

FEATURE ARTICLE

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An important way students demonstrate mathematics competency is through solving word problems. The term *word problem* refers to a text-based mathematics problem in which students respond to a prompt within the word problem to develop a solution. Perhaps not surprisingly, students who experience difficulty with mathematics (as identified by an official or unofficial disability diagnosis) demonstrate low rates of success with setting up and solving word problems (Fuchs et al., 2014; Jitendra et al., 2014). In this brief, we describe effective word-problem instruction for students with mathematics learning difficulty (MLD) to better equip educators with the appropriate content knowledge to support their most vulnerable students.

Types of Word Problems

In textbooks and on high-stakes assessments, students in the elementary and middle school grades often solve two types of word problems: Directional and Routine. A *Directional* word problem provides students with specific directions to complete a task. For example, in the word problem question: *Which three shapes are quadrilaterals?*, students must identify the three shapes fitting the definition of a quadrilateral. A second example, *Use the drawing tool to draw a rectangle with an area of 1575 square units and a side of 45 units*, requires students to draw a rectangle.

Word Problems? No Problem! Helping Students to Set Up and Solve Word Problems

A *Routine* word problem directs students to respond to a question about the provided information. Typically, Routine word problems are the problems most people think of when they hear the term “word problem.” The following offers one example of a Routine word problem: *Ryan has $\frac{1}{2}$ pound of chocolate. He divides it into 4 equal portions. Enter the amount of chocolate, in pounds, of each portion.* In this Routine word problem, students need to use the information about $\frac{1}{2}$ pound and 4 equal portions to determine each portion is $\frac{1}{8}$ of a pound.

In another Routine word problem example, *Kevin makes muffins. It takes 8 minutes to mix the batter. The muffins bake for 17 minutes. The muffins cool for 5 minutes. What is the total amount of time Kevin spends mixing, baking, and cooling the muffins?*, students must calculate the total amount of time (i.e., 30 minutes) to correctly answer the question.

Why Word Problems are Difficult

Word problems prove challenging for students with MLD for many reasons, including the need to identify relevant information, ignore irrelevant information, and/or perform the computation(s) necessary to find the solution (Krawec, 2014; Sharpe et al., 2014; Wang et al., 2016). In addition, students with MLD may experience difficulties reading the

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Sarah Powell



Katherine Berry

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Word Problems? No Problem! Helping Students to... continued from page 1

problem, understanding the vocabulary within the problem, and interpreting the text (Fuchs et al., 2015; Peake et al., 2015); further, working memory challenges may hinder the word-problem process (Swanson et al., 2014). Solving word problems involves numerous steps and skills, and without formal instruction, most students with MLD rely on the immature strategy of adding all the numbers presented in the word problems without reflecting upon the word-problem question.

Because mathematics standards in the U.S. expect students to set up and solve word problems and students with MLD may find word problems especially challenging, several research teams have developed word-problem interventions to support the specific needs of students with MLD. See the work of Brian Bottge, Lynn Fuchs, Asha Jitendra, and Marjorie Montague (among others) for exemplar examples of word-problem interventions (Bottge et al., 2007; Fuchs et al., 2010; Jitendra et al., 2014; Montague et al., 2011).

In this brief, we describe our research team's effort to provide effective word-problem instruction to students with MLD. First, we discuss the importance of embedding modeling and practice about algebraic reasoning within a word-problem intervention. Then, we describe the five components of our intervention to support students in setting up and solving Routine word problems, as this type of word problem often proves most difficult for students with MLD. Lastly, we offer recommendations to general and special educators for implementing high quality word-problem instruction in their classrooms.

Instruction on Setting Up and Solving Word Problems

From 2015-2018, we provided third-grade students with MLD an intensive word-problem intervention called Pirate Math Equation Quest (PMEQ). We identified students with MLD as scoring at or below the 25th percentile on a measure of word problems. Students in PMEQ received our intervention 3 times per week, for 16 weeks, with sessions lasting approximately 30 minutes. PMEQ students participated in five activities for each session: (1) Math Fact Flashcards, (2) Equation Quest or Pirate Crunch (3) Buccaneer Problems, (4) Shipshape Sorting, and (5) Jolly Roger Review. *See Figure 1, on page 3, for an example of each activity.*

Math fact flashcards. To increase math fact fluency, interventionists displayed a set of addition and subtraction math fact flashcards to students during two, 1-minute timings.

