Memorandum

To: Cynthia McCarty, Alabama STEM Council, Executive Committee Chair
Elizabeth Mohr, Alabama STEM Council, STEM Operations Manager

From: Human Resources Research Organization (HumRRO)

CC: Rene McNeal, Alabama STEM Council, Ecosystems Coordinator

Date: October 30, 2025

Re: ANA Evaluation Quarterly Memo

The purpose of this quarterly memo is to provide a status of HumRRO's Alabama Numeracy Act (ANA) evaluation. HumRRO completed Year 3 of its contract on September 30, 2025. The information presented in this memo covers activities completed from July through September 2025.

Status of Activities

Outcome Evaluation

HumRRO received SY2024–25 outcome data from ALSDE on September 17, 2025. After initial review of the data, we noted discrepancies in some schools' full- or limited-support (FS/LS) status designation between the outcome files provided by the Alabama State Department of Education (ALSDE) and a list of designated schools provided by the Office of Mathematics Improvement (OMI). For the evaluation, we were instructed to treat the OMI-provided list as the "designation of record." This allows us to assign schools for our studies and to conduct the planned analyses; however, we find it concerning that these discrepancies exist. There were 62 schools with mismatching designations between the two files, five of which were identified as FS schools in the ALSDE files but not designated at all in the OMI files. School designations should be consistent among Alabama's education agencies. Ideally, they should be made public on the agency's website.

Alabama Multi-Tiered System of Supports (AL-MTSS) Study

The AL-MTSS study examines the extent to which (a) the Alabama Framework for MTSS is being implemented in grades K–5 and (b) ratings of MTSS implementation within schools relate to the distribution of students within tiered placements. We completed the following study activities July through September:

- Conducted preliminary analyses of annual survey data and records of MTSS training, monitoring, and select schools' responses to American Institutes for Research (AIR) needs assessment.
- Worked with OMI staff to secure tiered placement data from PowerSchools and prepared data for linking with student outcomes data.
- Planned for new data collection activities to address gaps in available MTSS implementation data, including developing protocols for targeted interviews with select FS/LS school leadership teams.

Comparison Study

The overall ANA evaluation includes a quasi-experimental design study to assess the impact that math coaches have on student math performance in FS/LS schools. We completed the following study activities July through September:

- Began cleaning SY2024–25 data (e.g., student assessment data, school designations, school demographic characteristics, coaching data) to explore feasibility and options for using these data to conduct a comparison study.

Cost Effectiveness Analysis Study

The cost effectiveness analysis study examines the overall costs and actual or anticipated financial benefits of the ANA. We completed the following study activities July through September:

- Collected and reviewed information about key ANA cost drivers, including funds allocated to each SY2024–25 budget category.
- Analyzed annual survey data describing use and frequency of local ANA implementation-related funds.

Math Coach Study

The math coach study examines the extent to which evaluations of math coaches by principals and regional coordinators in FS/LS schools relate to differences in math achievement. We completed the following study activities July through September:

- Informed by OMI that SY2023–24 coaching academy proficiency ratings cannot be provided to HumRRO; thus, the math coach study will begin with SY2024–25 data.
- Worked with OMI staff to finalize a datafile containing SY2024–25 school assignments and coaching academy proficiency ratings for all 443 assigned coaches.

Screening Assessments Study

The screening assessments study examines the extent to which required screening assessments identify students who are subsequently identified as needing tiered services and/or receive a diagnosis relating to a math deficiency. We completed the following study activities July through September:

- Began cleaning SY2024–25 data (e.g., student screening assessment data, school designations, student deficiency flags, student MTSS intervention data) to conduct analyses for the screening assessment study.

Stakeholder Awareness & Satisfaction Study

The awareness and satisfaction study examines the extent to which stakeholders are aware of and satisfied with ANA implementation. We completed the following study activities July through September:

- Worked on narrative description of study findings based on triangulation of information gathered from the annual survey and focus group sessions.

Teacher Knowledge and Pedagogy Study

The teacher knowledge and pedagogy study examines the (a) status and gains in math knowledge and skills of K–5 teachers and (b) extent to which ratings and gains in math knowledge and skills of K–5 teachers within FS/LS schools account for differences in student performance on formative and summative math assessments. We administered the Mathematics for Teaching Tool (MTT)[1], a validated measure of teachers' math knowledge for teaching, in fall 2024 to all K–5 teachers in all FS/LS schools. Using the MTT 10-point scale, principals rated the proficiency of their teachers' math knowledge and pedagogical skills (with higher number indicating higher proficiency). We completed the following study activities July through September:

- Conducted preliminary analyses of annual survey data and fall 2024 MTT data.
- Programmed and administered fall 2025 MTT to K–5 teachers in FS/LS schools.

