

Kirsten J. Truman¹, Ethan R. Van Norman¹, David R. Klingbeil², Madeline C. Schmidt², Peter M. Nelson³, David C. Parker³

¹Lehigh University, Bethlehem, PA, ²University of Wisconsin-Madison, Madison, WI, ³ServeMinnesota, Minneapolis, MN

INTRODUCTION

- Relatively little is known regarding post-intervention reading fluency outcomes for English learners (ELs), yet educators must be prepared to sustain growth for all students transitioning to less intensive tiers.
- Approximately 40% of students exited from Tier 2 reading fluency interventions return to an “at-risk” level by the end of the year, despite performance above year-end benchmarks when initially dismissed (Nelson et al., 2018).
- Regression magnitude has not been examined as a function of language status, but an understanding of unique maintenance effects among ELs may better inform recommendations for exit criteria and for supporting student transitions to receiving Tier 1 support only.

Purpose & Research Questions

- **Purpose:** To investigate whether EL status moderated maintenance effects among second and third grade students following dismissal from Tier 2 reading fluency interventions.
- **RQ 1:** To what extent does language status impact reading fluency gains among at-risk students over the course of a Tier 2 intervention period?
- **RQ 2:** To what extent do between-group regression rates differ after students meet criteria for dismissal and over 12-13 weeks thereafter?

METHOD

Participants

- Extant data for 2776 participants across 2017-2018 and 2018-2019 years
- 1155 second and 1621 third grade students (~7.4—8.4% as EL group)
- Students were enrolled in 506 schools across 8 different states
- Spanish was primarily spoken at home for second (58.7%) and third grade EL students (67.1% of ELs), followed by Somali (19.1%; 12.5%).

Measures

- CBM-R: Reading fluency curriculum-based measure of achievement developed by FastBridge Learning (Christ et al., 2018)

Procedure

- Students performing below grade-level benchmarks on three CBM-R grade level fall screening passages were identified as eligible.
- Reading Corps interventionists provided 20-minute 1:1 reading fluency interventions for five days per week in English.
- Students were exited from the program when: (a) three of most recent five observations were above the goal line and (b) two of the three observations exceeded the next benchmark assessment.
- All exited students continued to be monitored weekly with CBM-R.

ANALYSIS

- Piecewise multilevel models estimated intervention growth based on EL status and the extent to which growth patterns were maintained.
- Segmented regression is an extension of typical linear regression in which an abrupt change, in this case students exiting the intervention, is modeled so that growth before and after the event is estimated (Jebb et al., 2015).
- A categorical covariate captured whether student j was (1) or was not (0) identified as currently receiving EL services.
- Intervention and post-intervention slope interactions were modeled to determine whether growth during and post-intervention was moderated by EL status.
- Analyses were completed in the computer program R (Core Team, 2021) and the lme4 package (Bates et al., 2015) was used to estimate multilevel models.

