis Remediation of Difficulties in Mathematics for the Classroom Teacher.** University of Central Florida. (Fall 2020, 2 graduate students; Fall 2019, 1 graduate student).
- **MAE 6908 – Development of a Diagnostic/Prescriptive Case Study.** University of Central Florida. Spring, 1997 (1 graduate student).
- **MAE 6909 – Research Report as part of master’s degree.** University of Central, Florida. Fall 1998 (1 graduate student).
- **EDCI 6980 – Analysis of Research in Curriculum and Instruction: Mathematics Education.** University of New Orleans. (1 graduate student). Developed by the Instructor.

Chair of Doctoral Student Committees:

- Tapp, Laura (Fall 2014-Summer 2016). Ph.D. Mathematics Education. An Analysis of Undergraduate Elementary School Pre-Service Teachers' Ability to Contextualize Fraction Expressions and Decontextualize Fraction Word Problems. Current position: Mathematics tenure instructor position at Alvin Community College.
- Gault, Rebecca (Fall 2014-Spring 2016). Ph.D. Mathematics Education. A Multiple Case Study Examining How Third-Grade Students Who Struggle in Mathematics Make Sense of Fraction Concepts. Current position: Assistant professor.
- Avila, Cheryl (Fall 2011-Summer 2013). Ph.D. Mathematics Education. Calculus instructors' assumptions of their students' prior knowledge of functions: A multiple-case study.
- Maisonave, Leyzia (Fall, 2008-2010). Ed.D. Curriculum and Instruction in Secondary Mathematics Education. She left the program during summer 2010.
- Price, Beverly (Fall, 2008-Spring 2009). Ed.D. Curriculum and Instruction in Secondary Mathematics Education. She completed her comprehensive exam under my advising and completed her dissertation with another academic advisor.

Co-Chair of Doctoral Student Dissertation Committees:

- Subramanian, Lalitha (Fall 2003-Summer 2005). Using dynamic software to teach proof in mathematics. Ph.D. in Secondary Mathematics Education. Lockheed/UCF Academy. University of Central Florida. Co-Chairs: Drs. **Enrique Ortiz** and Mike Hynes.
- Skidmore, Cheryl A. (Fall, 1998-Fall, 2004). The effect of the math concepts and skills computer program on standardized test scores at Holy Hill Middle School. Ed.D. in Secondary Mathematics Education. University of Central Florida. Co-Chairs: Drs. **Enrique Ortiz** and Stephen Sivo.

Advising of Students:

- Academic Advisor of Educational Doctoral (Ed.D.) graduate students
 - Deanna McDuffie (2017-Fall 2019)
- Coordinator of the Lockheed/UCF Academy Master of Education in K-8 Mathematics and Science Education (Summer 2019- present)
- Coordinator of the Mathematics and Science Educator Certificate (Summer 2019- present)
- Coordinator of the MAT Teacher Education - Middle School Mathematics Education Track program and the Transition to Mathematics and Science Teaching (T-MAST) (2005-present).
- Academic Advisor of undergraduate students in elementary education (2016-2018).
- Coordinator of the Lockheed/UCF Academy T-MAST program (2001-present).
- Co-coordinator of graduate elementary education programs (2002-2005).

- Coordinator of undergraduate and graduate elementary education programs (2000-2002).
- Interim coordinator of the K-8 Master of Education, Lockheed/UCF Teaching Academy (Fall 2007 - Spring 2008).
- Graduate Coordinator for elementary education (2000-2002).
- Academic Advisor of undergraduate and graduate students in elementary education programs (1989-2000).

Directed Graduate Studies:

The following student has been directed in graduate research reports:

- Skidmore, Cheryl A. (co-directed, Fall, 1998-Fall, 2006)
- Subramanian, Lalitha (co-directed, Fall 2003-Summer 2005)
- Madden, Jeanann. (1997). University of Central Florida.
- Chavez-Mesa, Raquel. (1988). University of New Orleans.

Doctoral Student Committee Member:

- Crawford, Gay Brielle (summer 2023-present). Chair: Dr. Borowczak, Andrea. Ed.D.
- Rumph, DeSheila (Summer 2018-Spring 2021). Chair: Dr. Suzanne Martin. Exceptional Education Ed.D. program. Mathematical Knowledge Teacher Need Instructional Decision Making With Economic Disadvantage Populations.
- Haight, Deanna L. (Spring 2018-Spring 2020). Chair: Dr. David Boote. Ed.D. program. Evaluating the effectiveness of a Pre-algebra 1 Mini-Camp summer intervention program for rising seventh-grade Algebra 1 students.
- Sawyer, Kirk (Summer 2018-Fall 2019). Chair: Dr. Harstshorne. Ed.D. program. Evaluating Pedagogical Methods That Improve Student Homework Assignment Completion.
- Asplen, Brennan (Summer 2018-Spring 2019). Chair: Dr. Johnson. Executive Ed.D. program. A Comparison of Sixth-grade English Language Arts and Mathematics Achievement Between Middle Schools and K-8 Schools (investigate both overall achievement results and equity in the distribution of achievement based on SES).
- Eisenreich, Heidi (Fall 2014-Fall 2015). Chair: Dr. Juli Dixon. Ph.D. in Mathematics Education. Dissertation and comprehensive exam committees.
- Knotte, Edwards (Fall 2014-Fall 2019). Chair: Dr. Erhan S. Haciomeroglu. Ph.D. in Mathematics Education. Dissertation and comprehensive exam committees.
- Campbell, Karemah (Spring 2015-Fall 2016). Chair: Dr. Carolyn Walker-Hopp. Ed.D. in Mathematics Education. Dissertation committee member.
- Glenn-White, Vernita (Fall 2014-Summer 2015). Chair: Dr. Juli Dixon. Ph.D. in Mathematics Education. Dissertation and comprehensive exam committees.
- Edwards, Debbie (Fall 2014-Summer 2015). Chair: Dr. Carolyn Walker-Hopp. Ed.D. in Mathematics Education. Dissertation and comprehensive exam committees. An Examination of Pre-Service Teachers' Procedural and Conceptual Knowledge of Teaching Fractions.
- Sahin, Nesrin (Fall 2014-Spring 2015). Chair: Dr. Juli Dixon. Ph.D. in Mathematics Education. Dissertation and comprehensive exam committees.
- Brooks, Lisa (Summer, 2012-Summer, 2014). Chair: Dr. Juli Dixon. Ed.D. in Mathematics Education.
- Sotilo, Mercedes (Fall, 2012-Spring, 2014). Chair: Dr. Juli Dixon. Ph.D. in Secondary Mathematics Education. Lockheed/UCF Academy. University of Central Florida.
- Bawatneh, Zyad (Spring, 2012-Fall, 2012). Ph.D. in Secondary Mathematics Education. Lockheed/UCF Academy. University of Central Florida.
- Safi, Farshid (Summer, 2008-Spring, 2009). Chair: Dr. Juli Dixon. Ph.D. in Secondary Mathematics Education. Lockheed/UCF Academy. University of Central Florida.
- Tobias, Jennifer (Fall, 2006-Spring 2009). Ph.D. in Secondary Mathematics Education. Lockheed/UCF Academy. University of Central Florida.

- Roy, George (Fall, 2005-Fall, 2008). Chair: Dr. Juli Dixon. Ph.D. in Secondary Mathematics Education. Lockheed/UCF Academy. University of Central Florida.
- Kinney, Marcey A. (Fall, 2007-Summer, 2008). Ph.D. in Exceptional Education.
- Robertson, Shelby (Fall, 2007-Summer, 2008). Ph.D. in Exceptional Education.
- Debbie Wheeldon (Fall, 2006-Summer, 2008). Ph.D. in Secondary Mathematics Education. Lockheed/UCF Academy. University of Central Florida.
- Andreasen, Janet (Fall, 2004-Fall, 2005). Chair: Dr. Juli Dixon. Ph.D. in Secondary Mathematics Education. Lockheed/UCF Academy. University of Central Florida.
- Lowry, Kim (Fall, 2003-Fall 2005). Ph.D. in Secondary Mathematics Education. Lockheed/UCF Academy. University of Central Florida.
- Moch, Peggy L. (Spring, 2002). Dr. Brumbaugh Using technology with high school algebra students to enhance attitudes and academic performance. Ph.D. in Mathematics Education. Lockheed/UCF Academy. University of Central Florida.
- Large, Ronald B. (Spring, 2002). An analysis of the effects of instructional and motivational strategies on the mathematics levels of fifth grade students at selected low-performing public elementary schools. Ed.D. Curriculum and Instruction in Mathematics Education. University of Central Florida.
- Williams, Carole E. (Spring, 2002). An analysis of Long's reactive behavior patterns relative to the success of students in a community college algebra course. Ed.D. in Community College Mathematics Education. University of Central Florida.
- Wilkinson, Mary E. (Summer, 2001). Foundations of attitudes toward mathematics learning and teaching held by preprofessional elementary school teachers. Ph.D. in Secondary Mathematics Education. Lockheed/UCF Academy. University of Central Florida.
- Schmidt, Diane L. (Fall, 2001). The effects of instructional approaches for teaching computational skills on student achievement as measured by the Florida Comprehensive Achievement Test (FCAT). Ed.D. in Curriculum and Instruction. University of Central Florida.
- Junkins, Nicole R. (Summer, 2000). A study of the impact of long reactive behavior patterns on grade nine placement and achievement in mathematics. Ed.D. Curriculum and Instruction in Educational Leadership. University of Central Florida.
- Lee, Mayke L. (Spring, 2000). A study of academic characteristics of successful and unsuccessful community college statistics students. Ed.D. Curriculum and Instruction in Community College Education.
- Junkins, Nicolene R. (Fall 1999-Fall 2000). Does a student interactive behavior patterns affect placement in grade nine mathematics courses? Ed.D. Curriculum and Instruction. University of Central Florida.
- Childs, Gloria (Spring, 1992). Integrating the NCTM Curriculum Standards for school mathematics and calculus reform recommendations into an applied calculus course. Ed.D. Curriculum and Instruction. University of Central Florida.
- Houpy, Raymond L. (1988). The relationship between a measure of effective teacher behavior and certain supervisor and teacher-evaluator characteristics. Ph.D. University of New Orleans.
- Raviotta, Charles Francis (August, 1988). A study of the relationship between knowledge of individual learning style and its effect on academic achievement and study orientation in high school mathematics students. Ph.D. University of New Orleans.
- Schmitt, Dorren R. (May, 1984). The development and validation of the instrument for software evaluation for educators (ISER). Ph.D. University of New Orleans.

