

A Formative Evaluation of MTSS at a Midwestern Elementary School

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Introduction

A formative program evaluation model for an MTSS/RTI organizational framework was initiated at a Midwestern elementary school. The program evaluation included analysis of 2.5 years of reading/writing and 1.5 years of math student outcome data. Evaluation results along with the methods of student outcome data analysis are discussed. Finally, perceived strengths, areas for improvement, relevant recommendations, and overall conclusions are presented.

Purpose

District administrative and building level support was secured to conduct a formative program evaluation of MTSS organizational framework at the elementary school. Assuming that interventions were delivered with fidelity of intensity and implementation, student outcome data in reading, writing, and mathematics are analyzed. Additionally, the effectiveness of reading, writing, and math tiered supports (i.e., 2 and 3) in closing the gap in relative academic measures across student cohorts and by specific intervention received are addressed. Furthermore, potentially differential outcomes by student ethnicity are discussed in relation to the specific intervention received. Finally, overall conclusions, including perceived strengths and recommendations for improving the school's current MTSS initiative are identified.

Methods

Total Number of Students in Intervention by Cohort	Reading/Writing
Years Covered	Fall 2017 to Fall 2019
K (17-18), 1 st (18-19), 2 nd (F-W 19)	12, 13, 16 (20 total)
1 st (17-18), 2 nd (18-19), 3 rd (F-W 19)	16, 18, 15 (25 total)
2 nd (17-18), 3 rd (18-19), 4 th (19-20)	20, 11, 11 (22 total)
3 rd (17-18), 4 th (18-19), 5 th (19-20)	11, 9, 3 (18 total)
K (18-19), 1 st (19-20)	10, 8 (10 total)
TOTAL	95

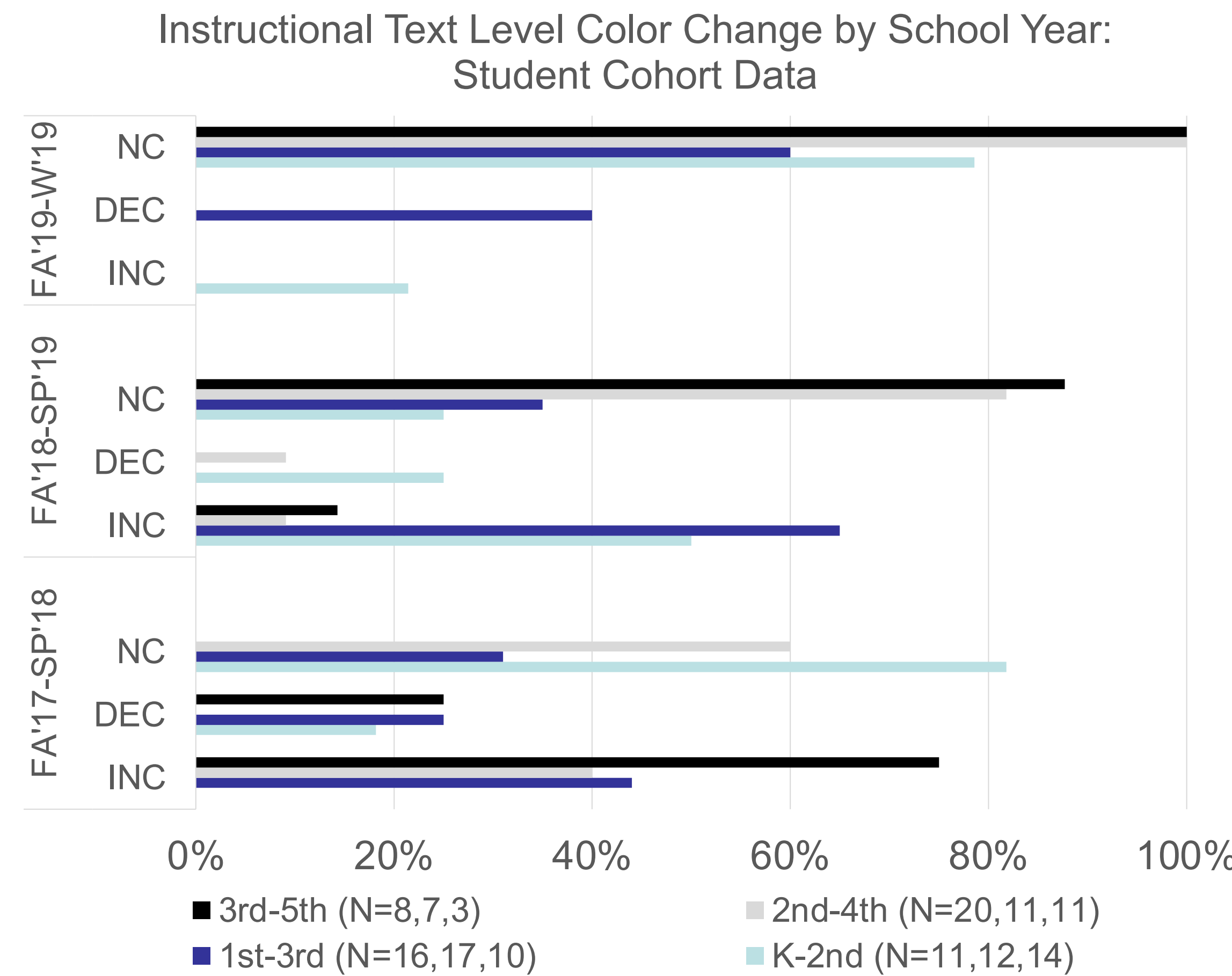
Total Number of Students in Intervention by Cohort	Math
Years Covered	Fall 2017 to Fall 2019
1 st (18-19), 2 nd (F-W 19)	14, 18 (21 total)
2 nd (18-19), 3 rd (F-W 19)	21, 12 (27 total)
3 rd (18-19), 4 th (19-20)	19, 11 (22 total)
4 th (18-19), 5 th (19-20)	8, 6 (11 total)
1 st (19-20)	7 total
TOTAL	88