After setting the timer, students answered as many flashcards in 1 minute. The interventionists placed cards with a correct response on the desk and provided immediate, corrective feedback for incorrectly answered cards. After 1 minute, interventionists and students counted the number of flashcards answered correctly. Prior to starting a second 1-minute timing, the interventionists challenged students to beat their previous score. At the end of the second 1-minute timing, students graphed the highest score from the two trials (*see Figure 1 on page 3*).

Equation Quest. Equation Quest served as the second activity of each intervention session. For approximately 2 to 5 minutes each session, interventionists provided instruction on solving equations and the meaning of the equal sign. We included this focus on equations and the equal sign because students used equations to represent a word problem's structure. For the word problem, *Juanita made 72 bracelets and then sold some at the jewelry market. Now, Juanita has 49 bracelets. How many bracelets did Juanita sell?*, the equation $72 - ? = 49$ represents the word problem.

During Equation Quest, interventionists reintroduced the common symbol and taught students to understand the meaning of the equal sign as *the same as*. Students learned the equal sign acts as a balance between two sides of an equation and does not solely signal a calculation. To understand the equal sign as a relational symbol, students solved standard and nonstandard equations with concrete manipulatives (e.g., balance scale and blocks), hand-drawn pictures, or equations presented with numbers and symbols. Students learned a set of steps to balance equations with a variable (i.e., "X"), which involved isolating the variable and emphasizing that whatever calculation is performed on one side of the equal sign is also performed on the other side of the equal sign (e.g., subtract 4 from both sides). Students practiced isolating the variable with both standard and nonstandard equations. For all PMEQ students, interventionists emphasized the meaning of the equal sign as *the same as* and embedded equation solving throughout each session.

Buccaneer Problems. The third activity for each session consisted of interventionist-led schema instruction through a series of three Buccaneer Problems. During sessions 1 through 4, interventionists reviewed addition and subtraction skills. Starting in session 5, the interventionists provided explicit, scaffolded instruction on how to set up and solve word problems by schema. To emphasize new concepts, the interventionists used manipulatives or pictures as necessary.

text continued on page 4

Math Fact Flashcards

Math Fact Flash Card Graph									
Student:	1	2	3	4	5	6	7	8	9
40									
39									
38									
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3									
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Day									

Equation Quest

EQUATION QUEST: LESSON 38

equal sign: the same as

A. $12 - X = 9$

B. $X + 6 = 10$

C. $X = 8 - 5$

=

Buccaneer Problems

Pirate Math: Lesson 39

ACTIVITIES

- 1. Math Fact Flash Cards
- 2. Equation Quest/Pirate Crunch
- 3. Buccaneer Problems
- 4. Shipshape Sorting
- 5. Jolly Roger Review

Materials

Posters
RUN! Total Difference Change
Student Materials
Equation Quest, Lesson 39 (PM+ES)
Jolly Roger Review, Lesson 39
Tutor Materials
Cubes
Math Fact Flash Cards
Timer
Sorting Cards
Attendance Log

1: Math Fact Flash Cards

Use Activity Guide: Math Fact Flash Cards.

2: Equation Quest/Pirate Crunch

EQUATION QUEST
Let's get started with our Equation Quest! What does the equal sign mean?
The same as.
(That's right. The equal sign means the same as "is equal".)

PIRATE CRUNCH
Let's get our brain reading for word problems by doing some math review activities.
Math review activities for 2-3 minutes.

Pirate Math Lesson 39 • 109

BUCCANEER PROBLEMS: LESSON 39

Mike played video games in the morning. Later that day, he played 15 sports games. How many games has Mike played now?

8. There were some puppies at the pet store. A family came to the pet store and bought 1 puppy. Now, there are 4 puppies left. How many puppies were at the pet store to start with?