Chair Master's Thesis Committee:

- Klingler, Kelly L. (Summer, 2011-Spring, 2012). Mathematics strategies for effectively teaching problem solving: The influence of teaching mathematical problem-solving strategies on students' attitudes in middle school. Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Twar, Brian J. (Fall, 2010-Spring, 2011). The effect of using Interactive Student Notebook on the understanding of the concepts and algorithms of addition and subtraction of fractions and mixed

numbers for fifth grade mathematics students. Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.

- Goss, Patricia (Spring, 2008-Spring, 2009). How does my practice of using graphic organizers during instruction affect students' ability to summarize and comprehend significant earth science content? Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy. University of Central Florida. She was awarded the 2009 Outstanding Master's Thesis Award by the UCF College of Education.
- Guyton, Pamela (Spring, 2007-Spring, 2008). How Verbal and Written Explanations Impact Low Achieving Students in their Comprehension of the Connections between Decimals and Fractions. Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy. University of Central Florida.
- Roicki, Joseph (Spring, 2007-Spring, 2008). Effects of Discussion and Writing on Student Understanding of Whole Number Concepts and Operations. Master of Education in K-8 Mathematics and Science Mathematics and Science Education. Lockheed/UCF Academy. University of Central Florida.
- Rose, Anna K. (Spring, 2004-Summer, 2005). The nature of students; misconceptions and whether discourse and writing are effective methods for correcting students' misconceptions. Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy. University of Central Florida.
- Culbert, Kelly (Spring, 2004-Spring, 2005). Writing as a constructivist approach to problem solving. Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy. University of Central Florida.
- Hess, Janice S. (Spring, 2003-Spring, 2004). Effects of creating meaning in mathematics through real-world activities on fourth-grade students' mathematical performance. Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy. University of Central Florida.
- Sindone, Nicole (Fall, 2002-Spring, 2003). What is the Connection between Gender Preference in Genre, and Gender of the Protagonist of Books They Read and Reading Performance? Master of Education in Elementary Education. University of Central Florida.

Master's Thesis Committee Member at UCF:

I have been part of several thesis committees every year (**2001-present**) for the M.Ed. in K-8 Mathematics and Science Education, Lockheed/UCF Academy and Endowment program and other programs.

- Dorr, Mariella (Fall 2012-Fall 2017). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy. Dr. Lisa Dieker, Chair.
- Newby, Tara L. (Fall, 2012). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy. Dr. Bobby Jeanpierre, Chair. The implementation of engineering design challenges on 4th grade students' attitudes towards engineering, classroom climate, and writing ability.
- Franco, Veronica (Fall, 2011). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy. Dr. Lisa Dieker, Chair.
- Jablonski, Heather (Fall, 2011). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy. Dr. Janet Andreasen, Chair.
- Friske, Monica (Fall, 2011). Effects of using context supportive of the area model on sixth grade students' performance writing word problems for fraction multiplication. Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy. Dr. Juli Dixon, Chair.
- Wallace, Bill (Spring, 2009). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Maguhn, Jessica (Spring, 2009). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Scott, Alicia (Summer, 2008). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.

- Hoke, Darlene (Summer, 2008). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Clayton, Angela (Spring, 2007-Summer, 2008). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Ashley, Samuel (Spring, 2007-Spring, 2008). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Ross, Caryn (Spring, 2007-Spring, 2008). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Wittcop, Melissa (Spring, 2007-Spring, 2008). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Jones, Rebecca (Spring, 2007-Spring, 2008). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Nardelli, Marino (Spring, 2006-Spring, 2007). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Hensley, Elizabeth (Spring, 2006-Spring, 2007). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Hosack, Lindsey (Spring, 2005-Spring, 2006). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Estrada, Elsy (Spring, 2005-Spring, 2006). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Campbell, Meghan (Spring, 2005-Spring, 2006). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Egendoerfer, Lisa (Spring, 2005-Spring, 2006). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Allen, Colleen (Spring, 2004-Spring, 2005). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Hull, Lynette (Spring, 2004-Spring, 2005). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Lang, Annie (Spring, 2004-Spring, 2005). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Lopez, Lourdes (Spring, 2004-Spring, 2005). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Lindsey, Tracy (Spring, 2003-Spring, 2004). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Weaver, Karen (Spring, 2004-Spring, 2005). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Somwaru, Paramdai (Spring, 2003-Spring, 2004). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Vila, Ana (Spring, 2003-Spring, 2004). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Apple, Sarah (Spring 2002-Spring 2003). Master of Education in K-8 Education. Lockheed/UCF Academy.
- Stickle, Jennifer (Spring, 2002-Spring, 2003). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Courie, Lisa (Spring, 2002-Spring, 2003). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Gibson, Annette (Spring, 2002-Spring, 2003). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.

- Snow, Christine (Spring, 2002-Spring, 2003). Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Roy, George (Spring, 2001-Spring, 2002). Thematic teaching in an inner city school and its effects on 8th grade algebra students' attitudes and performance in mathematics. Master of Education in Mathematics Education. Lockheed/UCF Academy.
- Rivera, Debbie Ann (Spring, 2001-Summer, 2002). A Dash of Technology: A Study of the Integration of Technology into a Second Grade Science-Based Curriculum. Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.
- Bemiller, Sarah Jane (Spring, 2001-Summer, 2002). The Effects of Teacher Collaboration and Flexible Age Grouping on Kindergarten Students' Mathematics Performance and Attitudes. Master of Education in K-8 Mathematics and Science Education. Lockheed/UCF Academy.

Master of Education (M.Ed.) Mentor of Action Research Projects:

I mentored students in the action-research studies for the *M.Ed. in K-8 in Mathematics and Science Education, Lockheed/UCF Academy and Endowment* (Fall 2019-present) and Master of Education (M.Ed.) in Secondary Education (Fall 2018-present). This is a very intensive, arduous, time-consuming process, and at the same time ultimately satisfying professional endeavor. We work on research questions, review of literature, methodology, data gathering, analysis of data, and conclusions. We are working on publishing these action research projects in professional journals. Submission of the manuscript for publication is optional.

Fall 2022

- **EDG 6949**
 - Acevedo, Kesia
 - Beckett, Kimberli
 - Cameron, Kaele
 - Cintron, Gladys
 - Fagersten, Andrew
 - Galarza, Neisha
 - Mckenzi, Hively
 - Jimenez, Anisa
- **ESE 6427**
 - Perez, Adriana
 - Sanchez, Karilis
 - Semb, Chandler
 - Sirois, Hayley

Fall 2021

- Devin L. Thornton Why should I care?: Using popular culture to increase student engagement in elementary mathematics. (Fall, 2021, ESE 6427, Section 0M01)

Spring 2021

- Barnard, Elizabeth, Kimball, Lauren, & Pena, Julia (Spring, 2021, Section 0M02).
- Boyle, Alison L. & Pimentel, Laura (Spring, 2021, Section 0M02).
- Campbell, Taneisha N. & Wilson (Menelas), Arnetta M. (Spring, 2021, Section 0M02).
- Cartagena-Hernandez, Jamilette (Spring, 2021, Section 0M02).
- Dumas, Shadee (Spring, 2021, Section 0M01).
- Garnett, Joshua A. (Spring, 2021, Section 0M02).
- Hollingsworth, Keri & Woods, Sharon (Spring, 2021, Section 0M02).
- Jacques, Patricia N. & Thom, Shari A. (Spring, 2021, Section 0M01).
- McElroy, Marley S. (Spring, 2021, Section 0M01).
- Panet, Iris M. (Spring, 2021, Section 0M01).
- Thude, Aaron H. (Spring, 2021, Section 0M01).

Fall 2020

- David, Stephanie, Edmond, Wanessa, & Vilabrera, Joslyn (Fall, 2020). Word-problem solving strategies and teacher questioning. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Questions:

 1. If teachers are exposed to workshops involving questioning techniques to promote problem-solving in the classroom, how will this approach impact their questioning skills when teaching students about solving systems of linear equation word problems?
 2. If students are exposed to problem-solving strategies, how will the approach impact students' ability to solve systems of linear equation word problems?
- Davis, Katheleen (Fall, 2020). Online participation in breakout rooms. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Question: How does participating in exercises to improve communication and social skills impact the student's ability to work collaboratively in online breakout rooms?
- Espinosa, Carmen G. & Fonseca, Johanna (Fall, 2020). Parental Involvement in STEM during an Unprecedented Pandemic. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Questions:

 1. If I involve parents in guiding their children during STEM experiments at home, then will students demonstrate improvement on their understanding and self-efficacy of the Engineering Design process?
 2. If I involve parents in guiding their children during STEM experiments at home, then will parents' demonstrate improvement on their perceptions of self-efficacy to help their children complete STEM experiments?
- Dukes, Britney (Fall, 2020). Mathematics is not acultural; there is more than one way to solve a problem! M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education. Mentors: Ortiz and Safi.