*Note: no math interventions listed on data wall for 2017-2018 school year; no interventions listed for K (18-19)

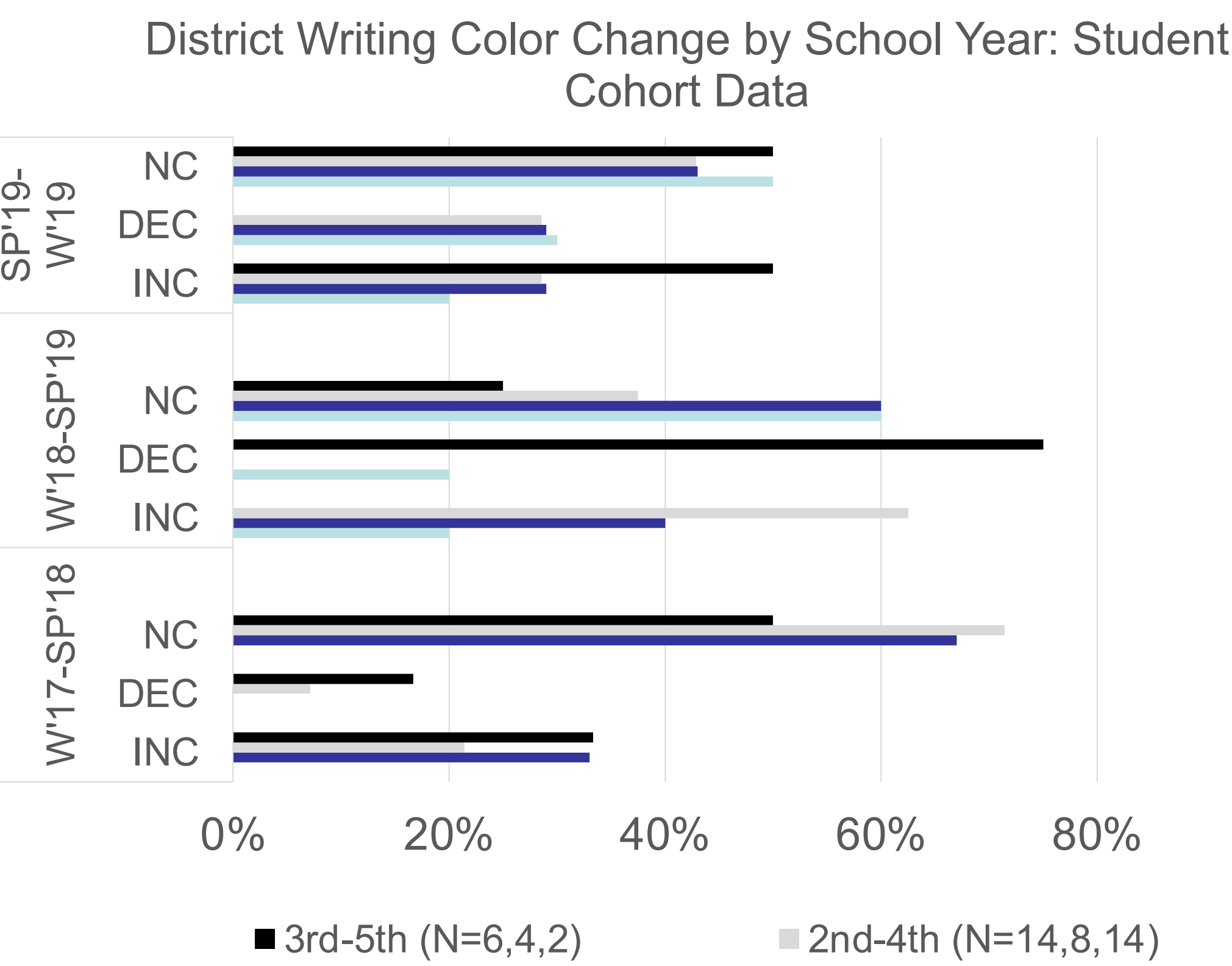
Key Stakeholders

- Principal
- Problem Solving Team (Social Worker, Interventionists, School Psychologist)

