FEATURE ARTICLE

Using Regression Discontinuity Designs to Evaluate Tier 2 Intervention Within an MTSS Framework: An Illustration Using *SRSD Fractions*

By Robin Parks Ennis, University of Alabama at Birmingham
Ashley Shaw, Pittsburg State University

Robin Parks Ennis   *Ashley Shaw*

There is significant research to support the use of MTSS practices such as response-to-intervention and positive behavioral interventions and supports. MTSS frameworks are used to address students' academic, behavioral, and social-emotional needs at each tier. Because Tier 3 supports are costly in terms of both time and resources, utilizing Tier 2 interventions is one way to serve students more efficiently, and to better align students with their level of need.

One practical way to analyze the effects of Tier 2 interventions within school settings is through the use of regression discontinuity designs (RDD). RDD use a forcing variable at a set cut score (e.g., 30th percentile) to identify students requiring intervention (Jacob et al., 2012). The intervention is determined to be effective if there is a significant discontinuity (change) in the regression lines on the post-test. The beauty of RDD is that all students falling at or below the cut point can participate in the intervention as effects provide estimates of growth in intervention compared to expected growth without targeted interventions (Ryoo & Pullen, 2017). This design allows us to efficiently evaluate the effects of targeted, Tier 2 interventions without having to assign students identified as needing support to a control group. Despite the validity and feasibility of RDD for use with students with and at-risk for learning disabilities, they have not been widely used within the special education literature and only a few studies have utilized this design to evaluate mathematics interventions.

An Illustration Using *SRSD Fractions*

SRSD Fractions was developed to support the skills of adding and subtracting fractions with unlike denominators using the acronym FILMS (*see Figure 1, on page 2*; **F**ind the denominator, **I**dentify the multiples, **L**ocate the least common multiple, **M**ultiply to make new fractions, and **S**olve the problem). All lessons utilize explicit instruction for strategy acquisition and self-regulation (i.e., goal setting, self-monitoring, self-instruction, self-reinforcement) and follow the six-stage self-regulated strategy development (SRSD) framework: develop background knowledge, discuss it, model it, memorize it, support it, and independent practice (Harris et al., 2008). To date, three studies have demonstrated the efficacy of *SRSD Fractions* (Ennis & Losinski, 2020; Losinski et al., 2019; 2021a). The purpose of the current study is to extend the prior work using *SRSD Fractions* to determine the efficacy of the SRSD framework

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SRSD FRACTIONS MNEMONICS

FDDS

F = Find the denominator

D = Draw Number Lines

D = Divide the line into parts
equaling the denominator

S = Shade the number of parts of
the numerator.

FILMS

F = Find the denominator

I = Identify the multiples

L = Locate the Least Common
Multiple (LCM)

M = Multiply to make new fractions

S = Solve the problem

Figure 1. SRSD Fractions Mnemonics

to improve the conceptual and procedural understanding of fractions with fourth-grade students with math difficulties (MD). In addition to other systematic manipulations, we added additional lessons using FDDS (**F**ind the denominator, **D**raw a number line, **D**ivide the number line into spaces that equal the denominator, and **S**hade the number of spaces in the numerator) to facilitate conceptual understanding of plotting fractions on a number line. The current research is predicated on the following question: Is there a difference in fractions performance between students participating in *SRSD Fractions* intervention and those in the control group within the estimated bandwidth?

Method

What follows is a summary of methods/results, for full details see Losinski et al. (2021b).

Participants and Setting

Following IRB approval, this study took place in an elementary school serving 597 students (66.16% White) in grades PK-6 in a small city in the midwestern United States currently implementing a MTSS framework. As a part of this framework, 60 of the 73 4th grade students returned consents to be screened for participation using a fractions assessment, we applied a cut-score so that student at or below 30th percentile received the SRSD Fractions Intervention. A total of 16 students were placed in the intervention group, with 44 in the control. The intervention was implemented by the intervention developer, a male faculty researcher.

Measures

A broad assessment was used at pre- and post-test with all students. The 63-item fractions battery was comprised of 15 items comparing fractions (current study Alpha = 0.84), 10 items representing fractions on number lines (Fuchs et al., 2016; Alpha = 0.93), 14 items from the National Assessment of Education Progress subtest (Alpha = 0.77), and 24 items on adding/subtracting fractions with like and unlike denominators (Alpha = 0.92). Treatment fidelity of intervention procedures also were collected by the interventionist and an outside observer using a checklist of required lesson elements (range 23-52 steps). The interventionist self-reported 98.83% (SD = 1.60) of intervention elements across all lessons. The outside observer had 100% IOA with the interventionist and reported 100% fidelity on days observed.