Research Questions:

 1. How will implementing alternative Ancient Egyptian computation algorithms using an Ethnomathematics context impact fourth-grade marginalized students?
 2. How will students' attitudes toward mathematics and solving multiplication computation problems be impacted by using an Ethnomathematics context?
- Gracia-Toledo, Yulianne (Fall, 2020). Effects of Project-Based Learning in an Online 4th Grade Science Unit. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Question: If I implement a project-based approach in an online-based science 4th grade unit about the motion of objects, will students demonstrate improvement on their performance?
- Guardascione, Lisa & Porras, Maria (Fall, 2020). The effectiveness of the concrete-representational-abstract framework. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Questions:

 1. How will the implementation of the CRA framework impact students' performance in a multiplication unit?
 2. How will the implementation of the CRA framework increase student engagement during a multiplication unit?
- Hart, Ruby Lori & Lumpkin, Sarah (Fall, 2020). The impact of iReady mathematical games on first and fourth grade students' whole number knowledge. M.Ed. in K-8 Mathematics and

Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Questions:

1. If we use iReady mathematical games to help first and fourth grade students learn computation of whole numbers, then will students demonstrate improvement in solving computation of whole number problems?
 2. What is the percentage of growth each student made from the pre-assessment to the post-assessment in the computation of whole numbers?
- Horton, Nicole (Fall, 2020). An investigation of interactive arts integrated mathematics online learning. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Questions:

1. If I implement interactive cross-curricular content using Nearpod (2020) during remote learning mathematics instruction, then will third grade students demonstrate improvement in engagement and understanding of fractions?
 2. How does student interest and performance change when students are introduced to interactive cross curricular learning with Nearpod (2020)?
- Negron, Lydia (Fall, 2020). The importance of mathematical vocabulary in understanding word problems. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Question: How will introducing fifth-grade students to direct mathematical vocabulary impact their ability to solve word problems involving decimal number computation?

- Wall, Amber & White, Monique C. (Fall, 2020). Physical manipulatives versus digital manipulatives. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.
- Research Question: If we incorporate virtual manipulatives and tools, such as digital number lines work mat, digital base-ten blocks work mat, IXL daily warm-up problems, GO Math interactive lessons, Khan Academy, CPALMS, Nearpod, and Kahoot, during online remote learning activities with one group of third-grade students and one group of fourth-grade students and physical manipulatives, such as cubes, base-ten blocks, counters, and pattern blocks, during face-to-face instruction with another group of third-grade students and another group of fourth-grade students, then will students' in each group demonstrate improvement in their interpretation of multiplication and division word problems?
- Zuroff, Rachel C. (Fall, 2020). Using Nearpod in a blended online/face-to-face classroom. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Questions:

1. How does the use of Nearpod enhance fourth-grade students' engagement and participation for both online and face-to-face students?
 2. How does the use of Nearpod help fourth-grade students learn content knowledge for both online and face-to-face students?
- Young, Joanna (Fall, 2020). The impact of teachers' self-Efficacy on the use of seven digital resources. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Questions:

1. Given seven digital tools, how do teachers rate themselves on a pre/post-test on how effectively they use the tools?

2. After attending a professional development and watching videos that I create on these digital tools, how do teachers rate themselves on how effectively they use the tools?
- Akyalcin, Abdulkerim (Fall, 2020). The Effects of the Flipped Classroom Approach on Student Engagement and Performance in a High School Calculus Class. M.Ed. in Secondary Education: Mathematics Education Track. University of Central Florida, College of Community Innovation and Education.
Research Questions:
 1. If I implement flipped-classroom intervention in a remote classroom environment, then will my AP Calculus students demonstrate improvement on their test scores and grades?
 2. Is there an effect of flipped classroom interventions on student satisfaction?
 - Hum, Alice (Fall, 2020). Peer teaching method. M.Ed. in Secondary Education: Mathematics Education Track. University of Central Florida, College of Community Innovation and Education.
Research Questions:
 1. How will pre- and post-test scores of the students who participated in the peer teaching sessions compared with those who participated in the traditional lecture sessions?
 2. Suppose I implement a peer-teaching approach to help students learn mathematics. How will the improvement of students who participate in the peer-teaching sessions compare with students who choose traditional lecture sessions?
 - Rahman, Samina (Fall, 2020). Impact of Homework on Student Achievement. M.Ed. in Secondary Education: Mathematics Education Track. University of Central Florida, College of Community Innovation and Education.
Research Question: If I assign daily homework and provide in-depth feedback, then will a group of 11th grade Honors students demonstrate improvement in their assessment scores related to the Progressive Era unit in US History?

Spring 2020

- Brownlie, Renee (Spring, 2020). Perfectionism and Productive Struggle in Geometry. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.
Research Question: How does the implementation of productive struggle habits in Geometry unit help 8th grade students cope with their perception of the importance of perfectionism?
- Bucaro, Mary (Spring, 2020). Impact of a Positive Teacher Relationship with a Trauma Affected Student. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.
Research Question: What is the impact of strong student-teacher relationships on a trauma affected student's success on the eighth-grade mathematics and district assessments.
- Cole, Tiffany (Spring, 2020). Using Total Physical Response as an Intervention to improve Self-Efficacy and proficiency in Mathematics in African-American boys with ADHD. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.
Research Questions:
 1. How will implementing Total Physical Response (TPR) to teach geometry standards improve self-efficacy in African American Male students?
 2. How will implementing TPR to teach geometry standards improve proficiency in African American Male students?
- Garroni, Natalia (Spring, 2020). Bilingualism versus Monolingualism in a Pre-Algebra class. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Question: How does the teaching of Mathematics using bilingualism better support Latinx-English Language Learners (ELL) students' learning of the 8th Pre-Algebra Angle Relationship unit?

- Harris, Pauline & McKinney, Roderick (Spring, 2020). *Is Your Classroom Game?* M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Question: How does cooperative grouping and the use of academic games improve students' multiplication fluency and affect their attitude towards learning mathematics?

- Lewis-Williams, Ranell (Spring, 2020). *I Like to Move It, Move It! Effects of Total Physical Response Method on Mathematical Self-Efficacy and Understanding of Attributes of 2-D Shapes of African American Boys.* M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Questions:

1. Does implementing Total Physical Response Method influence overall mathematical self-efficacy in African American males as measured by a pre and post student survey?
 2. Does implementing Total Physical Response Method improve student understanding of attributes of 2-dimensional shapes as measured by a pre and post assessment?
- Martin, Sheila (Spring, 2020). *Increasing Oral Reading Fluency and First-Grade EL Learners.* M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Question: What happens to my EL learners reading fluency when I use reader's theater?

- Vickers, Heather (Spring, 2020). *The Power of Numberless Word Problems: Is it all about the Numbers or the Context?* M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Questions:

1. When moving forward with my research project, these are the questions I want to focus on when working the group of students.
2. How does implementing numberless word problems impact the understanding for students to solve real-world word problems?
3. How did using the strategies from solving numberless word problems help with solving word problems with numbers?

Fall 2019

- Quinonez, Pricilla (Fall, 2019). *Parent perceptions of gifted student needs.* M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Questions:

1. What are the effects of a "public school held for only the gifted" on parents' attitudes and perceptions toward their child's learning science and/or math? What are the effects of a "public school serving the gifted in a cluster model" on parents' attitudes and perceptions toward their child's learning science and/or math? How do these perceptions differ?
 2. What are parent perceptions of gifted children's educational needs in a "public school using a pull-out model" compared to parent perceptions in a "public school using a cluster model"?
- Rougeux, Kimberly (Fall, 2019). *Foster parent self-efficacy.* M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.

Research Question: What are some of the reasons foster parents perceive as affecting their foster children's possible success or failure to complete high school?

- Treshonda Rutledge (Fall, 2019). Mathematics tracking: Killing black girls' math purpose. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.
Research Questions:
 1. Can middle school aged black girls perform successfully on advanced mathematics task regardless of mathematics tracking course placement?
 2. To what extent do black girls' rating of their mathematics abilities change, using a scale that ranged from one to five, when given a chance to excel at advanced mathematics topics?
- Granaham, Jessica (Fall, 2019). Examination of the effects of explicit instruction on key collaborative skills for 4th graders given an engineering task. M.Ed. in K-8 Mathematics and Science Education. Lockheed Martin/UCF Academy (Endowment) and OCPS scholarship. University of Central Florida, College of Community Innovation and Education.
Research Questions:
 1. How does explicit instruction in group collaborative skills affect 4th graders students ability to work as a team to create a final product?
 2. How will explicitly teaching collaborative techniques alter 4th grade students ability to work together in an Engineering task?

Fall 2018

- Rodeghier, Ian (Fall, 2018). Comparison of the benefits of a blended classroom to a completely digital environment. M.Ed. in Secondary Education. University of Central Florida, College of Community Innovation and Education.
Research Questions:
 1. Were students in either classroom setting more successful with selected standards?
 2. What factors contributed to any increases or decreases in performance?

Honor in the Majors Thesis Committee Member (Bachelor's Degree):

- Quintero, Andrea (Spring 2016-Fall 2016). A qualitative assessment of preservice teachers' perceptions of the at-risk student. Chair: Gina Gresham.
- Murray, Matthew (Spring 2014-Spring 2015). What is implicit about category learning? Honors in the Major Program in Psychology, Psychology Department. Chair: Corey Bohil. This was a study involving the use of fNIRS.
- Duany, John (Spring, 2013-Summer, 2013). Predicting cognitive workload with measures of blood oxygenation in the prefrontal cortex and heart rate. Honors in the Major Program in Psychology, Psychology Department. Chair: Corey Bohil.
- Yader, Rayna (Spring, 2006). E-merging technology for the emerging classroom. B.S. in Elementary Education. Honors in the Major Program in Elementary Education. University of Central Florida.
- Blair, Katherine J. (Spring, 2004). The role of contemporary artist and mathematics in the art classroom. B.S. in Art Education. Honors in the Major Program in Art Education. University of Central Florida.

Honor in the Majors Thesis Committee Member (Bachelor's Degree):

- Quintero, Andrea (Spring 2016-Fall 2016). A qualitative assessment of preservice teachers' perceptions of the at-risk student. Chair: Gina Gresham.
- Murray, Matthew (Spring 2014-Spring 2015). What is implicit about category learning? Honors in the Major Program in Psychology, Psychology Department. Chair: Corey Bohil. This was a study involving the use of fNIRS.
- Duany, John (Spring, 2013-Summer, 2013). Predicting cognitive workload with measures of blood oxygenation in the prefrontal cortex and heart rate. Honors in the Major Program in Psychology, Psychology Department. Chair: Corey Bohil.