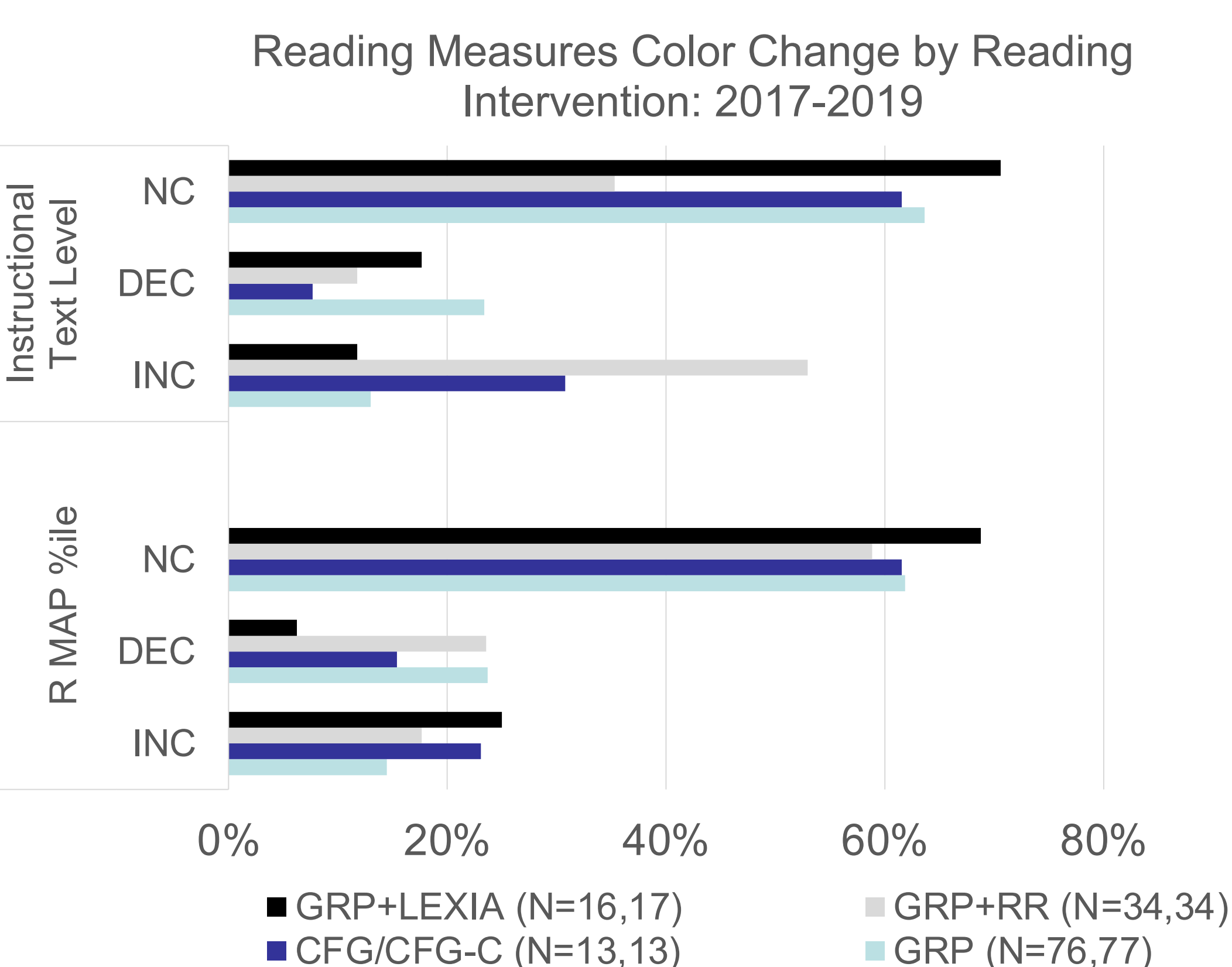
Graph 1



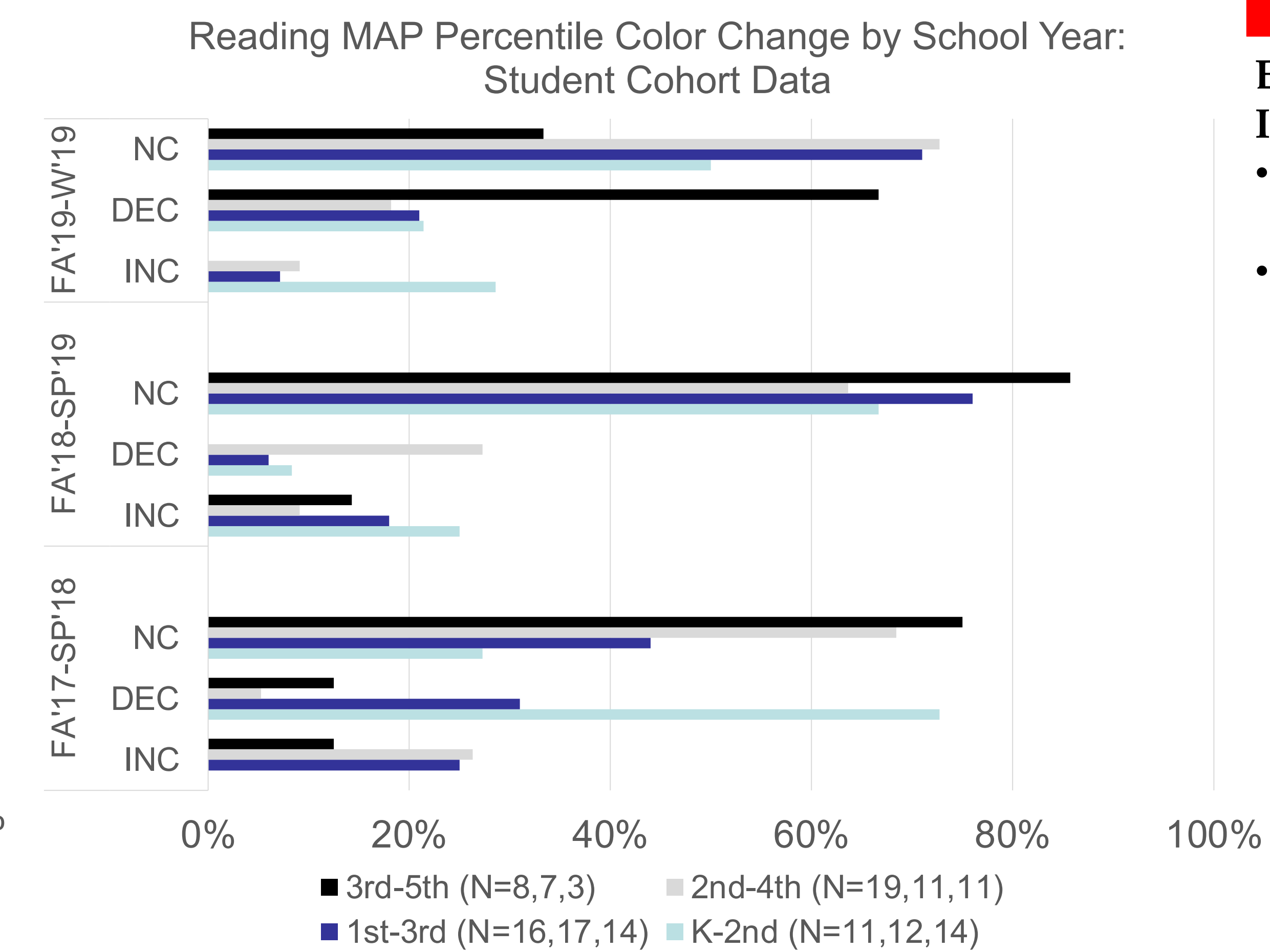