Procedures

All students in both the control and the intervention condition participated in mathematics instruction within the classroom. The content was aligned with the Common Core Math Standards for 4th grade and included 60 min of math instruction each day (20 min instruction, 40 min independent work or intervention time). Students in the control condition remained in their classroom for all 60 min. Students in the *SRSD Fractions* condition participated in mathematics instruction with their classroom teacher for the first 20 min of mathematics. They then worked with the intervention agent in the library during the 40-min intervention time to learn *SRSD Fractions* strategies. The intervention took place over a period of six days for a total of 240 min. The lessons were delivered three days a week over a two-week period. The lesson plans used to teach the FDDS and FILMS lessons are available online for free at teachsrsdmath.com.

Data Analysis

We used RDD to estimate the effect of *SRSD Fractions* on 4th-grade students' fractions performance. RDD estimate intervention effects for students assigned to an intervention based on a numeric cut score (Jacob et al., 2012). The cut score can be uniformly applied (sharp RDD) or loosely applied along the cut score (fuzzy RDD). We applied a cut score so that most students at or below the 30th percentile received the intervention, resulting in a fuzzy RDD (Ryoo & Pullen, 2017). First, we visually plotted the dependent variable on the vertical (y) axis and the cut-score plotted on the horizontal (x) axis to evaluate the data for evidence of a discontinuity, or difference between slope-lines, around the cut-score. Statistical tests and effect sizes are then estimated to evaluate the discontinuity. We used the Imbens–Kalyanaarman optimal bandwidth calculation to create the bandwidth and estimated local linear regression on both sides of the cut score within the bandwidth to estimate a treatment effect (Imbens & Lemieux, 2008). We also calculated a standardized mean difference effect size *(g)* for post-test scores within the bandwidth to provide a standardized estimate of effect. Interpretation of the magnitude of effect was $g = 0.20$ small, $g = 0.50$ medium, and $g = 0.80$ large (Cohen, 1988). Last, we leveraged data from all students, as opposed to just those within the RDD bandwidth, to estimate a difference-in-difference (DiD) estimator. The two "differences" in the *DiD* estimator are (a) the difference in the means of the *treatment* and *comparison* groups in the dependent variable (DV) **after** the treatment, and (b) the difference in the means of the *treatment* and *comparison* groups in the DV **before** the treatment. See Losinski et al. (2021b) for complete analysis details.

Results

The mean pretest score for all students ($n = 60$) was 33.2 ($SD = 14.1$) and the mean posttest score for all students ($n = 54 – 6$ control students were unavailable for posttest) was 35.8 ($SD = 12.3$). Mean scores by group at pretest were 17.9 ($SD = 6.0$) for the treatment group ($n = 16$) and 38.7 ($SD = 11.9$) for the comparison group ($n = 44$). Mean score by group at posttest were 27.8 ($SD = 13.3$) for the treatment group ($n = 14$) and 38.6 ($SD = 10.8$) for the comparison group ($n = 40$). The nonparametric fuzzy RDD model using the Imbens–Kalyanaraman optimal bandwidth suggested that students in the treatment group had higher scores on the post-test, but that estimate was not statistically significant. The primary coefficient of interest was the DiD estimator, which was statistically significant and positive, suggesting that after controlling for pretest heterogeneity, students in the treatment group performed statistically significantly higher than students in the comparison group. To increase interpretation, we calculated the standardized mean difference effect size using the DiD coefficient, the standard deviation of all scores (13.27), and samples. Overall, we found a treatment effect of 0.81, which is considered large.

Conclusion

While the students in the control group still had higher scores at posttest, these findings suggest that the brief *SRSD Fractions* intervention resulted in statistically significant gains in student performance. These findings are consistent with other investigations using SRSD Fractions (Ennis & Losinski, 2020; Losinski et al., 2019; 2021a). This study should be interpreted in light of several limitations which can be found at Losinski and colleagues (2021b).