- Yader, Rayna (Spring, 2006). E-merging technology for the emerging classroom. B.S. in Elementary Education. Honors in the Major Program in Elementary Education. University of Central Florida.
- Blair, Katherine J. (Spring, 2004). The role of contemporary artist and mathematics in the art classroom. B.S. in Art Education. Honors in the Major Program in Art Education. University of Central Florida.

University Coordinator for Internship I, Internship II, Graduate Internship, and Graduate On-the-job Internship:

Student teachers have been supervised as part of supervision assignments, including elementary, middle and high school levels (1989-present). Voluntarily supervised graduate students in the Transition to Mathematics and Science Teaching (T-MAST) On-the-job Internship (Fall, 2002-Spring, 2003).

Supervised three graduate on-the-job internship students: Fall, 2007, and Spring, 2008.

- Luisa Padilla, Master of Education in Middle School Mathematics, T-MAST program, Ocoee High School, Ocoee, FL
- Mercedes Sotillo-Jorge, Master of Education in Middle School Mathematics, T-MAST program, Ocoee High School, Ocoee Middle School, Ocoee, FL
- Jennifer Carmichael, Master of Education in Middle School Mathematics, T-MAST program, Ocoee High School, Timber Crest High School, Orlando, FL

Recent Professional Development Participation:

- **FACTE SEL Sharing Session:** Delta Research and Educational Foundation: Drs. Chapman and Felder: Social Emotional Learning (SEL) from Frameworks of Tampa Bay. Florida Association of College for Teacher Education, January 29, 2021.
- **Black and Brown Babies: The First 48 presentation** by Chandra Adams, M.D., MBA, *Failure to Progress: A Crisis at the Crossroads of Maternal Mortality and Intersectionality*. Sponsored by CCIE Supporting High-Needs Populations/Urban Education: 3rd Wednesday Forum. Wednesday, November 18, 2020, 8:00 a.m.-9:15 a.m., Zoom.
- **e-LED Talk** presented by the CCIE Office of Research, November 10th from 10:00am to 12:00 pm via Zoom.
- **Storytelling Math Panels: Celebrating diversity, math, and the power of story.** The Voices Behind Storytelling Math. October 24, 2020, 1 pm to 5 pm. Chalesbridge.com.
- **American Educational Research Association (AERA) 17th Annual Brown Lecture in Educational Research.** The Segregation Pandemic: Brown as Treatment of Placebo? William F. Tate IV, University of South Carolina. Thursday, October 22, 2020, 6:30 pm – 7:30 pm., provost and executive vice president of academic affairs at the University of South Carolina, and a leading expert on the intersections between education, society, and public health.
- **Build Your Tribe of Influence with NFAA Founder, Stephanie Chandler: An Exclusive Lulu Webinar.** October 21, 2020. Hosted by Team Lulu Publishing Company.
- **Open Course: University of Minnesota** (Fall, 2020): Creative Problem Solving, Drs. Brad Hokanson & Jody Nyber on Coursera.
- **Virtual Meetups** (July 16, 2020). OCTM: Remote Teaching and Learning with Graspable Math Presented by Steve Phelps (Hamilton County ESC). Co-hosted by the Ohio Department of Education and one of our partner professional organizations.
- **AERA Division K Panel** (2020). Virtual panel discussion on anti-racist teacher education scholarship and practice. Centering Justice and Anti-Racism in Teacher Education, July 13, 4 pm – 5 pm.
- **KOGNITO at-risk for Faculty & Staff Course** (Summer, 2020). UCF Counseling and Psychological Services, Student Development and Enrollment Services.
- **InLearning Course – PowerPoint: Designing Better Slides** by Heather Ackann (Summer, 2020). 1h 33m, General Released: 8/24/2017

- **Virtual Meetups** (June 16, 2020). Remote Teaching and Learning with Geogebra and Geogebra Classroom Presented by Steve Phelps (Hamilton County ESC). Co-hosted by the Ohio Department of Education and one of our partner professional organizations.
- **TODOS: Math for ALL Members' Webinar** (Jun 10, 2020 04:00 PM PDT). Exploring the Shifts in our Student's Social/Emotional Well-Being. Presented by Amy Brooks. Educators were invited to reflect on the changing patterns of human interactions that impact instruction.
- **NSF DRK-12 Webinar: Strengthening Educators' Practices for Engaging and Empowering Students with Disabilities and Difficulties as Mathematics Learners.** The webinar took place June 4, 2020 at 1:00-2:00 PM.
- **Remote Learning Community Mini Pop-In Conference:**
Zoom – April 24, 2020, 12:30-3:00 pm
 - Student Engagement Track (20 minutes each session):
 - Interactive Google Docs - Ms. Paula Santana, De Tice and Ms. Lybrya Kebreab
 - Student Responses Padlet/Flipgrid - Dr. Aline Abassian
 - Digital Escape Rooms - Dr. Lee-Anne Spalding
 - Editing Google Slides During Sessions - Ms. Siddhi Desai and Dr. Farshid Saf
- **NCTM Webinar: How We Move from Equality to Equity and Justice in Mathematics Teaching (General Interest)** - Apr 23, 2020, 7:00 pm.
- **AMTE Webinar: Bringing together both community and STEM connections in PSTs' mathematics teaching** – Wednesday, April 22, 2020, 1:00 pm – 2:00 pm.
The speakers will be AMTE's National Technology Leadership Initiative (NTLI) Fellowship recipients Frances Harper, Zach Stumbo, and Nick Kim.
- **Youth Mental Health First Aid Faculty Training** - April 12, 2019 TA 322 9:00-3:30 pm:
SEDNET is the agency that DOE has contracted with to provide training to all Threat Assessment Teams in K-12 schools using “evidence-based” Youth Mental Health First Aid Training.
- **2019 Summer Faculty Development Conference** (Summer, 2019). Faculty Excellence: Advancing the Development of Associate Professors Track,
Contact: Daniel.Murphree@ucf.edu. UCF Classroom Building I, May 6-9, 2019.
- **Spring 2019 Scholarship of Teaching and Learning Day: Session A: Qualitative Data Analysis for SoTL**, Facilitated by: Dr. David Boote, Associate Professor, Department of Learning Sciences and Educational Research, College of Community Innovation and Education (CB1-205) (Friday, March 1, 2019, 9:00 am-1:00 pm).
- **2018 Summer Faculty Development Conference** (Summer, 2018). Faculty Center for Teaching and Learning Track. UCF Classroom Building I, May 7-10, 2018.
- **From No Child Left Behind (NCLB) to Every Student Succeeds (ESSA): Changes and Opportunities Town Hall Meeting** (Wed, August 29, 2018, 6:30 PM – 8:00 pm).
University of Central Florida, Morgridge International Reading Center. Organized by the College of Community Innovation and Education at UCF and Delta Teacher Efficacy Campaign's special initiative on Teachers Advocating as Great Change Agents (TAG).
- **Spring 2018 QEP-Sponsored Course Designation Workshop**, UCF Teaching Academy (Jan 26, Feb 16, Mar 2, Mar 30, Apr 6, and Apr 20 from 9:00 a.m. to 11:00 a.m., Spring, 2018). In an effort to provide an engaged learning experience across disciplines, qualifying High Impact Educational Practices (HIPs) courses will be reviewed for one of three UCF HIP designations.
- **Founder's Day Honors Convocation.** UCF Student Union. April 4, 2018.
- **STEM Education Research Symposium.** UCF Harris Engineering Center, HEC 101. April 11, 2018.
- **Targeted Opportunity Position in STEM Education presentation**, Dr. Mohr-Schoeder. CEDHP, ED 306, March 22, 2018.

- **Google Training** (January 12, and February 23, 2018). The new Elementary Education Capstone Colloquium class for Internship II students provided Google Training open to instructors for participation, which was offered by OCPS Google Certified Trainers.
- **5th Annual International TeachLive™ Conference: Virtual Human Interactive Performance (VHIP)** (June 7-9, 2017).
- **2017 Summer Faculty Development Conference** (Summer, 2017). High-Impact Practices for Integrative Learning. UCF Classroom Building I, May 8-11, 2017. High-impact academic practices allow students to integrate and apply their learning to complex problems and projects that are important to themselves and society.
- **Open Course: University of California, San Diego:** (April, 2017). Mindshift: Break Through Obstacles to Learning and Discover Your Hidden Potential. This course was divided into 4 sessions (one-week each). **Taught by:** Drs. Barbara Oakley, (Ramón y Cajal Distinguished Scholar of Global Digital Learning, McMaster University, Professor of Engineering, Industrial & Systems Engineering, Oakland University), and Terrence Sejnowski (Francis Crick Professor at the Salk Institute for Biological Studies /react-text Computational Neurobiology Laboratory).
- **Open Course: University of California, San Diego:** (March, 2017). Learning How to Learn: Powerful mental tools to help you master tough subjects. This course was divided into 4 sessions (one-week each). **Taught by:** Drs. Barbara Oakley, (Ramón y Cajal Distinguished Scholar of Global Digital Learning, McMaster University, Professor of Engineering, Industrial & Systems Engineering, Oakland University), and Terrence Sejnowski (Francis Crick Professor at the Salk Institute for Biological Studies /react-text Computational Neurobiology Laboratory).
- **2016 Fall Research Series.** The Office of Research is hosted the “Utilizing Extant Data from Public Sources for Research” workshop, presented by Dr. Jerry Johnson, Wednesday, November 16, 2016 in ED 305 from 1:00 pm – 2:00 pm.
- **Quick Start with Qualtrics: Designing Educational Surveys.** The Quick Start with Qualtrics: Designing Educational Surveys is a practical training for faculty, staff, and doctoral students conducted by Dr. Matthew Munyon, Assessment, Analytics, and Application Director and Dr. Shiva Jahani, Statistical Research Coordinator. The training sessions are Monday, Oct. 31, 2016, from 9:30 a.m.-12:45 p.m. in the Teaching Academy, Room 305 and Thursday, Nov. 10 from 1-4:15 p.m. in the Teaching Academy, Room 305.
- **Workshop Integrating Computer Science in the Classroom - 2016 Workshop Series:** Workshop II: **Teaching Mathematics through Robotics**, November 10, 2016; Workshop III **Teaching Science through Robotics**, November 29, 2016 by Dr. Megan Nickels, Morgridge International Reading Center.
- **Dr. Rose Pringle**, Associate Professor of Science Education, University of Florida to the UCF CEDHP, June 24, 2016, 9 am-12 pm, Dean’s Conference Room, 308.
- Member of Serving High Needs Education SIG (formerly Urban Education SIG).
- **Visit of Deputy Under Secretary, U.S. Department of Education, Kim Hunter Reed** to the UCF CEDHP, Monday, June 20, from 9:30 to 11:20 a.m., Morgridge International Reading Center.
- **ClassFlow training:** Thursday, August 11, 2016, Morgridge International Reading Center, Session 1: 9:00am to Noon, Faculty members/Graduate Teaching Assistants.