Graph 3



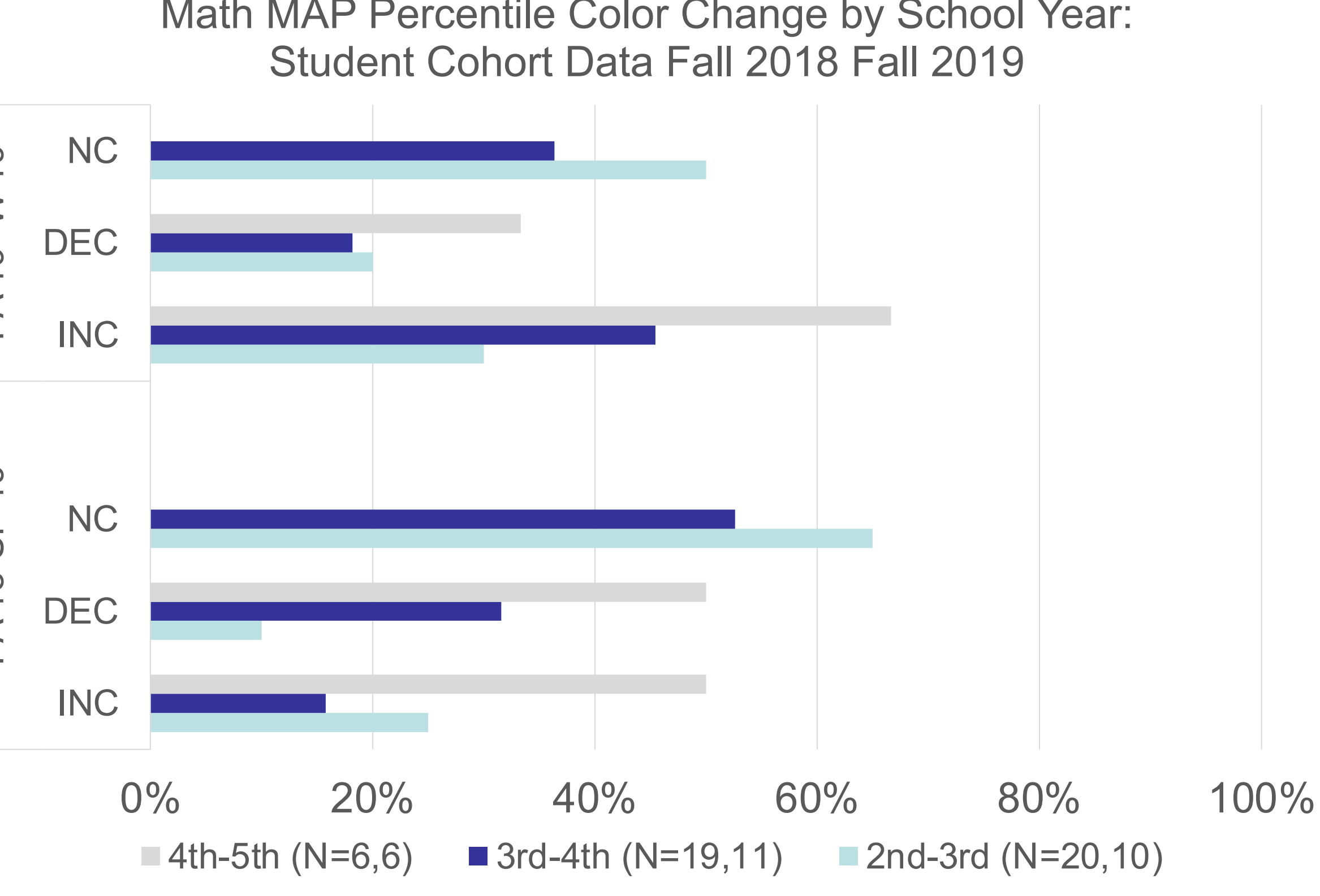
Graph 5