Unintended Consequences Study

The unintended consequences study examines the positive and negative outcomes that emerge from schools, LEAs, ALSDE, and other stakeholder groups that were not anticipated as a result of implementing the ANA. We completed the following study activities July through September:

- Worked on narrative description of study findings based on triangulation of information gathered from the annual survey and focus group sessions.

Remaining FY2025 Evaluation Activities

Attachment A presents the Year 3 general, process, and outcome evaluation activities and Attachment B presents the Year 3 supplemental studies activities that we completed, cannot complete, and will be completed October through December 2025.

[1] Ball, D. L., Thames, M. H., & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of Teacher Education*, *59*(5), 389-407. Content Knowledge for Teaching: What Makes It Special?

Attachment A: Year 3 General, Process, and Outcome ANA Evaluation Activities[2]

Year 3 Timing	General Evaluation Activities	Process Evaluation Activities[3]	Outcome Evaluation Activities[4]
Oct – Dec 2024 **COMPLETED**	Weekly meetings with OMI/ALSDE Biweekly supplemental study meetings with OMI/ALSDE Monthly meetings with STEM Council Executive Director Monthly HumRRO-Mathematica team meetings Refine/Update ANA evaluation data tracking system Prepare Year 2 annual report (Oct 2023–Sept 2024)	Work with OMI/ALSDE to coordinate in-person fall 2024 site visits (SVs) to a total of six FS and LS schools; conduct in-person SVs Analyze in-person fall 2024 fall SV data overall and by school type and/or stakeholder type Prepare description of fall 2024 in-person SV findings (narrative, tables) Refine Year 3 annual survey to measure quality/effectiveness of ANA implementation processes and activities; survey to include parallel versions for specific stakeholder groups (regional coordinators, district staff, principals [FS and LS schools], math coaches, math teachers) Work with OMI/ALSDE to whitelist Year 3 annual survey URL in FS and LS schools	Establish outcome evaluation data metrics Complete cleaning and merging SY2022–23 student, teacher, and school datasets Conduct baseline analysis of SY2022–23 outcome data, separately by metric as appropriate Prepare description of SY2022–23 baseline outcome findings (narrative and tables) Clean and merge SY2023–24 student, teacher, and school outcome datasets; review quality of data for meeting assumptions of proposed analyses (e.g., normality, linearity) Conduct analyses of SY2023–24 outcome data, separately by metric as appropriate

[2] Shaded text indicates completed activities.
[3] The fall 2025 in-person site visits are part of Year 4 but planning for them and preparing materials were to begin in Year 3. Because Year 4 funding was delayed, the team was unable to complete these activities before September 30, 2025. These activities will be completed once HumRRO receives Year 4 funding.
[4] HumRRO did not receive the SY2024–25 outcome data until September 17, 2025; cleaning/merging and analysis of the SY2024–25 outcome data and reporting findings will be completed October through December 2025.

Year 3 Timing	General Evaluation Activities	Process Evaluation Activities[3]	Outcome Evaluation Activities[4]
Jan – Mar 2025 **COMPLETED**	Weekly meetings with OMI/ALSDE Biweekly supplemental study meetings with OMI/ALSDE Monthly meetings with STEM Council Executive Director Monthly HumRRO-Mathematica team meetings Submit/Disseminate Year 2 annual report (Oct 2023–Sept 2024) Refine/Update ANA evaluation data tracking system	Administer Year 3 annual survey to stakeholders (regional coordinators, district staff, principals [FS and LS], math coaches, math teachers) Refine protocols for spring 2025 virtual focus groups (FGs) with stakeholder groups (regional coordinators, district staff, principals [FS and LS], math coaches, math teachers); sessions will elaborate on and/or clarify survey findings Conduct spring 2025 virtual FGs (regional coordinators, district staff, math coaches)	Compare SY2022–23 and SY2023–24 outcome findings to establish potential trends
Apr – Jun 2025 **COMPLETED**	Weekly meetings with OMI/ALSDE Biweekly supplemental study meetings with OMI/ALSDE Monthly meetings with STEM Council Executive Director Monthly HumRRO-Mathematica team meetings Refine/Update ANA evaluation data tracking system Prepare/Submit April 2025 quarterly memo	Clean annual survey data Analyze Year 3 annual survey data overall and separately by stakeholder type Prepare description of Year 3 survey findings (narrative, tables) Analyze spring 2025 regional coordinator, district staff, and math coach virtual FG data separately by stakeholder type Prepare description of regional coordinator, district staff, and math coach spring 2025 FG findings (narrative, tables) Conduct spring 2025 virtual FGs (principals [FS and LS], math teachers)	Prepare description of SY2023–24 outcome findings (narrative and data visualization/tables); include SY2022–23 and SY2023–24 trends as appropriate Identify procedures for receipt of SY2024–25 outcome data