C. Best had a party. She invited 2 fewer boys than girls to the party. She invited 15 boys. How many girls did she invite?

Shipshape Sorting

Dante's mom planted 8 trees and rose bushes in the yard. She planted 4 rose bushes. How many trees did she plant?

Don has \$1 more than Matt. If Don has \$5, how much money does Matt have?

T

D

C

?

Jolly Roger Review

JOLLY ROGER REVIEW: LESSON 40

A. $9 + 2 = \underline{\quad}$

B. $14 - 5 = \underline{\quad}$

C. $9 - 2 = \underline{\quad}$

D. $8 + 8 = \underline{\quad}$

E. $6 + 7 = \underline{\quad}$

F. $\begin{array}{r} 77 \\ - 62 \\ \hline \end{array}$

G. $\begin{array}{r} 29 \\ + 17 \\ \hline \end{array}$

Figure 1. PMEQ Example

Students learned to approach any word problem by *RUN*ning through the problem (see Figure 2, below): Read the problem, Underline the label and cross out irrelevant information, and Name the problem type (i.e., choose the correct schema to use). For each schema, students learned to use an equation to represent the problem and to mark “X” to represent the missing information. For the young pirates, “X” represented the treasure (i.e., a word-problem answer). The interventionists introduced the Total problem schema during session 5, the Difference schema in session 17, and the Change schema in session 34. From session 39 until the end of intervention, Buccaneer Problems included a comprehensive review of Total, Difference, and Change problems.

Total problems. The interventionists introduced the Total schema during session 5. In a Total problem, the missing information (i.e., “X”) could be the total or one of the parts. After checking for a table or a graph and *RUN*ning through the problem, students followed five steps to work toward the problem solution: (1) Write $P1 + P2 = T$ (i.e., Part 1 + Part 2 = the Total), (2) Find T, (3) Find P1 and P2, (4) Write the signs, and (5) Find X. For Total problems with more than two parts, students learned to expand the equation (e.g., $P1 + P2 + P3 = T$).

Difference problems. The interventionists introduced Difference problems during session 17. After session 17, Buccaneer Problems for each session included Total and Difference problems. In a Difference problem, students learned to compare an amount that is greater and an amount that is less to find the difference. The missing information (i.e., “X”) for Difference problems could be the amount that is greater, the amount that is less, or the difference. Interventionists taught students that the most important attribute in a Difference problem is the compare sentence. Students learned to find the compare sentence by looking for a compare word (e.g., words like *more*, *less*, or *fewer*, or other words like *older*, *shorter*, or *faster*), and then using the compare sentence to determine which quantities were greater and less, and whether the difference was provided or missing. Students followed six steps for solving a Difference problem: (1) Write $G - L = D$ (i.e., Amount that is greater – Amount that is less = Difference), (2) Put brackets around the compare

sentence and label G and L, (3) Find D, (4) Find G and L, (5) Write the signs, and (6) Find X.

Change problems. In Change problems, there is a starting amount, then at a later time something happens to increase or decrease the starting amount, so the ending amount is changed. The interventionists introduced Change problems during session 34, and from session 39 until the end of intervention, Buccaneer Problems included a comprehensive review of Total, Difference, and Change problems. In a Change problem, the missing information (i.e., “X”) could be the starting amount, the change amount, or the end amount. Students followed six steps to solve a Change problem: (1) Write $ST \pm C = E$ (i.e., Start amount \pm Change amount = End amount), (2) Find ST, (3) Find C, (4) Find E, (5) Write the signs, and (6) Find X. With more than one change within the problem, the interventionists taught the students to expand the equation to reflect the additional information in the problem ($ST + C - C = E$).

Shipsape Sorting. The fourth activity each session, Shipsape Sorting, was a timed activity allowing students to practice identifying word-problem schemas learned during the Buccaneer Problems. Shipsape Sorting started during session 7 of the intervention. Before the sorting activity began, the interventionist placed a mat with four squares in front of the student. Each square was labeled with one word-problem type letter (i.e., T for Total, D for Difference, or C for Change) or a question mark. Interventionists reminded students to sort the word-problem cards and to not solve any of the word problems. Interventionists set the timer for 1 minute and read the first word-problem card aloud before handing the card to the students. After 1 minute, interventionists provided immediate, corrective feedback by reviewing at least three of the word-problem cards.