Professional Development Funds:

- **PrimeD Grant Project** (Fall 2021). Participated as a representative of University Supervisors (Clinical Coordinators) because of my work with secondary mathematics

education interns. I participated in 3 NIC meetings to provide feedback, insights, and expertise (\$1,000 stipend is \$1000).

- **Ortiz, E.** (Summer, 2019). *Faculty Excellence track of the Summer Faculty Development Conference*, “Advancing the Development of Associate Professors,” which was held May 6-9, 2019. *UCF FCTL Summer Faculty Development Conference 2019*. \$800.00.
- **Ortiz, E.** (Summer, 2018). Integration of *TeachLive* simulation environment in an Undergraduate Mathematics Education Course. *UCF FCTL Summer Faculty Development Conference 2018. Faculty Center: Our track will focus on redesigning individual courses* (May 7-10, 2018). \$800.00
- **Ortiz, E.** (Summer, 2017). Integration of Case Study Research Methods in an Undergraduate Mathematics Education Course. *UCF FCTL Summer Faculty Development Conference 2017. Quality Enhancement Plan (QEP) track. Theme, What’s Next: Integrative Learning for Professional and Civic Preparation*, and that seek to improve undergraduate student learning at UCF. \$800.00 were used to hire a doctoral student to help with data collection and analysis.
- **Ortiz, E.** (Summer, 2015). Integrating research methods into an undergraduate elementary education mathematics methods course. *UCF FCTL Summer Faculty Development Conference 2015: Office of Undergraduate Research*. This project supported the implementation of undergraduate research involving mathematics with elementary education undergraduate students. \$800.00
- **Ortiz, E.** (Summer, 2014). *UCF FCTL Summer Faculty Development Conference 2014: STEM Proposal Writing Track*. This project supported the development of a research grants involving the use Optical Topography to study mathematics fluency. \$800.00
- **Ortiz, E.** (Spring, 2014). *UCF College of Education, Coyle Fund for Professional Development* to present research paper at the *2014 NCTM Meeting and Exposition*, Philadelphia. \$500.00
- **Ortiz, E.** (Spring, 2013). *UCF College of Education, Coyle Fund for Professional Development* to present research paper at the *2013 NCTM Meeting and Exposition*, Philadelphia. \$500.00
- **Ortiz, E.** (Spring, 2012). *UCF College of Education, Coyle Fund for Professional Development* to present research paper at the *2012 NCTM Meeting and Exposition*, Philadelphia. \$1,000.00
- **Ortiz, E.** (June 28-30, 2011). *POGIL Southeast Regional Meeting* at Franklin and Marshall College, Lancaster, PA. Scholarship provided for participation in the meeting and workshops by the *POGIL Project, NSF Grant*, including housing, meals, and materials for workshops. \$1,000.00
- **Ortiz, E.** (Summer, 2011). *UCF FCTL Writing Your Journal Article in 12 Weeks* Workshop. This project supported the development and publication of a professional article. \$500.00
- **Ortiz, E.** (Summer, 2011). *UCF FCTL Summer Faculty Development Conference 2011*. This project supported the development of a research study involving the use of clickers in an undergraduate elementary education mathematics methods course. \$800.00
- **Ortiz, E.** (Fall, 2009). *UCF College of Education, Coyle Fund for Professional Development* to present research paper at the *Lily 2009 Conference* at Traverse City. \$900.00
- **Ortiz, E.** (Fall, 2008). *UCF College of Education, Coyle Fund for Professional Development* to present research paper at the *National Council of Teachers of Mathematics 2009 Annual Conference*. \$1,000.00
- **Ortiz, E.** (Summer, 2005 & Summer, 2006). SoTL Section of The FCTL Summer Conference Grant. \$1,000.00 each.

PROFESSIONAL AND UNIVERSITY SERVICE

Professional Leadership/Collaboration Activities:

National:

- Judge in the 2023 Serious Play Awards program, 2023 Serious Play Conference, Toronto, Canada (Summer 2023).
- Reviewer for Action in Teacher Education of the Association of Teacher Educators (Summer 2023-present).
- Appointed as Co-editor for the *Mathematics Teacher: Learning and Teaching PK–12 (MTLT)*, *For the Love of Mathematics* department. (Fall, 2022 – present). This journal is considered NCTM’s flagship journals. This appointment was made in response to a call for this journal editors, and based on my experiences in working with Geometric Abstractions and, using the visual arts to teach mathematics in grades preK-12. It demonstrates my love of mathematics and has thus prepared him well for this role.
- Reviewer for Math for the People Project. Math for the People is a new approach to teaching Quantitative Literacy to students outside of traditional STEM fields.
- Reviewer for the International Journal of Learning, Teaching and Educational Research (Fall 2021).
- Reviewer for the Technology Facilitator as part of the *Conference Committee of the Association of Mathematics Teacher Educators (AMTE) Annual Conference*. Orlando, Florida (Spring 2021, Spring 2020, Spring 2019).
- Reviewer for the *NCTM Research Committee. National Council of Teachers of Mathematics Annual Research Conference* (Fall 2019, Fall, 2018; Fall, 2017; Fall, 2016).
- Reviewer for the *NCTM Annual Conference. National Council of Teachers of Mathematics Annual Research Conference* (Fall 2021, Fall 2020, Fall 2021, Fall, 2018; Fall, 2017; Fall, 2016).
- Reviewer for *Teaching Children Mathematics Journal, National Council of Teachers of Mathematics* (Fall, 2013 – present).
- Reviewer for the *American Educational Research Association (AERA) Annual Conference* (Fall 2021, Fall 2020, Fall 2019, Fall, 2018; Fall, 2017)
- Reviewed one *High-Leverage Practice (HLP) Video Pilot: HLP #12: Systematically Design Instruction for the CEEDAR Center and the National Center for Intensive Interventions* (December, 2017).
- Review Panel Member NSF Grant (Spring, 2016). *Integrative Strategies for Understanding Neural and Cognitive Systems (NSF-NCS): INTEGRATIVE FOUNDATIONS and CORE+ SUPPLEMENTS*. <http://www.nsf.gov/pubs/2016/nsf16508/nsf16508.pdf>
- Developed *Module for Delta Teacher Efficacy Campaign* (Fall 2015). I developed the module for students who struggle with mathematics.
- Co-Chair for the *Conference Committee of the Association of Mathematics Teacher Educators (AMTE) Annual Conference*. Orlando, Florida (February, 2015).
- Member of Editorial Team of *the International Journal for Mathematics Teaching and Learning* (2014-present). This is a joint initiative between the Centre for Innovation in Mathematics Teaching at Plymouth University, UK and the Mathematics Education Department at College of Nyiregyháza, Hungary.
- Reviewer for *Mathematics Teacher Educator Journal, Association of Mathematics Teacher Educators and National Council of Teachers of Mathematics* (Fall 2013-present).
- Referee and reviewer for the *Journal for Research in Mathematics Education, National Council of Teachers of Mathematics* (Fall, 20014-present). Reviewed one research article summer 2014.
- *TODOS: Mathematics for All Conference Committee: Reviewer of 2015 NCTM Annual Meeting TODOS: Equity Strand Sessions* (2014-present).
- *2014 Research National Council of Teacher of Mathematics (NCTM) Conference Reviewer* (August, 2013).

- *TODOS: Mathematics for All Conference Committee*: Reviewer of *2014 NCTM Annual Meeting TODOS: Equity Strand Sessions* (April, 2013).
- Reviewer of *NCSM's draft position on RTI Interventions* (September, 2012).
- Co-Chair for the *Conference Committee of the Association of Mathematics Teacher Educators (AMTE) Annual Conference*. Orlando, Florida (February, 2013).
- Referee and reviewer for the *Editorial Panel of the ON-Math Journal, National Council of Teachers of Mathematics* (Fall, 2007-Fall, 2009).
- Invited Reviewer of the following paper: *Improving Student Achievement in Mathematics by Addressing Response to Intervention (RTI): Interventions*. This paper is part of a series of position papers developed by the *National Council of Supervisors of Mathematics (NCSM)* to provide research-based practices for school and district mathematics education leaders. The idea was to provide feedback to help make *NCSM's* position and leader actions strong and relevant (2009).
- Research Consultant for the University of New Orleans Metropolitan Council for Lifelong Learning. Educational and Training Survey (1988-89).
- Development of SAS-Main Frame Statistical Programs for Data Analysis (1990-94).
- Organized a Math Lecturer Symposium, and taught classes (EDCI 4744 and EDCI as part of the Chevron Project (Research Grant). University of New Orleans (1987-88).
- Outside Reviewer for the Elementary Mathematics Pilot Program. East Baton Rouge Parish Schools, Baton Rouge, Louisiana (May, 1986).