This study was implemented within a three-tiered MTSS framework designed to provide students with the appropriate level of support for their academic, behavioral, and social needs. Using a RDD allowed us to intervene with all students identified as needing additional support. As a result, we did not have to navigate the ethical dilemma of having to use a control group or delaying treatment (e.g., a single-case multiple baseline design, waitlist control design). Further, RDD is recognized by the WWC (2014) as a quasi-experimental design that can be used to support strong causal inferences. We hope future researchers will continue to explore this design as it is well aligned for use within MTSS frameworks. RDD have strong internal and external validity, which is important for ensuring quality analysis and understanding the potential generalizability of findings (Ryoo & Pullen, 2017). ✍

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Dear DLD Members,

Spring 2023

As we approach the end of another academic year, I am grateful for the opportunity to write this message and reflect upon the work of the Division for Learning Disabilities (DLD). For those I have yet to meet – hello! My name is **Jess Tost**e and I am thrilled to be serving you as the incoming DLD President. I am currently an Associate Professor in the Department of Special Education at The University of Texas at Austin, where I also hold research affiliations with the Meadows Center for Preventing Educational Risk and the Texas Center for Equity Promotion. I began in the field as an elementary special education teacher and reading specialist, and my scholarly career has been committed to investigating methods to intensify reading intervention for students with learning disabilities. I have had the pleasure of serving the Council for Exceptional Children in various capacities and am excited to take on this leadership role.

In fall 2022, our Board of Directors engage in a two-day strategic planning retreat. From that work, we workshopped and developed a 2023-2028 Strategic Plan. As part of DLD's Mission to promote effective practices that improve the learning and wellbeing of individuals with learning disabilities, we set four main goals that represent priorities for our Division over the next five years.

1. Establish DLD as the leading organization for resources to inform effective practices for individuals with LD.

2. Intentionally embed diversity, equity, inclusion, and accessibility within DLD's work.

3. Increase communication and engagement with members.

4. Maintain and enhance internal systems to ensure longevity of DLD as an organization.

We look forward to launching the DLD Strategic Plan and sharing it with our members. It will serve as a guide for our ongoing work in service of high-quality research and practice in the field of learning disabilities.

There has been much to celebrate over the past year, but I would be remiss not to acknowledge that this has also been a year of significant challenge – especially for those who work in schools and the students they serve. Beyond the ongoing impact of the COVID-19 pandemic, our school systems have been grappling with concerns related to staffing shortages, school safety, inclusive and diverse curriculum, and targeted attacks on public education. These challenges place additional strain on the learning and wellbeing of all students, but especially on the provision of services and supports for students with disabilities. These challenges demand that DLD continues to evolve to ensure that we are providing resources that are timely, relevant, and impactful to our members. This has been a part of our strategic planning process and will continue to be an important point of conversation moving forward.

If you don't already, please follow DLD on Facebook and Twitter (**@TeachingLD**). We have a fabulous social media committee that has been working hard to increase our presence and share more information directly with members. I look forward to working with our dedicated Board to develop and share new resources – and I can't wait to connect with you all at next year's CEC Convention in San Antonio, TX. In the meantime, please do not hesitate to reach out if you have any questions or suggestions.

I hope you are all able to find time over the summer months to take care of yourselves and get rejuvenated for the fall!
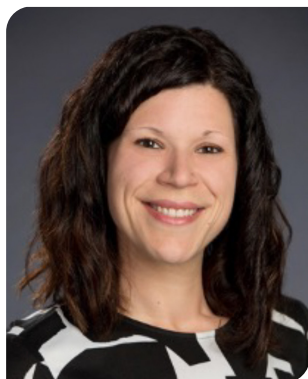
Jessica Toste, PhD

President, Division for Learning Disabilities,
Council for Exceptional Children
The University of Texas at Austin

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Welcome our new DLD Executive Board members!

PRESIDENT

Dr. Jessica Toste

University of Texas at Austin

VICE PRESIDENT

Dr. Lisa Goran

University of Missouri

SECRETARY

Dr. Lexi Hwang

California State University, Los Angeles

Welcome to our new Committee Chairs!