Jolly Roger Review. The final activity of each session, the Jolly Roger Review, included a brief, timed paper-and-pencil review of the session content. Students worked for 1 minute to answer math facts, solve computation problems, or write appropriate equations for the three word-problem schemas. Then, students worked for 2 minutes to solve a word problem using the schema steps taught during the Buccaneer Problems. Students performed the timed review autonomously and then received feedback at the end of the 3 minutes.

Motivation. Throughout each session, students earned pirate coins for following specific guidelines (e.g., listening to the interventionist, staying in your seat, working hard, trying your best). Students typically earned 4 to 6 coins per

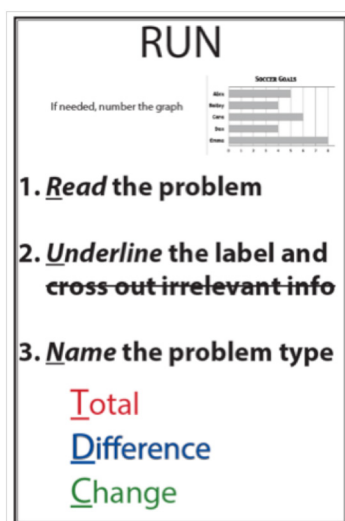


Figure 2. *RUN*ning through the problem

session. At the end of each session, students counted the number of coins earned and colored the appropriate number of coins on a treasure map. When students completed a treasure map, they selected a small novelty prize from a treasure box.

Results. Students with MLD demonstrated superior growth on a word-problem measure compared to students who did not participate in PMEQ, with an ES of 1.89. See Powell et al., 2019 for full results of the study.

Implications for Practice

Students with MLD should receive explicit instruction on reading, interpreting, setting up, and solving word problems. Through our intervention, interventionists provided modeling and guided practice during Buccaneer Problems on the three additive schemas of Total, Difference, and Change. Interventionists engaged students in independent practice with word problems during the Jolly Roger Review. We also provided students with practice opportunities to quickly identify different schemas (with Shipshape Sorting). We suggest teachers of students with MLD offer similar instruction and practice opportunities when students experience difficulty with word-problem solving. We also recommend teachers explicitly teach students with MLD to write equations representing a word problem's structure.

Students with MLD may also benefit from explicit modeling and practice about the relational meaning of the equal sign and how to use equal-sign knowledge to solve different types of equations. We suggest teachers of students with MLD provide opportunities with multiple representations for students to explore the equal sign as a balance. We also propose that teachers expose students to both standard and nonstandard equations, especially because the latter encourages students to think about the equal sign as a relational symbol. Teachers should explicitly connect any algebraic-reasoning instruction to the writing and solving of equations representing a word problem. 🎨

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Reauthorization of the Higher Education Act

By David F. Bateman, Shippensburg University

With IDEA reauthorization off the table for the time being, DLD members need to pay attention to the reauthorization of the Higher Education Act. The following are facts related to the need for higher education, along with recommendations related to the reauthorization of the law.

Facts that Shape the Discussion

- 33% of working-age people with disabilities participate in the labor force, compared to 77% of their peers with out disabilities (Bureau of Labor Force, 2019).
- By 2020, 65% of all U.S. jobs will require some postsecondary education and 90% of new jobs in growing industries with high wages will require, at a minimum, some postsecondary education (Carnevale, Smith, & Strohl, 2019).
- Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act (504) protect students with disabilities from discrimination and require institutions of higher education (IHE) to provide reasonable accommodations. However, colleges and universities (i.e., IHEs) face challenges in supporting students who may be unaware of their rights and responsibilities and the ways in which they can access accommodations. Additionally, IHEs may have difficulty providing accommodations, including services that involve specialized knowledge (e.g., assistive technology). Many faculty and staff are unaware of their legal obligations and how to accommodate students with disabilities (Smith, 2001).
- While 94% of students with learning disabilities received accommodations in high school, only 17% received accommodations in postsecondary education and many go without the accommodations and supports they need (National Center on Educational Research, 2011).
- Forty-eight states and D.C. report teacher shortages; the greatest shortages occur in the fields of special education and early intervention.
- Educators prepared through alternate pathways which often include less coursework and shorter student

teaching experiences are 25% more likely to leave their schools and the profession than those who are well-prepared.