Florida:

- Member of the *Orange County Council of Teacher of Mathematics Teacher of the Year Selection Committee* (Spring, 2007, Spring 2008, Spring 2009, Spring 2010 & Spring 2011, Spring 2012).
 - Volunteer for the *Conference Committee of the Association of Mathematics Teacher Educators (AMTE) Annual Conference*. Orlando, Florida (February 5-7, 2009)
 - Volunteer for the Conference Committee of the *TODOS: Mathematics for ALL Annual Conference*. Salt Lake City, Utah (April, 2014, April, 2013, April, 2012, April, 2011, April, 2010, April, 2009, April, 2008).
 - Nominated and elected for *Vice-president for College of the Florida Council of Teachers of Mathematics (FCTM) Board and FCTM Executive Board* (Fall, 2006-Fall, 2008).
 - Reviewer for and Co-founder of the *Transformations, a Journal of FAMTE*, (Fall 2015 present).
 - Reviewer for *Investigations in Mathematics Learning Journal, RCML* (Fall 2015, present).
 - Developed *Checklist for Florida Standards* (Fall 2015).
 - Reviewer for *Mathematics Teacher Educator Journal, AMTE* (Spring, 2014-present).
 - Board Member at Large of the *Florida Association of Mathematics Teacher Educators* (Fall 2013-present).
 - Referee and reviewer for the *Editorial Panel of the Journal for Research in Mathematics Education, National Council of Teachers of Mathematics* (Spring, 2013-present).
 - Referee and reviewer for the Editorial Panel of the *Teaching Children Mathematics Journal, National Council of Teachers of Mathematics* (Fall, 1999-present).
- Articles review:
- Engaging Students In Functional Thinking (August 22, 2012).
 - Plugging into the MATRIX (April 2, 2010).
- Consultation Committee for the development of the Intensive Mathematics curriculum: *Orange County Public School System (OCPSS)* personnel, Drs. Janet Andreasen, Enrique Ortiz, Mary Little and others (Fall, 2010-Spring 2011).

- Referee and reviewer for the Editorial Panel of the *Middle School Mathematics Journal*, *National Council of Teachers of Mathematics* (Fall, 2004-present).
- Nominated to serve as the secretary of the Research Council of Teachers of Mathematics (Fall, 2002).
- Invited reviewer (Fall, 2002). "Games Book." *National Council of Teacher of Mathematics*.
- Reviewer for McGraw-Hill Higher Education (A Division of the McGraw Hill Companies) (Fall, 2001): Darken, Betty. *Fundamentals of Elementary Mathematics*.
- Member of the NCTM Annual Conference Publication Committee. Orlando, Florida (4-7 April, 2001).
- Consultant for the *Project Central Algebraic Thinking Initiative* (Fall, 2001-2008).
- Co-Conference Chair of the *Association of Mathematics Teacher Educators (AMTE) Annual Conference*. Tampa, Florida (January, 2006).
- Development and management of a Website for the *Florida Association of Mathematics Teacher Educators (FAMTE)*, (Fall, 2002-Fall 2006): <http://www.famte.org>
- Great Expectations in Mathematics and Science (GEMS) *UCF/Polk County Summer Camp* (Fall 2004-Summer 2005). *Boone Middle School*, Winter Haven, Polk County. Consultant and mentor.
- Organize the *Florida Association of Mathematics Teacher Educators (FAMTE)* spring 2005 meeting (February, 2005), UCF Teaching Academy building, TA 130.
- Member of Review Team for the Governor's Summer Program. Applications were reviewed and selected for the summer 2005 programs to be recommended for funding, Florida (2005).
- Organize the Florida Association of Mathematics Teacher Educators (FAMTE) spring 2004 meeting (February 21, 2004), UCF Teaching Academy building, TA 130.
- Organize the Florida Association of Mathematics Teacher Educators (FAMTE) spring 2003 meeting (February 21, 2003), UCF Teaching Academy building, TA 130.
- Communication Director of the Florida Association of Mathematics Teacher Educators Board (Spring, 2004 – Fall, 2005).
- Co-organizer of the Florida Association of Mathematics Teacher Educators meeting, February 21, 2004, UCF Teaching and Learning Academy, Orlando, Florida.
- Editor of Adult Secondary GED teachers' workshops and VPI Committee's task force. *Orange County Public Schools* (Fall, 2005).
- Consultant for the *Polk County Mathematics and Science Summer Program* (Fall & Summer, 2005). Polk County and UCF.
- Member of the *Florida Teacher Certification Examination (FTCE)* Specialization Section for Middle School Mathematics Education: Specification Validation Committee. Institute for Instructional Research and Practice. *Florida Department of Education*. *University of South Florida*, Tampa, Florida (December 9 and 10, 2004). All graduate and undergraduate students who are applying for certification in the area of middle school mathematics will take this exam.
- Member (Specialist) of the Teacher Education (FTCE) Program Folio Review Team. Florida Department of Education ESOL Folio Review, University of South Florida, St. Petersburg, Florida (May 28-30, 2002).
- Member of the Florida Teacher Certification Examination General Knowledge Specification Validation Committee. Institute for Instructional Research and Practice. Florida Department of Education. University of South Florida, Tampa, Florida (November 7 & 8, 2001).
- Consultant for the development of the Volusia County Public Schools Handbook for Placing Reviewer for Merrill Education/Prentice Hall (October, 1999): Cathcart, Pothier, Vance, and Bezuk, Nadine. *Learning Mathematics in the Elementary and Middle Schools*.
- University Interns in the Schools Advising Committee (Fall, 1993 - Spring, 1994).

- Consultant for the Aviation/Space Teacher Workshop Committee. Embry-Riddle University, Daytona Beach, Florida (Spring 1993 - Summer 1998).
- Consultant for the Aviation/Space Teacher Workshop Committee. Embry Riddle University, Daytona Beach, Florida (Fall 1989 - Summer 1990).
- Instructional Consultant for Red Bug Elementary School, Seminole County, Florida (1990).
- Instructional Consultant for Reedy Creek Elementary School, Osceola County, Florida (1990).
- Member of the Panel of Experts for the development of the Item Specification for the Florida Department of Education Calculator Project, The use of calculators to assess Mathematics achievement (1989-90).
- Research Consultant for the Aviation and Aerospace Education Center Program Development Proposal, Embry Riddle University, Daytona Beach, Florida (1989-90).
- Professional Development School Site-Coordinator at Goldsboro Elementary School. UCF/Orlando Science Center Holmes Partnership (Fall, 2000-present).
- Co-Program Chair of the Research Council of Teacher of Diagnostic-Prescriptive Mathematics. Melbourne, Florida (February, 1996).
- Co-Conference Chair of the Research Council of Diagnostic/Prescriptive Mathematics Annual Conference. Melbourne, Florida (February, 1996).
- Member of the School Improvement Committee, Volusia County, Florida. Elected as a member of the Conference Committee of the Research Council of Diagnostic-Prescriptive Mathematics (Summer, 1992-Summer 1996).
- Conference proposal reviewer for the American Educational Research Association (2002-present): SIG's: Mathematics Education, Technology, and Learning Environments.
- Field Reader for the Evaluation of Grant Application for the Program to Encourage Minority Students to Become Teachers. U.S. Department of Education (Spring, 1993-to Judge in the Annual Spanish Conference of Florida (April, 1993).
- Member of the UCF/Daytona Speakers' Bureau. Organized the visit of an exchange visiting professor from Venezuela. Dr. Hermes Bravo-Brito (August, 1993-August, 1994). Organizer and Judge of the Metric Estimation Component of the Louisiana Science Olympiad (April, 1989).
- Presider at the Florida Council of Teachers of Mathematics Annual Conference, St. Petersburg Beach, Florida (August, 1991). Presider at the Louisiana Association of Teachers of Mathematics Annual Conference, Monroe, Louisiana (November, 1990). Problem solving comes alive through cooperative learning and manipulative. Presider at the Florida Council of Teachers of Mathematics Annual Conference, St. Petersburg (1990, October). Using IBM Courseware in Precollege Classes.
- Presider at the Louisiana Association of Computer Using Educators Fall Conference. Using multimate advantage (October, 1988).
- Volunteer for the Membership Committee. National Council of Teachers of Mathematics Annual Conference, New Orleans, Louisiana (April, 1991).
- Volunteer in Public Schools at the Holly Hill Elementary School, Volusia County, Florida (1990-91).
- Volunteer in Public Schools at the Bonner Elementary School, Volusia County, Florida (1989-90).
- Volunteer for the National Educational Computing Conference, Orlando, Florida (June, 1993).
- Volunteer for the Research Council of Diagnostic and Prescriptive Mathematics Annual Conference Organizing Committee, Melbourne, Florida (February, 1993).
- Youth Motivator Program Organizer, Volusia County Public Schools (Fall, 1992).

University of Central Florida:

University Service:

- Member of the UCF Graduation Progression Team (Spring 2021-Spring 2022). Invited to serve on the Graduation Team for the Division of Student Learning and Academic Success (SLAS) at UCF as a representative of the CCIE. The focus of the team is to work on academic success initiatives toward progression/graduation of UCF undergraduate students. This team is an outcome of the work on Major Progression led by Drs. Theodora Berry, Paige Borden, Jeffrey Jones, and Michael Georgopoulos in an effort to promote and increase academic success and address key performance metrics of the university.
- Member of UCF Scroll and Quill Application Criteria Review Committee (Spring 2020). I was invited to participate in this committee to revise the Scroll and Quill application criteria. UCF Faculty Excellence (FE) asked Scroll and Quill members to review the current criteria for admittance into the Society and suggest possible changes. Our role was consisted of individual review of the existing application and attending meetings to discuss ideas with other committee members and FE personnel.
- Member of Latino Faculty and Staff Association (LaFASA) (Fall 2017-present). Raising Awareness and Advocating for the Needs and Goals of the Latino/a/x Community at the University of Central Florida.
- Member of HIP Course Designation- Review Committee (Fall 2018-Summer 2019). This is a committee that will serve as the final review point for the following course designations – Service Learning (SL), Research Intensive (RI), and Integrative Experience (IE). RI and IE are new designations to the university. The responsibility for this committee includes:
- Member of *Research Intensive Course Designation Development Subcommittee*, Kevin Jardaneh, Chair. (Spring 2017-Summer 2019). As part of the UCF Office of Undergraduate Research Council, the committee was charge with the development of definitions, protocols, timeline, and general content of an undergraduate research course.
- Reviewer for UCF Undergraduate Research Journal Library Award (Spring 2018; Spring 2017). Reviewed three research articles that were published in 2017 in the UCF Undergraduate Research Journal for this award.
- Reviewer for the *UCF Fall Office of Undergraduate Research (OUR) Research Grant* applications (Summer, 2018). Reviewed applications to the Fall OUR Research Grants.
- Presenter a course at the ADAGE (Academic Discoveries and Adventures for Gifted Enrichment (ADAGE), Project ELEVATE Summer Program (Summer, 2017).
- Member of UCF Hispanic Serving Institution (HSI) Task Force (**Spring 2017-present**). The Task Force will address the main opportunities related to HSI status and our currently high level of Latino enrollment.
- Reviewer for the UCF Summer Undergraduate Research Fellowship (SURF) applications (Spring 2017). Reviewed 17 applications to SURF.
- Reviewer for UCF Undergraduate Research Journal Library Award (Spring 2017). Reviewed three research articles that were published in 2016 in the UCF Undergraduate Research Journal for this award.
- Advisory Board member for *Discovery Research PreK-12 (DRK-12) NSF Grant* (Fall 2016). NSF grant “Digitizing and Personalizing the Testing Effect: Increasing Capacity, Diversity, and Efficacy via Remediation-Enhanced Collaborative Learning,” PI: Richard Hartshorne Co PIs: DeMara, Campbell, Bai, and Chen.
- Intervention Specialist Advisory Committee Member (Spring 2016). *Project Bridges: Special Educator Preparation in Intensive Interventions*. Advisory Committee Meeting, Thursday, March 3, 2016. UCF Teaching Academy, Room 130.
- UCF Faculty Cluster Initiative (FCI) Pre-proposal: Multidisciplinary Neuroscience Alliance (MDNA): Translational Neuroscience (Spring 2015-present). Cluster leader: Kiminobu Sugaya. Participating units: College of Arts and Humanities, College of Business Administration, College of Education and Human Performance, College of Engineering and Computer Sciences, College of

Health and Public Affairs, College of Medicine, College of Sciences, United Technologies Research Center, Institute of Simulation & Training.

- UCF Faculty Cluster Initiative (FCI): CEDHP proposal for FCI hire seeking positions in the areas of (a) learning sciences and (b) computational knowledge (Fall 2016). I will be one of the participating faculty members.
- Undergraduate Research Council (Fall 2014-Summer 2019; Fall, 2007–Fall 2009).
- STEM Day 2015: Festival Expo (November 6, 2015). Tangram Challenge. Presented one mathematics-learning activities for elementary level students. The Center for Initiatives in STEM (*iSTEM*) and the Astronaut Scholarship Foundation invited K-12 grade classes to come and explore the exciting fields of science, technology, engineering, and mathematics (STEM) through demonstrations, activities, speakers, and exhibits designed and led by UCF faculty and students.
- Member of UCF Neuroscience Research and Training Alliance (Spring 2015 – present).
- Served as a Reviewer for the selection of recipient of the Summer 2015 Undergraduate Research Fellowships as part of the Undergraduate Research Council Sub-committee.
- STEM Day 2015: Festival Expo (January 30, 2015). Tangram Challenge. Presented two mathematics-learning activities for elementary level students. One Ph.D. student and eight undergraduate students collaborated in the preparation and presentation of the activities.
- Judge for the 2015 Graduate Research Forum: Eighth Annual Showcase of Diverse Student Research, March, 31, 2015, 12:00 p.m. – 2:00 p.m., UCF Student Union, Orlando, Florida.
- Committee member representing STLL in *iSTEM Fellows Program* committee (Fall 2014-present).
- Judge for the 2011 Graduate Research Forum: Eighth Annual Showcase of Diverse Student Research, March, 29, 2011, 1:00 p.m. – 4:00 p.m., UCF Student Union, Orlando, Florida.
- Organized Near Infra-Red Spectroscopy & Optical Topography Lecture, by Dr. Joerg Schnackenberg, Hitachi Medical Corporation, Japan, October 27, 2009, 9:00 a.m. to 11:00 a.m. UCF Teaching Academy, Room 117.
- Roundtable Paper Presentation at the SoTL Day Faculty Showcase (Spring 2010).
- Poster Presentation at the SoTL Day Faculty Showcase (Spring 2009; Spring, 2008; Spring 2007; Spring, 2006).
- ENLACE (ENgaging LATino Communities for Education) Florida Advising Board Member (Fall, 2005-Spring 2018).
- Reviewer for the UCF Undergraduate Research Journal (Summer 2005-Spring 2019).
- Pew Higher Educational Roundtable Program. A forum for exploring ideas related to the UCF's strategic planning. It involved around 25 people, including the President and Provost (January 27-28 and March 17-18, 1997).
- Minority Scholarship Committee (1996-97).
- College of Education Dean's Search Committee. Chair: Dr. Husemann, Dean College of Business Administration (Fall, 1992-Summer 1993).
- Faculty Senate: Undergraduate Course Review Committee (Summer, 1993 – Summer, 1998).

College of Community Innovation and Education (CCIE) (since summer 2018)
(previously College of Education and Human Performance, CEHP):

Committee Service:

- Served as one of the faculty volunteers in the area of mathematics education for UCF's Parents as Teacher Hotline for Local K-12 Schools (Fall 2020-Fall 2022).
UCF News: College and Campus News: <https://www.ucf.edu/news/ucfs-parents-as-teacher-hotline-ready-for-local-k-12-school-year/>
- Instructor and Lecturer Promotion Committee (Fall 2020, Fall 2019)

- Volunteered as a Judge for the Graduate Research Forum. UCF Student Union, April 3, 2018.
- CEDHP Associate Dean for Academic Affairs Search Committee (Spring 2016-Summer 2016).
- Served as a member of dissertation panel (June 9, 2015). IDS 7502: Case Studies in Education Research, Instructor: Dr. Glenn Lambie. TA 222.
- Served as a Judge for the CEDHP Undergraduate Research Showcase, Poster Presentations, March 18, 2015. Teaching Academy Lobby, University of Central Florida.
- Served as a Judge for the CEDHP Graduate Research Showcase, Poster Presentations, March 1, 2015. Teaching Academy Lobby, University of Central Florida.
- ORC In-House competition – CEDHP research proposal reviewer before submitting to ORC (Spring, 2014).
- Co-chair of Lockheed/UCF Academy Enhancement Grant (Summer, 2013- Fall 2018). Bobby Jeanpierre and **Enrique Ortiz**. Selection of recipients and organization of presentation of awardees' presentations at MIRC.
- Judge of the Lockheed/UCF Academy Enhancement Grant Selection Committee (February, 2013). Lisa Dieker, **Enrique Ortiz**, and Malcom Butler. 10 grants of \$1,000 each were selected.
- College of Education Research Committee Member (Summer 2013-Summer 2015).
- College of Education Council Member (Summer 2012-Spring 2013).
- College of Education Faculty Council Chairperson (Summer 2012-Spring 2013).
- College of Education Faculty Council Member (representing the School of Teaching, Learning and Leadership School). (Summer 2011-Spring 2013; Summer, 2005-Fall 2009, and Summer, 2002 – Summer, 2004).
- Coyle Competitive Fund Advisory and Selection Committees (Fall 2010, and Spring 2011).
- Member of the UCF Research Incentive Award RIA Award Selection Committee (Spring 2010-Spring 2011).
- Member of the UCF Research Incentive Award (RIA) Award Selection Committee (Spring 2009-Fall 2010).
- Response to Intervention (RtI) Special Interest Group (SIG) (Fall, 2009-Fall 2016), Dr. Mary Little, coordinator.
- Sabbatical Selection Committee (Fall 2011, Fall 2010).
- STEM Special Interest Group (SIG) (Fall, 2011-Fall 2016), Dr. Lisa Deiker, coordinator.
- RIA Selection Committee (Fall, 2009; Spring, 2009; Fall 2010-Spring 2011).
- Institutional Effectiveness Reports
 - Master of Arts in Teaching (MAT) Middle School Mathematics track, with Dr. Janet Andreasen (Fall 2010)
 - Master of Arts (MA) in Middle School Mathematics Program (Fall 2009, Fall 2008, Fall 2007, Spring 2006)
 - K-8 Master of Education (M.Ed.) in Mathematics and Science Education (Fall 2007)
 - Master of Arts (MA) in Elementary Education Program (2001-2006)
 - Master of Education (M.Ed.) in Elementary Education Program (2001-2006)
- Evaluator of Promotion and Tenure Portfolios (Fall 2010, Fall 2009, Fall 2008).
- Poster Presentation at the UCF College of Education Second Annual Research Poster Symposium (April 22, 2009).
- Undergraduate Curriculum and Standards Committee (Fall, 2006 – Summer, 2008).
- Represent UCF College of Education Faculty in the Project Central Advisory Board (Fall, 2005-Spring 2009).
- Represent the Faculty Council in College Council meetings (at least 2 per year) (Fall, 2005-Fall, 2009).

