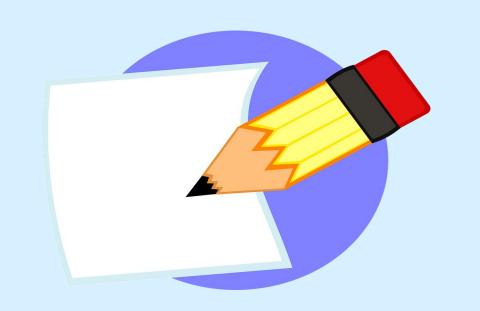
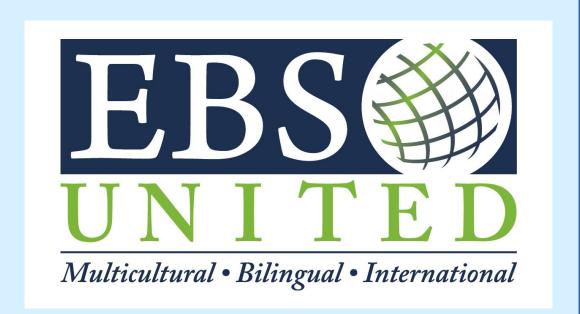




Impact of Occupational Therapist and Teacher Collaboration on Handwriting Outcomes in the Classroom

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RATIONALE

Using a Response to Intervention framework including coteaching, occupational therapists (OTs) can assist teachers in developing collaborative handwriting instruction individualized to the needs of children in their classrooms. This proactive, collaborative approach in designing, implementing, and adapting handwriting instruction leads to improved outcomes including legibility amongst children in primary grades and avoids unnecessary referrals for evaluations.

STUDY OBJECTIVE

The study was completed in order to further understand how an Rtl model of collaboration between an OT and teacher can positively impact handwriting outcomes in primary grades. This study also examined the ways an OT can embed strategies and activities into the general education curriculum that facilitate skill acquisition and provide measurable positive outcomes.

METHODS & DEMOGRAPHICS

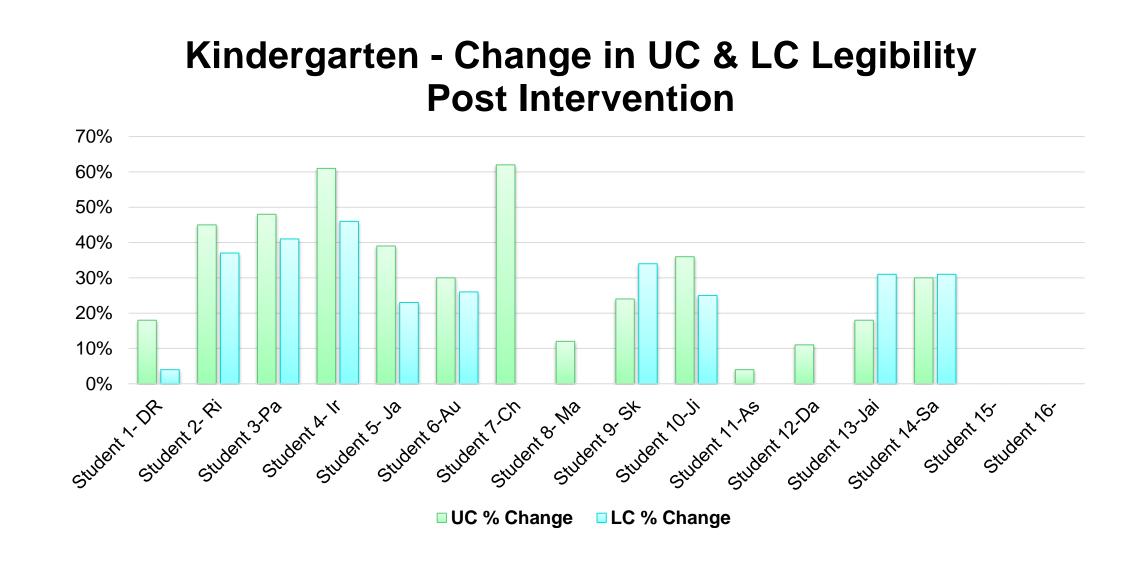
Convenience sampling of 3 classrooms (39 total students) in one elementary school with teachers who were interested in additional support with handwriting.