- Over the past 5 years, enrollment in teacher preparation programs has declined 35% (US Department of Education, 2017).

Recommendation: Include the Supporting the Teaching Profession Through Revitalizing Investments in Valuable Educators Act (STRIVE) Act.

Recommendation: Retain and strengthen the Teacher Quality Partnership (TQP) grants with a focus on residency preparation, principal preparation, and shortage areas such as special education, specialized instructional support personnel, and professional development. Such grants ensure skill development in using research-based practices that improve outcomes for all students, including students with disabilities, and partnering with parents in the education of students with disabilities.

Recommendation: Require Department of Education to promote the Teacher Education Assistance for College and Higher Education (i.e., TEACH) grants through activities such as public awareness campaigns and to actively engage in recruiting teacher candidates, particularly in shortage fields such as special education.

Recommendation: Maintain TEACH grant funding as mandatory funding.

Recommendation: Include language – adding early childhood education – including early intervention and preschool education – to the list of high-need fields.

Recommendation: Retain and strengthen Teacher Loan Forgiveness Programs including the Teacher Loan Forgiveness program and the Public Service Loan Forgiveness program. These programs are critical in addressing the teacher shortage and should be strengthened and marketed by the Department of Education as a strategy for addressing the shortage and the shrinking pipeline of teachers.

Recommendation: Include the Respond, Innovate, Succeed, and Empower (RISE) Act (S.1585). This bipartisan bill:

- Authorizes increased funding for a technical assistance center that provides students and families with information on disability services available in college and how to access services and offers college faculty training and resources on best practices to support students with disabilities.

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- Requires IHEs to accept an Individualized Education Program (IEP), 504 plan, or prior evaluation as documentation of a student's disability when seeking accommodations in an IHE, preventing students from having to undergo a new, costly and burdensome evaluation required by many IHEs.

Recommendation: Maintain the National Technical Assistance Center in Section 777(a) of the Higher Education Opportunity Act.

Recommendation: Authorize funding to collect (and make available to the public) accurate data about the recruitment, retention, graduation, and employment of students and faculty with disabilities to help postsecondary programs in their ability to serve students with disabilities and to provide middle and high school students, parents, and faculty with information about postsecondary educational options, accessibility, enrollment procedures, supports, and rights and responsibilities.

Recommendation: Include provisions establishing a new commission to identify barriers to ensuring equal opportunity for students with psychiatric disabilities and make recommendations.

Recommendation: Include the Expanding Disability Access to Higher Education Act (S. 1176) to promote the matriculation and increase in the graduation rates of individuals with disabilities within higher education for first-generation or low-income students with disabilities including through the TRIO program.

Recommendation: Clarify that, consistent with the ADA and other laws, students should not be penalized for behavior related to a disability where individualized, reasonable accommodations could mitigate this behavior.

Recommendation: Retain the definition of “universal design for learning” (UDL) included in current law. In addition, postsecondary education programs and their administration, staff, and faculty should receive training, support, and technical assistance to ensure programs of instruction, curricula, and support services are developed according to the principles of UDL.

Recommendation: Include provisions that require services, including but not limited to housing, websites, and athletic facilities, to be universally designed and accessible to students with disabilities, and require that institutions understand their legal obligation to provide reasonable accommodations.

Recommendation: Apply accessibility standards to all platforms used by IHEs to deliver instruction in recognition of the increasing availability of web and computer-based instructional delivery and web and computer-based course materials for students.

Recommendation: Incorporate the use of UDL principles into teacher preparation coursework and professional development.

Recommendation: Require teacher preparation programs to ensure that candidates complete their preparation prior to serving as the teacher of record and qualify for full state certification upon program completion.