RESULTS

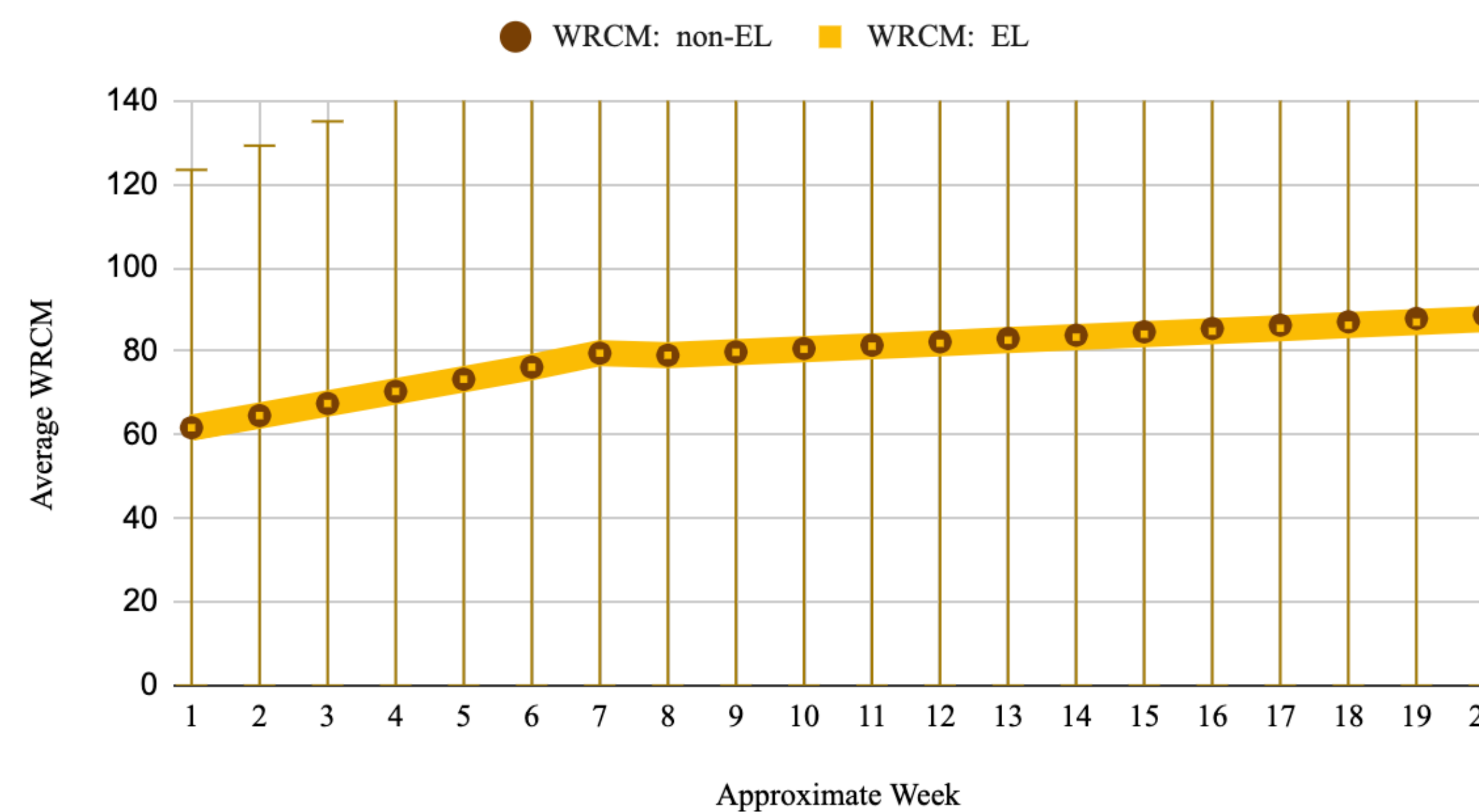
RQ #1: No significant intervention gains differences by EL status.

- Average grade two intervention ROI was 2.90 WRCM per week.
- Average grade three intervention ROI was 2.35 WRCM per week.