- 1. Kindergarten (whole classroom instruction)
- 2. First grade A (whole classroom instruction)
- 3. First grade B (small group instruction)

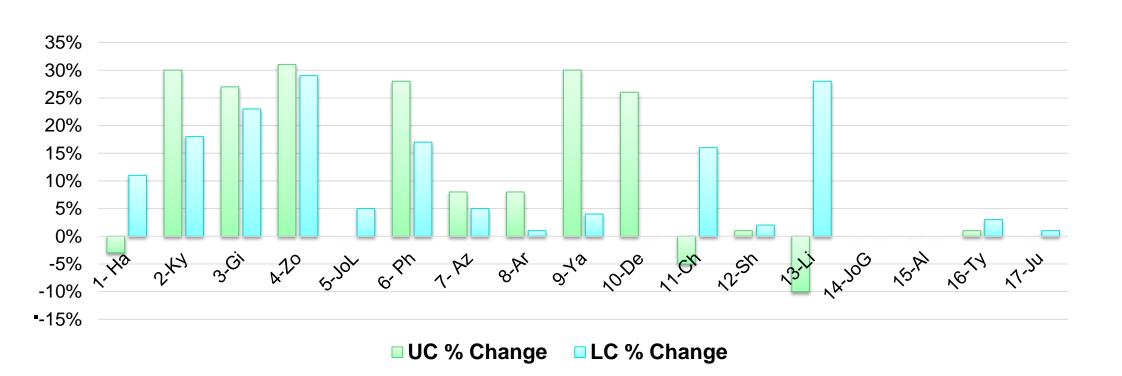
(Evaluation Tool of Children's Handwriting).

Instruction occurred 1 x week for 30 minutes for 12 weeks (unless interrupted due to teacher request/school activities). It utilized concepts/categories from Size Matters Handwriting Program© (tall, small, and falling) to determine order of letter instruction. Legibility was measured utilizing criteria from the ETCH

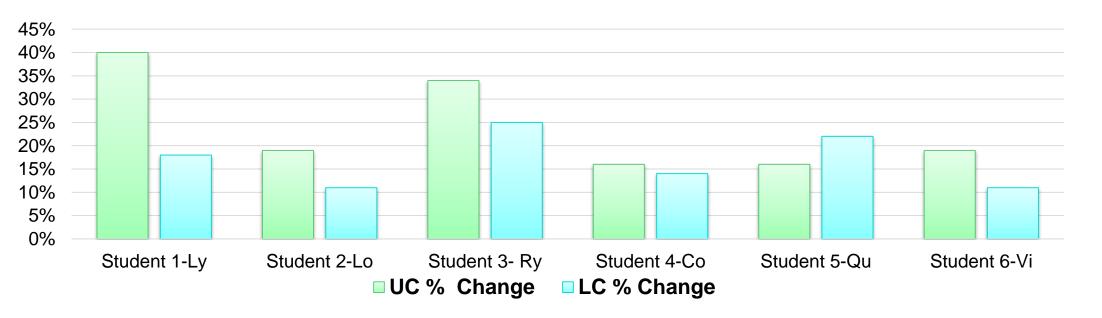
RESULTS



First Grade A - Change in UC & LC Legibility **Post Intervention**



First Grade B - Change in UC & LC Legibility **Post Intervention**



				# Referrals	# Referrals
	#	UC Legibility	LC Legibility	Pre	Post
Classroom	Students	Change	Change	Intervention	Intervention
Kindergarten Class	16	31%	30%	5	1
First Grade Class A	17	13%	12%	3	1
First Grade Class B	6	19%	11%	5	1