Recommendation: Require that individuals who complete teacher preparation programs receiving funds via the Higher Education Act (HEA) demonstrate content knowledge and skill in instructing diverse learners, including students with disabilities.

Recommendation: Include provisions that require the administration, staff, and faculty of postsecondary program to receive training, support, and technical assistance to ensure programs of instruction, curricula, and support services are developed according to the principles of UDL.

Recommendation: Include provisions requiring that IHEs receiving Garrett Lee Smith Memorial Act grants return those grant funds if they are found to have discriminated against students based on a psychiatric disability.

Student Loan Availability, Accessibility, and Affordability.

Students with disabilities, and professionals who work with children and adults with disabilities must be taken into consideration as our federal government tackles the important issue of affordability and access to higher education. These students must be eligible for all types of financial aid and programs to create greater access, especially for first-generation college students and all other students. The HEA should ensure that educators, those who provide early interventions services, specialized instructional support personnel, and other professionals who work with people with disabilities are provided the financial support to pursue a public service career. These professionals are critical to ensuring that children and adults with disabilities have access to the range of services and supports they need to participate in the workforce and community life.

POLICY UPDATES (cont.)

Recommendation: Provide access to adequate levels of federal loans and affordable loan repayment options to all students (providers of services beginning at birth and students with disabilities).

Recommendation: Federal law should ensure that students with disabilities are accommodated if they cannot meet credit-hour requirements per semester.

Recommendation: An updated HEA must retain provisions that allow students with intellectual disabilities to access financial aid.

Recommendation: Change the Title of Sec. 766 Model Comprehensive Transition and Postsecondary Programs to “Inclusive Higher Education Programs for Students with Intellectual Disabilities.” 🦋

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RESEARCH NEWS

Dr. Stephen Ciullo, current DLD Secretary and Associate Professor of Special Education at Texas State University, was awarded a four-year \$1.4 million Goal 1 Exploration grant from the Institute of Education Sciences (IES) titled *Exploring Writing Instruction Delivered by Teachers Providing Services to Students with Disabilities*. Two other DLD members are Co-PIs on this grant: **Dr. Alyson Collins** at Texas State University and **Dr. Steve Graham** at Arizona State University.

Stephen, Alyson, and Steve want to shed light on what classroom writing instruction looks like for students with learning disabilities (LD). Their grant will provide initial information on the following question: *Is special education writing instruction special?*

This research team will observe teacher dyads: general educators and special educators who teach writing to students with disabilities. They will report on the effective instructional practices used by the teachers, and examine associations between writing instruction and student outcomes.



RESEARCH NEWS

\$1.4 MILLION IES GRANT AWARDED

Principal Investigator: Dr. Stephen Ciullo
Co-PI: Dr. Alyson Collins

Stephen’s team will also consider if teacher-level factors (e.g., expertise for teaching students with disabilities) influence these relationships, and if special educators and general educators differ in the use of effective instructional practices for teaching writing.

Stephen, Alyson, and Steve Graham will use data from this project to guide professional development in writing, and offer recommendations for new writing interventions for students with LD. Stay tuned! 🦋

Highlights from DLD's Student Poster Session

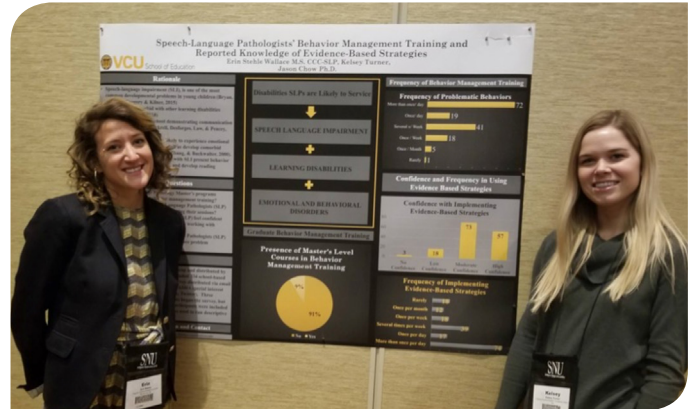
This year we had a great turnout at our annual reception and student poster session. Students from universities all over the U.S. presented their research and DLD members had a great time!