- Clinical Experiences Advisory Board (Fall, 2004-Fall 2008). This committee organizes the field-experiences and related activities for graduate and undergraduate programs.
- K-8 Master of Education in Mathematics and Science Education Self-Study (Fall, 2007).
- College of Education Graduate Enrollment Retreat (October 19, 2007).
- NCATE related reports for the Master of Arts in Middle School Mathematics (Fall, 2004-Spring, 2007).
- Performance Assessment Committee (Spring, 2003 – Spring, 2006). This committee will decide the directions of National Council for Accreditation of Teacher Education (NCATE) in the next few years.
- NCATE Professional Standards Task Force (Spring, 2003-Spring, 2006). This committee organizes the field-experiences and related activities for graduate and undergraduate programs.
- Organization of Action Research Interest Faculty Group (**Summer, 2004 – Fall, 2005**). **Ortiz, Enrique**, and Little, Mary. This includes graduate and undergraduate initiatives.
- Professional Portfolio Committee (Spring, 2003 – Fall, 2004). This committee was involved in the selection of the electronic system to be used as part of the graduate and undergraduate student's portfolio system.
- Proctor Master's Comprehensive Exam (Summer, 2004). Teaching Academy (TA 117).
- College of Education Conceptual Framework (Spring, 2003 – Fall, 2004). I helped design the model (I developed the graphical representation) for this Conceptual Framework that is being used by graduate and undergraduate programs.
- Teaching and Learning Principles Department Chair Search Selection Committee (Fall, 2002)
- UCF/Orlando Science Center Holmes Partnership Advisory Committee (Fall, 2000-2003).
- UCF/Orlando Science Center Web-site Development Committee (Fall 2000).
- Department Undergraduate Courses and Curriculum Committee (Fall, 2001-Spring, 2003).
- Professional Development School Site-Coordinator Committee. UCF/Orlando Science Center Holmes Partnership (Fall, 2000-present).
- Chair, TIP Award Selection Committee (1998-99).
- TIP Award Selection Committee (1996-97).
- College of Education Technology Committee (1998-Summer 2008).
- Strategic Planning Writing Team: Technology Section (1997-98).
- Daytona Beach Faculty Committee (1989-1999).
- Department Teacher Education Committee (Fall, 1992).
- Revised Master of Education in Elementary Education program of study as part of a Recruitment and Retention grant. Bookmarks and brochures were developed and duplicated for recruitment purposes.
- Diversity and Multicultural Issues Newsletter Committee Newsletter Article: **Ortiz, Enrique**. (Fall, 1993). The "Vevo Vevo" Game.
- Endowed Chair for Mathematics Education Committee. Faculty Committee for the LM/UCF Academy for the Teaching of Science and Mathematics Research Grant. Michael Hynes, Director.
- Junior Year Block Faculty Committee (Daytona Beach).
- Master's Comprehensive Exam Committee (Summer 1991-present).
- Minority Mentors Committee. Multicultural Issues Group.
- Presenter at the College of Education Brown-Bag Seminars: Miller, Margaret, **Ortiz, Enrique**, and others. (February 27, 1992.) Multicultural Education Report.
- Holt, Larry, Everett, Robert; and **Ortiz, Enrique**. (April, 1992.) InTech Training Results.
- Proctor Doctoral Examination (Summer, 1991).
- Task Force for Multicultural Issues. Volusia County Teacher Education Center Council University Representative.
- Value Added International Programs Committee Member.
- Value Added Student Recruitment Leadership Team.

**School of Teacher Education (STE) (since summer 2018)
(previously School of Teaching, Learning, and Leadership, STLL):**

- Fall 2021: Associate Director, School of Teacher Education
- Member of TIP Selection Committee (Summer 2018-Spring 2019)
- Member of Elementary Education Council (Fall 2016-present).
- Member of Elementary Education Faculty Committee (Fall 2016-present).
- Member of Secondary Education Faculty Committee (Fall 2016-present).
- Member of the Communication/Visibility Committee, ad hoc committee of the Elementary Education Committee (Fall 2016-Spring 2020).
- Member of the Ph.D. in Mathematics Education Selection Committee (Spring 2019, Spring 2018, Spring 2017, Spring 2016, Spring 2015, Spring 2014, Spring 2013, Spring 2012, Spring 2011, Spring 2010, Spring 2009).
- Program Coordinator of the MAT: Teacher Education - Middle School Mathematics Education Track (Fall, 2005-present)
- T-MAST Coordinating Advising and Recruiting Committee, Lockheed/UCF Academy for Mathematics and Science Education (2004-present).
- Review Committee for UCF CED School of Teaching, Learning and Leadership Annual Faculty Evaluation Standards and Procedures
- Member of the Secondary and Middle School Education Faculty Committee (Fall 2006-Summer 2016)
- Member of the Elementary Education Faculty Committee (1989-2011).
- Member Elementary Education Advisory Committee (Fall 2008-present).
- Member of Ph.D. and Ed.D. in mathematics education faculty committee (Fall 2008-present).
- Student Issues Committee (Fall 2007-Fall 2009).
- Evaluator of Comprehensive Exam for Elementary Education, Spring 2009, Fall 2008, Spring 2008, Fall 2007.
- Evaluator of Ed.D. Comprehensive Exam for Beverly C. Price, Spring 2009; Tara Martina, Spring 2008.
- Chair of the Promotion and Tenure Committee for 2007.
- Interim Academic Advising Coordinator of K-8 Master of Education in Mathematics and Science Education (Fall 2007-Spring 2008).
- Academic Advising Coordinator for Undergraduate and Graduate Middle School Mathematics Programs (Fall, 2005-present).
- M.Ed. K-8 Mathematics and Science Coordinating Committee, Lockheed/UCF Academy for Mathematics and Science Education (2000-present).
- Academic Advisor for T-MAST program (Fall, 2005-present).
- Member of TLP Undergraduate Curriculum Committee (Fall 2006-Summer 2008).
- Middle School Mathematics Master's Comprehensive Exam Committee (Fall, 2005-present).
- Academic Advising Co-coordinator for Undergraduate and Graduate Elementary Education Programs (Fall, 2000-Summer 2005, and Summer 2006).
- Transition in Mathematics and Science Teaching Comprehensive Exam: Master of Arts in Middle School Mathematics Education: Portfolio Defense. Member of the Evaluation Committee (Summer, 2004, and Summer, 2005).
- Elementary Education Florida Teacher Certification Exam (FTCE) Preparation Class (Fall, 2002-Spring, 2004). This preparation class was available to graduate and undergraduate students preparing to take the Elementary Education FTCE.
- Recruitment and Retention Committee (Fall, 2001-Spring, 2006).
- Member of the Secondary Education Forum (Fall, 1992-Fall 2006), Secretary.

- Evaluator of Professional Portfolios: Undergraduate and Graduate Programs (Fall 1997-Fall 2010).
- Member of the Elementary Education/Middle School Forum (1989-2006).
- Elementary Education Master's Comprehensive Exam Committee (1996-2008).
- Department of Instructional Programs Curriculum Committee (Fall, 1991 to Summer, 1993). Chairperson (Fall, 1992 - Spring, 1993).
- Math/Science Research Group. Member of a committee revising MAE 2801 at the Community College (Summer, 1991 - Fall, 1991).
- Member of the Elementary Forum Pilot Program (Fall, 1991).

Faculty/Staff Search Committees:

- STE Internship Experience Coordinator II Search Committee (Spring 2023)
- STE Lecturer, Art Education (Fall 2018)
- STLL Assistant, Elementary Education (Fall 2014-Spring 2015)
- STLL Instructor or Lecturer, Elementary Education/ESOL (Spring 2014)
- STLL Visiting Professor, Mathematics Education (Fall 2012)
- STLL Visiting Instructor, Secondary, Mathematics Education (Spring 2012)
- STLL Associate Professor or Professor, Educational Leadership & Ed.D. Program Coordinator (Spring 2011)
- STLL Faculty Administrator Search Committee (Fall 2011)
- Assistant/Associate Secondary Education Mathematics Faculty Search Committee (Spring, 2009; Fall, 2008-Spring, 2007; Spring, 2006-Fall, 2007).
- Visiting Faculty Administrator (Assistant to the Chair) Search Committee (Fall 2005-Spring 2006). Department of Teaching and Learning Principles.
- Visiting Assistant Professor, Secondary Mathematics Faculty Search Committee (Fall 2005-Spring 2006).
- College of Education Clinical Supervision Coordinator Search Committee (Spring, 2004).
- Assistant/Associate Secondary Education Mathematics Faculty Search Committee (Fall, 2003-Spring, 2004),
- Assistant/Associate Elementary Education Mathematics Faculty Search Committee (Fall, 2002-Spring, 2003).
- Associate/Full Secondary Education Mathematics Faculty Search Committee (Fall, 2002-Spring, 2003).
- Two Clinical Supervision Instructor Lines at the Orlando Campus (Fall, 2002).
- Instructional Programs Chair, Orlando Campus (Spring, 1997-Spring, 1999).
- Assistant Professor in ESOL at the Orlando Campus (Spring, 1999).
- Assistant Professor in Elementary School Reading/Language Arts at the UCF Daytona Beach Campus (Spring, 1996).
- Assistant Professor in Elementary School Reading/Language Arts at the UCF Daytona Beach Campus (Spring, 1993).
- Assistant Professor in Secondary School Science (Spring, 1992).
- Assistant Professor in Elementary School Mathematics (Orlando Campus) (Fall, 1991).
- Assistant Professor in Elementary School Mathematics (one at the Brevard Campus and one at Orlando Campus) (Summer, 1991).

Membership in Professional Organizations:

- American Educational Research Association: Divisions (AERA):
C: Instruction and Learning.
G: Social Context of Education.

K: Teaching and Teacher Education.
SIG: Research on Mathematics Education.
SIG: Study of Learning Environments.
SIG: Microcomputers Applications in Education.

- Artist Network (ArtistNetwork.com): Artist Magazine
- Association of Mathematics Teacher Educators (AMTE).
- Association for Supervision and Curriculum Development.
- Association of Mathematics Teacher Educators (ATE)
- Mathematics Teacher Educators (MTE) A Special Interest Group (SIG) of the Association of Teacher Educators (ATE)
- Council for Technology in Math Education (CLIME) (an affiliate of NCTM since 1988)
- Florida Association for Computers in Education (FACE).
- Florida Association of Mathematics Teacher Educators (FAMTE).
- Florida Council of Teachers of Mathematics (FCTM).
- International Society of for Technology in Education (ISTE).
- International Mind, Brain, and Education Society (IMBES).
- The Mathematical Association of America (MAA).
- National Council of Teachers of Mathematics (NCTM).
- The National Association for Multicultural Education (NAME): Advancing and Advocating for Social Justice & Equity
- Research Council on Mathematics Learning (RCML).
- TODOS: Mathematics for All