Year 3 Timing	General Evaluation Activities	Process Evaluation Activities[3]	Outcome Evaluation Activities[4]
July – Sept 2025 **PARTIALLY COMPLETED**	Prepare/Submit July 2025 quarterly memo Weekly meetings with OMI/ALSDE Biweekly supplemental study meetings with OMI/ALSDE Monthly meetings with STEM Council Executive Director Monthly HumRRO-Mathematica team meetings Refine/Update ANA evaluation data tracking system	Analyze spring 2025 principal and math teacher virtual FG data separately by stakeholder group Prepare description of principal and math teacher spring 2025 virtual FG findings (narrative, tables) Refine protocols for fall 2025 in-person SVs Identify sample of schools in which to conduct fall 2025 in-person SVs (3 FS and 3 LS schools) Coordinate with OMI/selected school staff to determine procedures for conducting fall 2025 in-person SVs Conduct fall 2025 in-person SVs at identified sample of FS and LS schools	Work with ALSDE to receive SY2024–25 outcome data Clean and merge SY2024–25 student, teacher, and school outcome datasets Conduct analyses of SY2024–25 outcome data, separately by metric as appropriate Prepare description of SY2024–25 outcome findings (narrative and data visualization/tables); include trends across years as appropriate

Appendix B: Year 3 Planned ANA Supplemental Studies Activities[5]

Year 3 Timing	Math Coach Evaluation and Student Math Achievement[6]	MTSS and Student Math Achievement[7]	Teacher Math Pedagogy and Student Math Achievement[8]
Oct – Dec 2024 **COMPLETED**	Work with OMI/ALSDE to receive math coach info for full- and limited support schools (SY2023–24 and SY2024–25 status; number of math coaches each school had SY2022–23, SY2023–24, and SY2024–25; school's math coach funding source; math coach level of training/tier assigned; math coaches' other relevant professional learning) Work with OMI/ALSDE to receive SY2023–24 math coach performance data (performance ratings by principals and regional coordinators) Work with OMI/ALSDE to receive SY2023–24 math teacher performance data (performance ratings by principals and math coaches)	Work with OMI/ALSDE to receive AL-MTSS full-alignment status data and AIR MTSS Fidelity of Implementation rubric scores (SY2022-23; SY2023-24); determine SY2024-25 data availability Coordinate with OMI and regional coordinators to determine frequency and collect aggregate school-level scores on the depth of Tier 1, Tier 2, and Tier 3 instruction (SY2024–25) Work with OMI/ALSDE to receive school-level data on applicable MTSS tiered interventions and supports (SY2024–25) Finalize MTSS implementation questions and discuss with school leadership during fall 2024 in-person site visits (SVs) Analyze fall 2024 in-person SV MTSS implementation data	Finalize teacher math content/pedagogy knowledge questions and discuss with school leadership during fall 2024 in-person SVs Analyze teacher math content/pedagogy knowledge fall 2024 in-person SV data Implement validated teacher self-assessment of math pedagogical and domain specific content knowledge in FS and LS schools (SY2024–25) Draft and finalize teacher math content/pedagogy knowledge questions for Year 3 annual survey

[5] Shaded text indicates completed activities.
[6] HumRRO requested that ALSDE/OMI share math coach and math teacher performance data to complete these study activities. ALSDE/OMI provided SY2024–25 math coach data, but they did not systematically collect these data in SY2023–24. The SY2024–25 data were not received until September 17, 2025, so associated analyses of the SY2024–25 student achievement data and math coach performance data, and reporting findings will be completed October through December 2025. ALSDE/OMI indicated they will not provide math teacher performance data, so HumRRO cannot complete these study activities (which appear in light gray text).
[7] HumRRO did not receive the SY2024–25 outcome data until September 17, 2025; associated analyses of the SY2024–25 student achievement data and AL-MTSS/AIR data, and reporting findings will be completed October through December 2025.
[8] HumRRO requested that ALSDE/OMI share Alabama Teacher Observation Tool (ATOT) data (Essential and Learning dimensions); however, ALSDE/OMI indicated they will not provide these data, so HumRRO cannot complete these study activities (which appear in light gray text).