PUBLICATIONS & COMMUNICATIONS

Dr. Debra G. Holzberg

University of North Carolina Greensboro

CULTURAL AND LINGUISTIC DIVERSITY

Dr. Shaqwana Freeman-Green

University of North Florida

PROFESSIONAL DEVELOPMENT, STANDARDS, & ETHICS

Dr. John Romig

University of Texas at Arlington

DIGITAL MEDIA (CO-CHAIR)

Sarah King

The University of Texas at Austin

PUBLIC POLICY

Elizabeth Zagata

University of Connecticut

DLD Policy Corner

Congress has been busy, and that means so has the DLD Public Policy Committee! DLD has signed on support to a letter advocating for full funding of IDEA as well as two letters facilitated by the Consortium for Citizens with Disabilities (CCD): one that expresses support for the Assistive Technology Act, and one that raises concern about the discrepancy model included in a proposed federal bill on dyslexia. CEC also has three current "Action Alerts" on prioritizing special education funding, supporting school-based mental health, and rebuilding the special educator workforce. Visit https://exceptionalchildren.org/takeaction to reach out to your representatives about these important issues!

Elizabeth Zagata, Public Policy Committee Chair

If you are looking for additional ways to engage in advocacy work, CEC makes it easy:

- Subscribe to the weekly Policy Insider email sent from Kuna Tavalin, CEC's Senior Policy Advisor
- Attend Kuna's periodic "What's Happening Washington?" webinars
- Plan to be at the Special Education Legislative Summit July 9-12 in Washington, DC

For more details, visit https://exceptionalchildren.org/policy-and-advocacy

The DLD Public Policy Committee always welcomes new members so reach out to **Elizabeth Zagata** at eazagata@gmail.com if you're interested.

DLD Award Winners 2023

Samuel J. Kirk Award

This award recognizes excellence in professional journal articles that have been published in *Learning Disabilities Research & Practice*.

Research Article Winner: Dr. Emily Solari and Colleagues

Solari, E.J., Kehoe, K. F., Cho, E., Hall, C., Vargas, I., Dahl-Leonard, K., Richmond, C. L., Henry, A. R., Cook, L., Hayes, L., & Conner, C. (2022). Effectiveness of interventions for English learners with word reading difficulties: A research synthesis. *Learning Disabilities Research & Practice, 37,* 158-174.

Emily Solari is the Edmund H. Henderson Professor of Education at the School of Education and Human Development at University of Virginia. She directs Virginia Literacy Partnerships and the Virginia Language & Literacy Screening System (VALLS) a collaboration between UVA and the Virginia Department of Education. Dr. Solari's research focuses on better understanding reading development in subgroups of learners who are at-risk for reading difficulties and those identified with reading disabilities, with the goal of developing and implementing evidence-based language and reading instruction and interventions. Her scholarship includes experimental studies, professional development studies, and evaluations of language and literacy interventions and programs.

Samuel J. Kirk Award

This award recognizes excellence in professional journal articles that have been published in *Learning Disabilities Research & Practice*.

Research Article Winner: Dr. Sam Patton and Colleagues

Patton, S. A., Fuchs, D., Hendricks, E. L., Pennell, A. J., Walsh, M. E., Fuchs, L. S., Tracy, W. Z., & Haga, L. Y. (2022). An experimental study to strengthen students' comprehension of informational texts: Is teaching for transfer important? *Learning Disabilities Research & Practice, 37,* 124-139.

Sam Patton is an Evaluation and Research Specialist at the Michigan MTSS Technical Assistance Center. Prior to joining the TA Center in September 2022, Sam was a Research Associate at Vanderbilt University with Drs. Doug and Lynn Fuchs to support their work investigating interventions in reading and math for elementary students with learning disabilities. He earned his M. Ed. in Secondary Education in 2007 and Ph. D. in Special Education in 2019, both from Vanderbilt University, and was awarded the Robert Gaylord-Ross Award for Excellence in Scholarly Writing in 2019. He has presented or co-presented at the national CEC Convention & Expo going back to 2016. He is a lifelong Nashvillian where he lives with his wife Kelly and two cats.

Jeannette E. Fleischner Career Leadership Award

The Jeannette E. Fleischner Career Leadership Award honors those who have advanced the field of learning disabilities through direct services, policy development, community service, research or organizational leadership throughout their career.