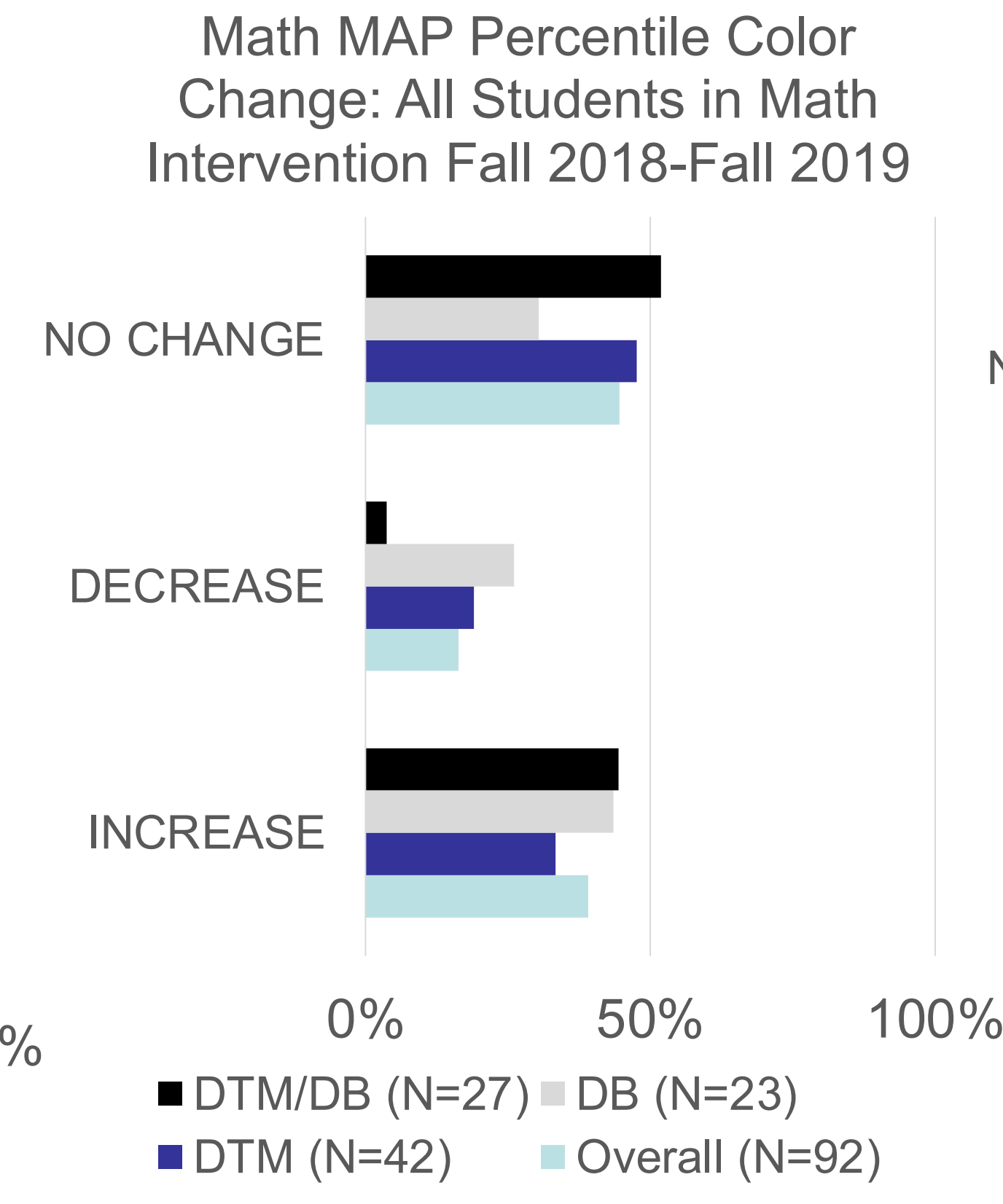
Graph 2