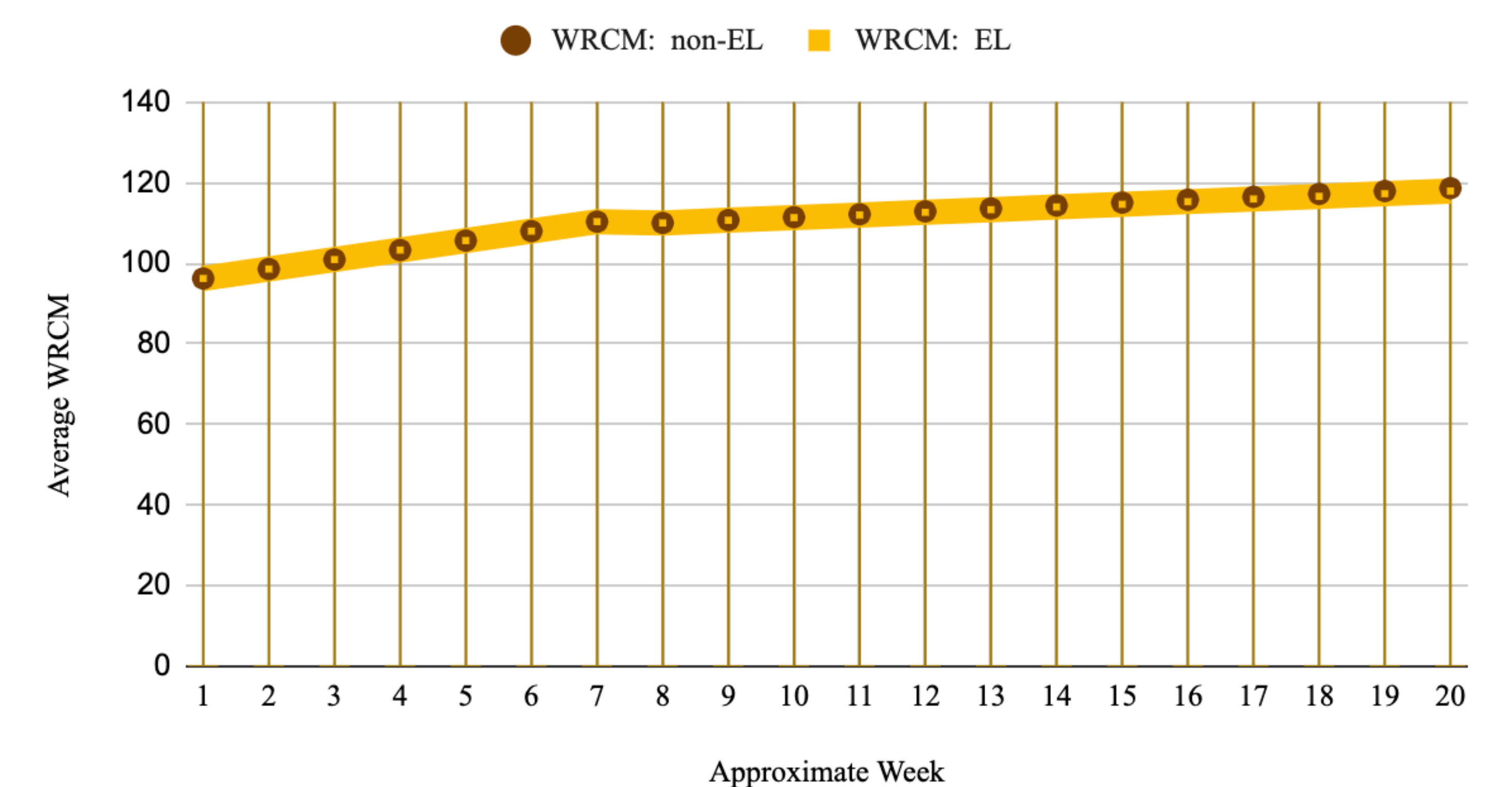
RQ #2: No significant post-intervention growth differences by EL status.

- Average grade two immediate regression was -0.49 WRCM per week and post-intervention ROI was 0.78 WRCM per week.
- Average grade three immediate regression was -0.33 WRCM per week and post-intervention ROI was 0.92 WRCM per week.

Average Second Grade Fluency Trajectory



Average Third Grade Fluency Trajectory



DISCUSSION

Benefits of Intervention Participation

- Regardless of grade level or language status, post-intervention fluency gains generally remained smaller than those observed during intervention.
- Educators might consider embedding multicomponent intervention strategies within both Tier 1 and Tier 2 instruction to assist all transitioning EL and non-EL students (e.g., oral language and vocabulary instruction).
- In addition to supporting the second language learning process, a comprehensive, multicomponent approach has been recommended to address concurrent skill deficits (e.g., word reading; word reading fluency; linguistic comprehension) observed among ELs with dyslexia risk (Miciak et al., 2022).

Limitations & Future Directions

- Although high-quality core instruction is foundational for effective MTSS, Tier 1 student experiences following dismissal may have varied considerably according to school-specific resources and protocols, as well as state-specific EL guidelines for entry and exit.
- Future studies should examine within-EL variability to disentangle short- and long-term outcomes by English proficiency level.