Winner: Dr. David F. Bateman

David F. Bateman, Ph.D., is a Principal Researcher at the American Institutes for Research. He is a former due process hearing officer for Pennsylvania for hundreds of hearings. He uses his knowledge of litigation relating to special education to assist school districts in providing appropriate supports for students with disabilities and to prevent and to recover from due process hearings. He has been a classroom teacher of students with learning disabilities, behavior disorders, intellectual disability, and hearing impairments. Dr. Bateman earned a Ph.D. in special education from the University of Kansas. Over the past 25 years he has either been a hearing officer or consultant on over 990 special education lawsuits. He has recently co-authored the following books: A Principal's Guide to Special Education, A Teacher's Guide to Special Education, Charting the Course: Special Education in Charter Schools, Special Education Leadership: Building Effective Programming in Schools, Current Trends and Legal Issues in Special Education, and A School Board Members Guide to Special Education.

Marva Collins Diversity Award

The Marva Collins Diversity Award honors a special education teacher who makes a significant impact in the education of children and youths with learning disabilities who come from culturally and linguistically diverse backgrounds.

Winner: Huyen Le, Atlantic Coast High School

A set of fingerprints is a unique, individualized impression of ridges on every pair of human hands. Like a set of fingerprints, my purpose in education is to leave a distinctive imprint that cultivates a legacy of love, hope, transformation, and integrity for students and educators alike. With a shared mission from Duval County Public Schools to "provide educational excellence in every school, in every classroom, for every student, every day," educators and students can make a global impact. I have had the joy of fostering the potential of every student and colleague I have worked with, specifically in Special Education and the juvenile justice system. I have aimed to promote a classroom culture of diversity and equity by implementing the Universal Design for Learning (UDL) framework and Positive Behavioral Interventions and

Supports (PBIS) model to support my students' learning. I have collaborated with ESE specialists and general education teachers to deliver differentiated instruction to students with culturally and linguistically diverse backgrounds. I have also trained ESE teachers on writing effective Individualized Education Plans by incorporating research-based practices and mentored interns from the University of North Florida aspiring to become teachers. I am honored to receive the Marva Collins Diversity Award because my parents were Vietnamese immigrants. Their hard work and resilience inspired me to become the first person in my family to graduate from college and become an educator.

John Wills Lloyd Outstanding Doctoral Research Award

DLD's John Wills Lloyd Outstanding Doctoral Research Award recognizes excellence in doctoral research that contributes to the field of learning disabilities.

Winner: Dr. Alexis Boucher, University of Tennessee-Knoxville

Dissertation Title: *Word Reading Intervention for Individuals with Word Reading Disabilities in Grades 2-4*

Alexis N. Boucher is an assistant professor in special education at the University of Tennessee, Knoxville. Her research aims to identify and develop effective reading interventions for students in upper elementary grades with

word reading difficulties/dyslexia. Alexis is an experienced elementary educator who taught students with high incidence disabilities in integrated co-teaching classrooms and resource room settings.

Candace S. Bos Innovative Project Grants

DLD's Candace S. Bos Innovative Projects grants support doctoral students, teachers, and other pupil services personnel who provide services to students with learning disabilities as they develop creative projects to enhance instruction, curriculum, action research, and service delivery.

Winner: Heba Z. Abdelnaby, University of Missouri

Winner: Erica Fry, University of Texas-Austin

Winner: Melissa Stoffers, University of Delaware

Winner: Zhina Shen, University of Texas-Austin

DLD Student Poster Session @ CEC 2023

Each year, DLD hosts a student poster session during our reception at the CEC convention. It is a great opportunity for undergraduate and graduate students to present their work. A call for proposals will be published on the DLD website (teachingld.org) in late fall. Send questions to **Erica Frye** at fry.erica@utexas.edu.

Improving Math Facts in a Flash: Brief Flashcard Practice

Syeda Sharjina Akther, Na Young Yoon
Sponsor: Dr. Sarah R. Powell, *The University of Texas at Austin*

Abstract: Addition and subtraction fluency supports the development of advanced mathematical concepts such as word-problem solving and algebra. We examined the effects of brief mathematics fact flashcard practice embedded in a word-problem solving intervention. The result indicated positive effects on mathematics fact accuracy for students with mathematics difficulties in Grade 3.