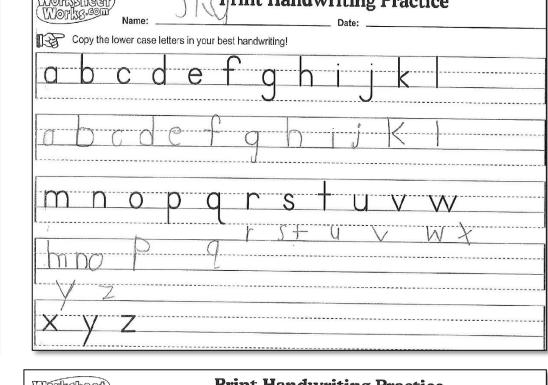
OUTCOME MEASUREMENTS

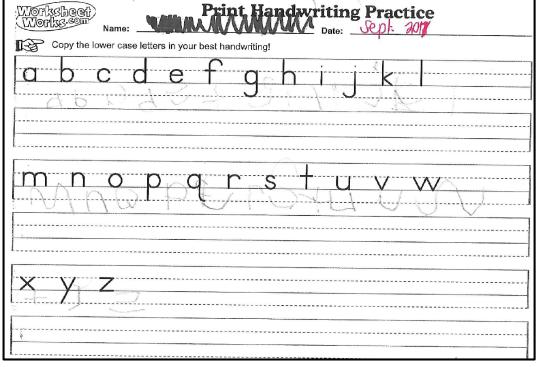
BEFORE

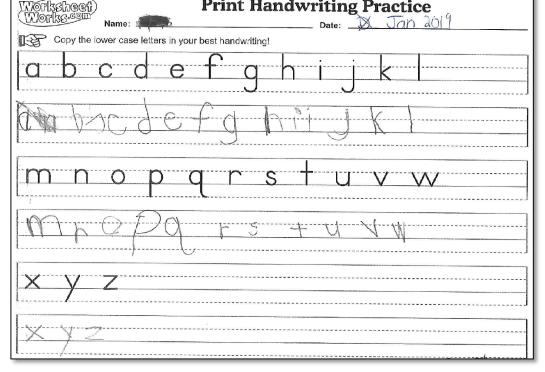
Copy the Upper Case letters in your best handwriting! ABODEFGHIJ KLMNOPQRS KLMWOPQR TUVWXYZ $T(J \cup W \times A(Z))$

AFTER

Copy the lower case letters in your best handwriting! OCCEFGHIJK MODON STUVW	Worksheet Name:	Print Handwriting Practice Date: Sept. 201
mnoppqrstuvw mhoppqrstuvw	a b c d e	e f g h i j k
mnoppqrstuvw	96000	P
	mnop	qrstuvw gnstuvw
	<u> </u>	
	<u>}</u>	







CONCLUSIONS

- Post-collaboration legibility improvements were demonstrated and most pronounced amongst all the kindergarten students. All but two first grade students demonstrated improvements.
- Collaboration with teachers to address handwriting concerns at the whole classroom and small group level reduced referrals for occupational therapy evaluations.

ACTION PLAN

- 1. Comparison of classrooms with and without co-teaching
- 2. Comparison of results between classes that use a handwriting program and classes that do not use a program
- 3. Collaboration with district to streamline the coteaching/RtI process
- 4. Institute a screening procedure for all kindergarten students within the district
- 5. Incorporation of routine meetings to further revaluate the efficacy of the intervention and adjust as needed

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- Case-Smith, J., Holland, T., Lane, A., & White, S. (2012). Effect of a co-teaching handwriting program for first graders: One-group pretest-posttest design. American Journal of Occupational Therapy, 66, 396-405. http://dx.doi.org/10.5014/ajot.2012.004333
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- 4. Zylstra, S. E., & Pfeiffer, B. (2016). Effectiveness of a handwriting intervention with at-risk kindergartners. American Journal of Occupational Therapy, 70(6), 670-678. doi:10.5014/ajot.2011