Erica Mason and Stacy Hirt: University of Missouri; Taylor Cox and Tiffani Pruitt-Britton: Southern Methodist University

Title: Data-Based Individualization in an Algebraic Readiness Systematic Framework

Abstract: An exemplar systematic framework for supporting the algebra-readiness of students at-risk or identified with a specific learning disability in the area of mathematics. Presenters will communicate theoretical and practical frameworks focusing on the process of systematic data-based individualization (DBI) and key components of assessments and decision making for algebraic readiness utilizing a universal screener, progress monitoring measure, and diagnostic assessment.



Erin Stehle Wallace and Kelsey Turner: Virginia Commonwealth University

Title: Speech-language Pathologists' Behavior Management Training and Reported Knowledge of Evidence-Based Strategies

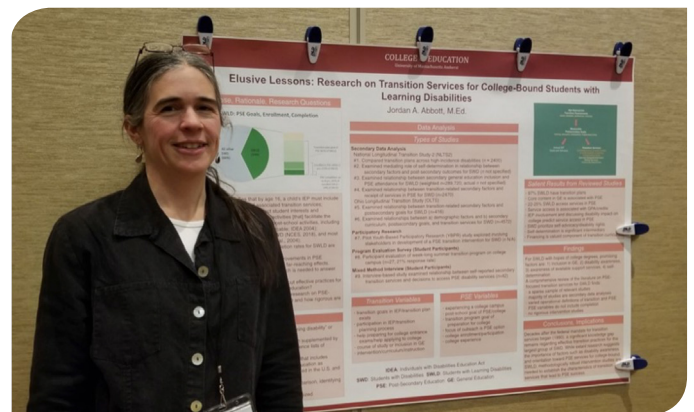
Abstract: A survey examined SLPs' behavior management training, and their knowledge of evidence based strategies when working with students with speech language impairment (SLI) and challenging behaviors. 91% reported they did not receive a course in behavior management during their graduate program, and 51% experience challenging behaviors more than once per day.



Rachel Donegan: Vanderbilt University

Title: Effects of Interventions of Differing Intensities on Reading Outcomes

Abstract: In the current investigation, we examined the effects of a multicomponent reading intervention implemented at two different intensities on the reading outcomes of 4th grade students with or at risk for disabilities. Preliminary analysis indicates significant effects on word reading outcomes for students that participated in the intensive implementation.



Jordan Abbott: University of Massachusetts - Amherst

Title: Elusive Lessons: Research on Transition Services for College-Bound Students with Learning Disabilities

Abstract: This comprehensive literature review, synthesizing research on transition services for college-bound students with learning disabilities, delves deeply into the studies published on the topic to reveal effective practices as well as the shortcomings of the relevant research base. Implications for service delivery and future research are presented.

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Jessica Kamuru: University of Missouri

Title: Number Line Tasks to Support Deeper Understanding of Number Concepts

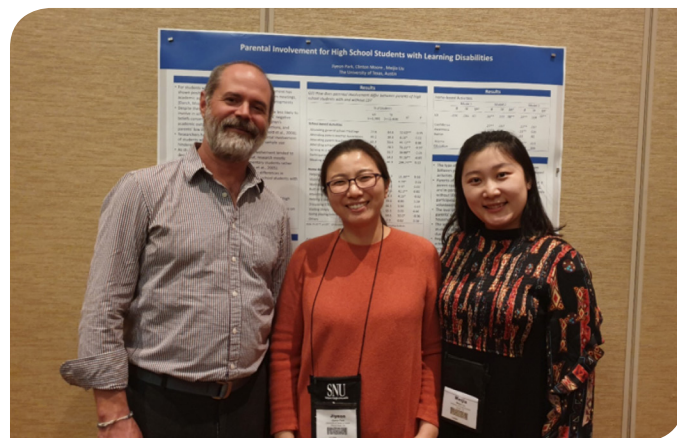
Abstract: The purpose of this poster is to present findings of a qualitative study that examined how second-grade students, teacher-identified as struggling in mathematics, developed ideas about the number line. We provide examples of tasks and the conceptual ideas they were focused on along with changes in student ideas of critical concepts in number.