Implementation Drivers of Data-Based Instruction: A Systematic Review

Seohyeon Choi, Emma Shanahan, Bess Casey Wilke, Jechun An
Sponsor: Dr. LeAnne Johnson, *TUniversity of Minnesota – Twin Cities*

Abstract: We aim to examine what kinds of implementation drivers have been used to support educators implementing data-based instruction (DBI) and what kinds of implementation outcomes researchers have measured. Findings indicate a need to incorporate implementation drivers and outcomes at diverse levels to best support educators' implementation of DBI.

Insights into Dysgraphia Research: Identification, Interventions, and Policies

Megan Bishop
Sponsor: Dr. Florina Erbeli, *Texas A&M University*

Abstract: This poster presentation presents findings from a narrative review, which summarizes the latest research on dysgraphia. Specifically, the poster presentation addresses the latest findings on dysgraphia identification, interventions for remediation, and inconsistencies in policy and procedures concerning dysgraphia across the United States.
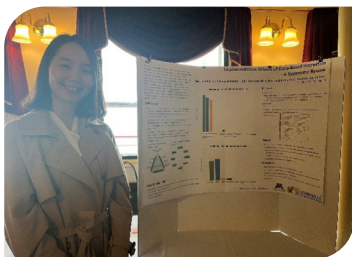

"I think it is amazing": Educational Leaders Reflect on PBPD and SRSD

Kate E. Connor, MA
Sponsor: Dr. Amber B. Ray, *University of Illinois, Urbana-Champaign*

Abstract: The purpose of this qualitative study was to follow up with participants who had previously participated in practice based professional development (PBPD) on self-regulated strategy development (SRSD) for informative writing. Interviews were held over Zoom. Descriptive codes emerged on the current implementation and sustainability of SRSD, barriers, and student impact.
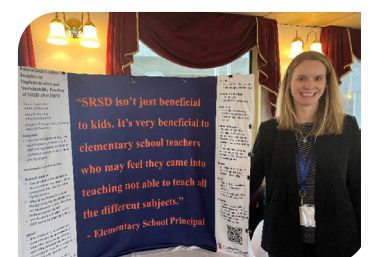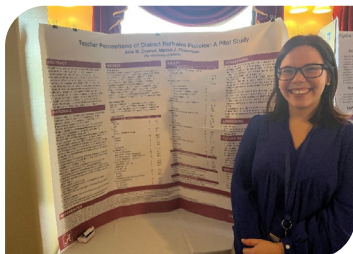
Teacher Perceptions of School District Policies on Restraint: A Pilot Study

Allie Marques Cramer
Sponsors: Lucy Barnard-Brak, Dr. Laci Watkins, **Dr. Marissa Filderman,** *University of Alabama*

Abstract: Research on perceptions of policy on and the use of restraint in school settings is incredibly limited. This pilot study utilizes mixed methodologies to determine teachers' perceptions of school district policies on the use of restraint. Initial findings, as well as implications for policy and practice, will be discussed.

Effects of Blocked and Interleaved Practice for Students with Learning Disabilities

Tzu Hsing Lin

Abstract: Teaching mathematical content is a major responsibility of teachers, but also supporting retention is equally important, especially for students with LD. We compared two forms of practice: blocked and interleaved on the retention of students with LD. Our findings indicate inter-leaved practice is superior. Implications and future directions are discussed.

Algebra Interventions for Students with LD: A Systematic Literature Review

Cassandra M. Smith
Sponsor: Dr. Delinda van Garderen, *University of Missouri*

Abstract: This session will review the algebra intervention for secondary students with learning disabilities research base. The systematic literature review's findings will provide insight into the current state of the research base (what is known and areas of need), as well as future research directions needed.

Systematic Review of Writing Interventions Studies for English Learners with Learning Disabilities

Yang Fu
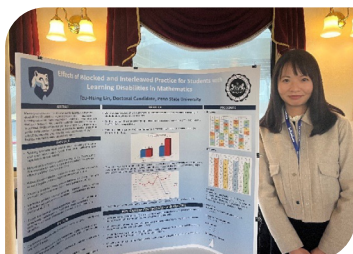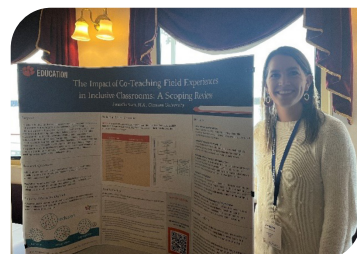Sponsor: Dr. Jason C Chow, *University of Maryland*

Abstract: This systematic review synthesizes the characteristics and effects of writing intervention studies that include English learners who had or are at-risk for learning disabilities (ELs with LD). We discuss some commonly implemented intervention elements and implications for future research needed to support the outcomes of ELs with LD.