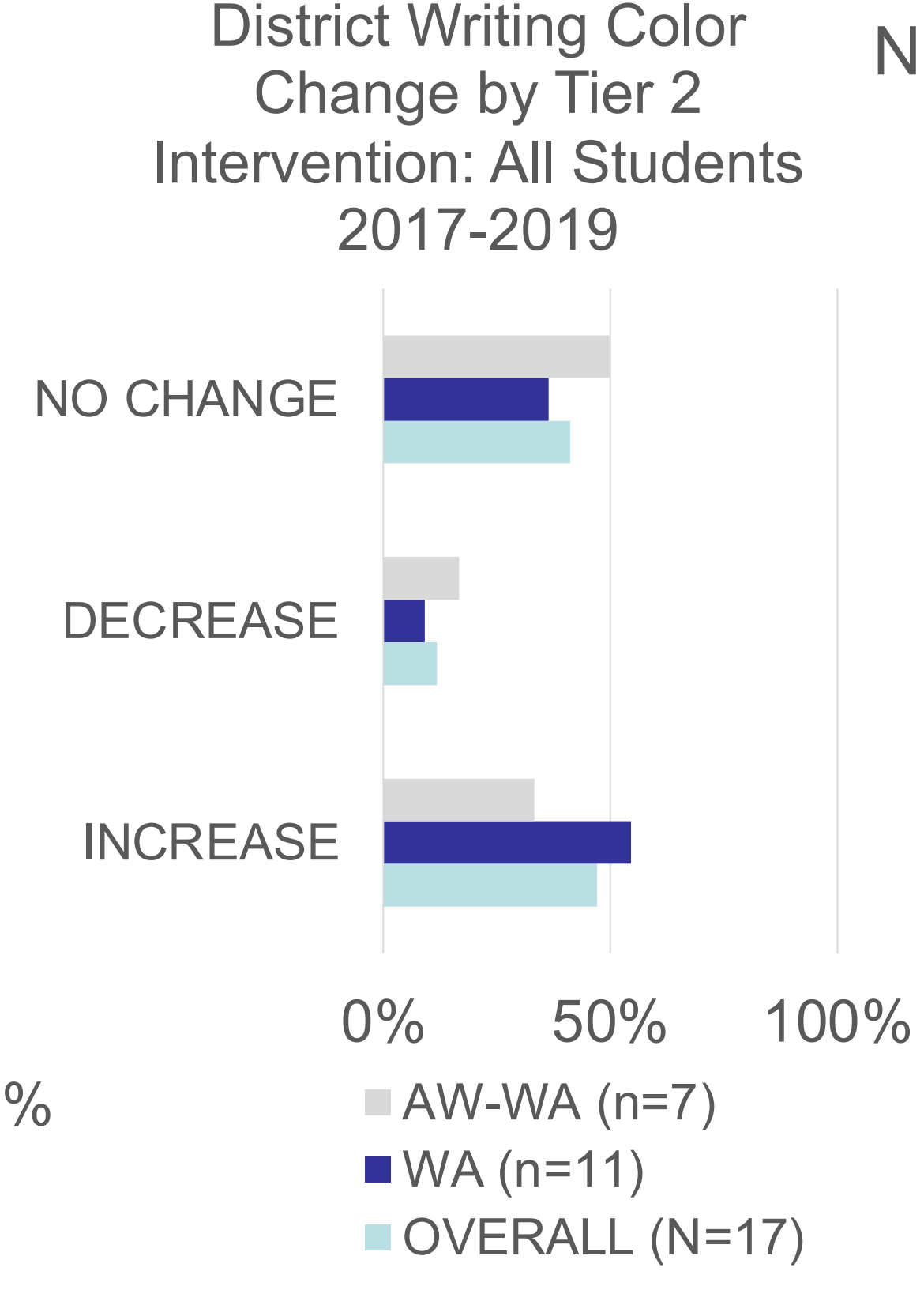
Graph 4



Graph 6



Graph 7



Results

Effectiveness of Individual Tiers by Areas of Instruction Based on Student Cohort Data