Title: A Synthesis: Morphological Awareness Interventions and the Effects on Literacy Outcomes

Abstract: This poster synthesizes the current research literature on the effects of morphological awareness intervention on literacy outcomes with struggling readers in kindergarten through 8th grade. The synthesis will review and analyze the types of morphological interventions that have been used to attempt to increase reading outcomes in students who struggle with reading. Findings suggest that morphological awareness intervention positively affects literacy outcomes in reading, vocabulary, and spelling.



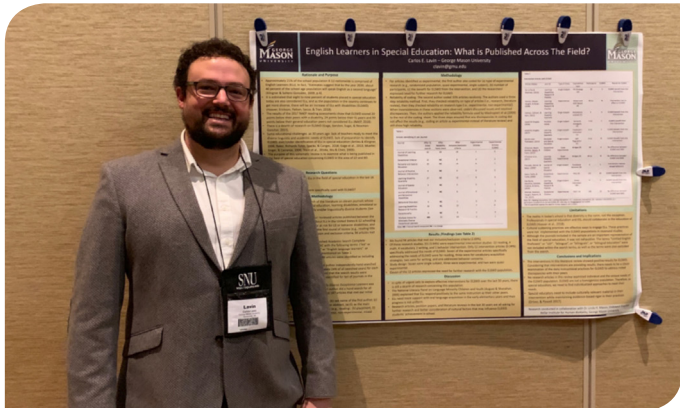
Stacie Brady: George Mason University



Jiyeon Park: University of Texas - Austin

Title: Parental Involvement for High School Students with Learning Disabilities

Abstract: Parental involvement is important for the success of students with learning disabilities (LD) in schools. This study analyzed the parent questionnaire from the High School Longitudinal Study of 2009 to investigate the parental involvement of parents of high school students with LD. Overall results show the level of parental involvement is positively associated with parents' confidence in academic areas, educational level, and household income, but it is negatively associated with students' difficulties in school and the frequency of school notice due to the behaviors and low performance/attendance. Having a child identified with LD is associated with an increase of parental involvement, when controlling for parents' confidence in academic areas, parent awareness on child's difficulties in school ($p < 0.01$). When we controlled for parents' income and educational level, parents of students with LD shows a higher parental involvement than parents of students without LD ($p < 0.01$).



Carlos Lavin : George Mason University

Title: English Learners in Special Education: What is Published Across The Field?

Abstract: This poster synthesizes the current research literature on English learners (ELs) published in special education journals over the past 16 years. Research questions examined what are the topic, and interventions published specifically regarding ELs in special education. Findings reveal a dearth of research on interventions for ELs.



Valentina Contesse: University of Florida

Title: The Effects of an Intensive Summer Literacy Program on Reader and Teacher Development

Abstract: Dual certification preservice teachers complete a summer practicum in literacy assessment and intervention. The purpose of this presentation is to describe the effects of preservice teachers' implementation of the UFLI-Intensive tutoring model with elementary-aged students with or at-risk for reading disabilities. 🌈

Join DLD in New Orleans in November for a Mini-Conference!

Where: Crowne Plaza New Orleans
French Quarter

When: November 7, 2019 @ 5-8pm

Registration: Opens April 1st (\$50 for teachers & students; \$75 for faculty).

Details at TeachingLD.org

Research Committee Update

The DLD research committee has four research alerts that will be published between now and the end of the year. Topics include data-based decision-making, math fact fluency, algebra, and dialogic reading. Committee members will also serve as reviewers for our annual **John Wills Lloyd Doctoral Award**. To increase submissions for the award, at three different points in time we will distribute information about the application to key constituent groups. We would also like to take this time to welcome our newest committee member Shawn Datchuk from the University Iowa. Other committee members include Alison Boardman, Elizabeth Hughes, Jessica Toste, Amy Boele, and Stephanie Morano. If any DLD member is interested in serving on the DLD research committee, we welcome you to join us!

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