The Impact of Co-Teaching Field Experiences in Inclusive Classrooms: A Scoping Review

Samantha Scott
Sponsor: Dr. Abby Allen, *Clemson University*

Abstract: The poster will feature a review of studies investigating general and special education pre-service teachers' perceptions, opinions, attitudes, or beliefs toward their ability to implement co-teaching practices within inclusive settings and the impact a co-teaching field experience has on their willingness to teach in inclusive classroom settings.
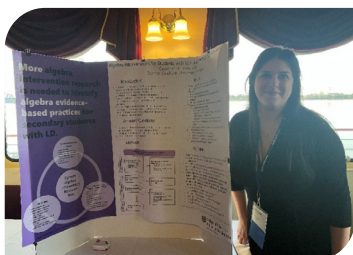

Supporting Teaching of Algebra: Individual Readiness (STAIR)

Emily Singell, Kyungwon Lee, and Tara Atchison-Green
Sponsor: Dr. Erica Lembke, *University of Missouri*

Abstract: STAIR is a framework based in data-based individual-ization (DBI). Special education teachers participating in STAIR receive coaching to learn how to integrate evidence-based mathe-matics strate-gies within their current cur-riculum. In the current study, researchers wanted to ex-plore what dosage and for-mat of coaching were most effective in improving teacher and student outcomes.
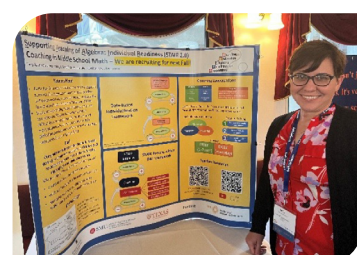
Using Skill-by-Treatment Interaction to Increase Mathematics Achievement

Emily Singell, Katherine Graves, Jonie Welland, and Heba Abdelnaby
Sponsor: Dr. Matthew Burns, *University of Missouri*

Abstract: Abstract: The goal of the poster will be to present data from a single-case design study that examined the skill-by-treatment interaction (STI) framework with three elementary students whose current mathematics intervention was not effective. In this study, district assessment and progress monitoring data were used to identify how to intensify math interventions based on STI decision methods. The presenters will also explain how practitioners can utilize an STI approach to identify interventions and strategies for individualized mathematic needs.
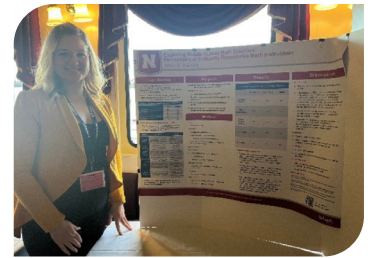
The Intervention Didn't Work: Intensifying Reading Interventions with Data

Jonie Welland, Heba Abdelnaby, Emily Singell, and Katherine Graves
Sponsor: Matthew Burns, *University of Missouri*

Abstract: TA skill-by-treatment interaction (STI) framework can help practitioners select appropriate reading intervention intensification strategies when prior efforts are not successful. In a single-case design, three students, identified as non-responsive to their current intervention, received intensified intervention that matched intensification strategy to student need based on the STI framework.

Culturally Responsive Mathematics Instruction (CRMI) Utilized by Middle School Math Teachers of Culturally and Linguistically Diverse (CLD) Student Populations Across Urban, Suburban, and Rural Settings: A Multiple Case Study

Ashley N. Struebing
Sponsors: Dr. Mackenzie Savaiano, Dr. Susan Loveall-Hague, *University of Nebraska*

Abstract: CLD middle school students often perform far below their White and Asian peers regarding mathematics achievement. CRMI has been effective in educating CLD students. This study examines the use of CRMI in CLD middle school math classrooms across urban, suburban, and rural settings, and its impact on student engagement behaviors.

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Subdivision Contact Info

Several jurisdictions have active DLD subdivisions. Many of these organizations have conferences and other activities for teachers. All subdivisions can provide more information about learning disabilities at the state, province, or local level. Please contact the representatives listed below for more information. If you are a DLD member and are interested in forming a subdivision in your state, contact DLD's Membership chair.

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