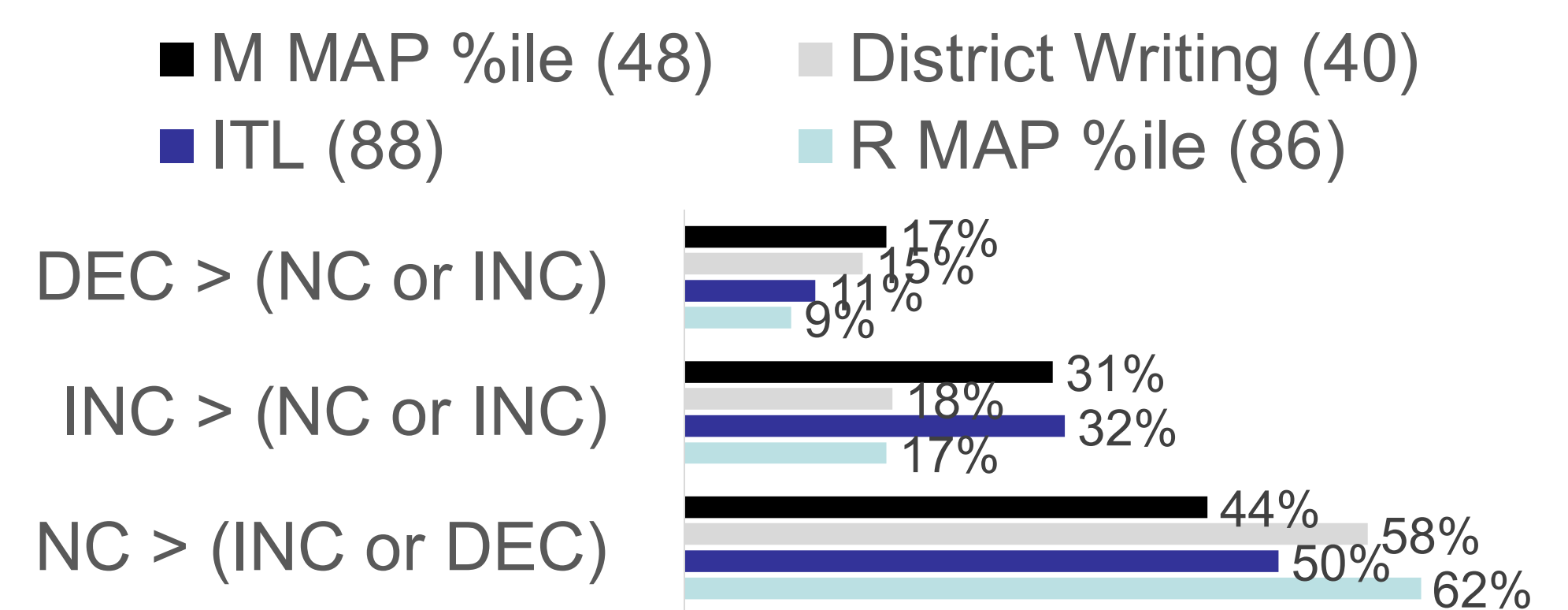
- Effectiveness of interventions at younger grade levels
- Tier 2 and 3 levels of intervention (F-S 2017-2018 and 2018-2019, F-W 2019)
 - Reading MAP %ile (Median 13% increase, 18% decrease, 67% no change)
 - Reading ITL (Median 21% increase, 0% decrease, 60% no change)
 - District Writing (Median 25% increase, 22.5% decrease, 50% no change)
 - Math MAP %ile (Median 30% increase, 32% decrease, 50% no change)

Effectiveness of Specific Tier 2 and 3 Interventions Based on Student Outcome Data

- Reading
 - Tier 3 Guided Reading Plus + Reading Recovery combined intervention for Instructional Text Level
- Writing
 - Write Aloud
- Math
 - Do the Math/DreamBox combined intervention

Conclusions/Recommendations

SUMMARY: Overall Student Outcomes - Frequency of Color Change Across Academic Areas Fall 2017 to Fall 2019



- Across academic areas: Majority of students receiving intervention from Fall 2017-Fall 2019 experience NO CHANGE in percentile/level color
- R MAP %ile: most NC, least DEC across academic measures & areas
- ITL: most INC across academic measures & areas
- M MAP %ile: most DEC across academic measures & areas
- DW: least INC across academic measures & areas
- If ITL is a valid measure of reading, it shows the greatest responsiveness to intervention
- Reading Intervention: Tier 3 GRP+RR
- Math intervention: Tier 3 DTM/DB
- Overall greater effectiveness of intervention at younger grade levels