Year 3 Timing	Math Coach Evaluation and Student Math Achievement[6]	MTSS and Student Math Achievement[7]	Teacher Math Pedagogy and Student Math Achievement[8]
		Draft and finalize MTSS implementation questions for Year 3 annual survey	
Jan – Mar 2025 **PARTIALLY COMPLETED**	Clean math coach performance data and merge with student achievement data (SY2023–24) Clean math teacher performance data and merge with student achievement data (SY2023–24) Analyze math coach performance and student math achievement data (SY2023–24) Analyze math teacher performance and student math achievement data (SY2023–24)	Clean full-alignment AL-MTSS/AIR needs assessment/tiered instruction implementation data (SY2022–23 and SY2023–24); merge with student achievement data (SY2022–23 and SY2023–24) Analyze full-alignment AL-MTSS/AIR needs assessment/tiered instruction implementation and student achievement data (SY2022–23 and SY2023–24)[9]	Clean teacher math content/pedagogy knowledge self-assessment data (SY2024–25); merge with student math achievement data Analyze teacher math content/pedagogy knowledge Year 3 survey data (SY2024–25)
Apr – Jun 2025 **PARTIALLY COMPLETED**	Prepare description of math coach performance and student math achievement findings (SY2023–24; narrative and tables) Prepare description of math teacher performance and student math achievement findings (SY2023–24; narrative and tables)	Prepare description of full-alignment AL-MTSS/AIR needs assessment/tiered instruction implementation and student achievement findings (SY2022–23 and SY2023–24; narrative and tables)	Work with OMI/ALSDE to receive SY2024–25 Alabama Teacher Observation Tool (ATOT) learning and essential dimensions subscale data Prepare description of teacher math content/pedagogy knowledge survey (SY2024–25; narrative and tables) Prepare description of teacher math content/pedagogy knowledge self-assessment findings (SY2024–25) Clean ATOT learning and essential dimensions subscale data (SY2024–25)

[9] Final analysis will differ from stated steps due to unavailability of some previously expected MTSS data.

Year 3 Timing	Math Coach Evaluation and Student Math Achievement[6]	MTSS and Student Math Achievement[7]	Teacher Math Pedagogy and Student Math Achievement[8]
July – Sept 2025 **PARTIALLY COMPLETED**	Work with OMI/ALSDE to receive math coach performance data (SY2024–25) Clean math coach performance data (SY2024–25); merge with student achievement data (SY2024–25) Analyze math coach performance and student math achievement data (SY2024–25) Prepare description of math coach performance and student math achievement findings (SY2024–25; narrative and tables) Work with OMI/ALSDE to receive math teacher performance data (SY2024–25) Clean math teacher performance data (SY2024–25); merge with student math achievement data (SY2024–25) Analyze math teacher performance and student math achievement data (SY2024–25) Prepare description of math teacher performance and student math achievement findings (SY2024–25; narrative and tables)	Clean full-alignment AL-MTSS/AIR needs assessment/tiered instruction implementation data (SY2024–25); merge with student achievement data (SY2024–25) Analyze full-alignment AL-MTSS/AIR needs assessment/tiered instruction and student achievement data (SY2024–25) Triangulate findings from AL-MTSS/AIR needs assessment/tiered instruction, Year 3 annual survey, and student achievement data, as appropriate Prepare description of full-alignment AL-MTSS/AIR needs assessment/tiered instruction and student achievement separate and triangulated findings as appropriate (SY2024–25; narrative and tables)	Merge ATOT learning and essential dimensions data with student math achievement data (SY2024–25); analyze Prepare description of ATOT learning and essential dimensions and student math achievement findings (SY2024–25; narrative and tables) Triangulate teacher math content/pedagogy knowledge (survey and self-assessment), Year 3 annual survey, and student math achievement findings, as appropriate[10] Prepare description of teacher math content/pedagogy knowledge (survey and self-assessment), Year 3 annual survey, and student math achievement triangulated findings (SY2024–25; narrative and tables)[11]

[10] Triangulation of the findings is only partially complete due to delay in receipt of SY2024–25 outcome data; these activities will be completed October through December 2025.
[11] Describing the findings is only partially complete due to delay in receipt of SY2024–25 outcome data; these activities will be completed October through December 2025

Year 3 Timing	Effectiveness of Screening Assessments[12]	Unintended Consequences of the ANA	Stakeholder Awareness and Satisfaction
Oct – Dec 2024 **COMPLETED**	Work with OMI/ALSDE to receive list of district-approved SY2023–24 screening and diagnostic assessments Work with OMI/ALSDE to receive SY2023–24 student (a) screening and diagnostic assessment data and (b) tiered services or math-related diagnosis classifications[13]	Discuss unintended consequences questions with parents during fall 2024 in-person SVs Analyze fall 2024 in-person SV parent data; prepare findings narrative and tables Draft and finalize unintended consequences questions for Year 3 annual survey	Discuss awareness and satisfaction questions with parents during fall 2024 in-person SVs Analyze fall 2024 in-person SV parent data; prepare findings narrative and tables Draft and finalize stakeholder awareness and satisfaction questions for Year 3 annual survey
Jan – Mar 2025 **COMPLETED**	Calculate classification rates, sensitivity, and specificity of required assessments Draft and finalize screening/diagnostic assessment questions for Year 3 annual survey Draft and finalize screening/diagnostic assessment questions for spring 2025 virtual FGs (regional coordinator, district staff, principal, math coach, math teacher) Discuss screening/diagnostic assessment questions during spring 2025 virtual FGs (regional coordinator, district staff, math coach)	Draft and finalize unintended consequences questions for spring 2025 virtual FGs (regional coordinator, district staff, principal, math coach, math teacher) Discuss unintended consequences questions during spring 2025 virtual FGs (regional coordinator, district staff, math coach)	Draft and finalize stakeholder awareness and satisfaction questions for spring 2025 virtual FGs (regional coordinator, district staff, principal, math coach, math teacher) Discuss stakeholder awareness and satisfaction questions during spring 2025 virtual FGs (regional coordinator, district staff, math coach)

[12] HumRRO did not receive the SY2024–25 outcome data until September 17, 2025, so analyses, triangulation, and describing findings will be completed October through December 2025; however, final analysis may differ from stated steps due to unavailability of some previously expected student screening assessment data.

[13] For the SY2023-24 data, we received district name, test name, overall beginning-of-year (BOY) and middle-of-year (MOY) formative assessment scores and an early numeracy deficiency flag for all students. We did not receive student scores on the screening assessments. ALSDE/OMI informed HumRRO that screening assessment scores are not available for SY2023–24.

Year 3 Timing	Effectiveness of Screening Assessments[12]	Unintended Consequences of the ANA	Stakeholder Awareness and Satisfaction
Apr – Jun 2025 **COMPLETED**	Conduct preliminary test of assessment classification accuracy Clean screening/diagnostic assessment Year 3 annual survey data Analyze Year 3 annual survey screening/diagnostic assessment data Discuss screening/diagnostic assessment questions during spring 2025 virtual FGs (principal and math teacher)	Clean unintended consequences Year 3 annual survey data Analyze Year 3 annual survey unintended consequences data Discuss unintended consequences questions during spring 2025 virtual FGs (principal and math teacher)	Clean stakeholder awareness and satisfaction Year 3 annual survey data Analyze Year 3 annual survey awareness and satisfaction data Discuss stakeholder awareness and satisfaction questions during spring 2025 virtual FGs (principal and math teacher)
July – Sept 2025 **COMPLETED**	Analyze screening/diagnostic assessment Year 3 spring 2025 virtual FG data by stakeholder type Triangulate Year 3 annual survey and spring 2025 virtual FG screening/ diagnostic assessment data, as appropriate Prepare description of screening/diagnostic assessment findings (narrative and tables)	Analyze unintended consequences Year 3 spring 2025 virtual FG data by stakeholder type Triangulate Year 3 annual survey and spring 2025 virtual FG unintended consequences data, as appropriate Prepare description of unintended consequences findings (narrative and tables)	Analyze awareness and satisfaction Year 3 spring 2025 virtual FG data by stakeholder type Triangulate Year 3 annual survey and spring 2025 virtual FG awareness and satisfaction data, as appropriate Prepare description of stakeholder awareness and satisfaction findings (narrative and tables)

Year 3 Timing	Comparison[14]	Cost Effectiveness Analysis
Oct – Dec 2024 **COMPLETED**	Work with ALSDE/OMI to receive outstanding SY2023–24 school math coach and individual math coach performance data Clean SY2023–24 math coach data Conduct preliminary analysis of SY2023–24 school math coach and individual math coach data; if sufficient comparison schools, develop plans for retrospective quasi-experimental design (QED) study	Obtain ANA cost data from public sources; verify accuracy with OMI/ALSDE Work with OMI/ALSDE to receive non-public ANA cost data (SY2022–23, SY2023–24, and SY2024–25) Discuss ANA cost questions with school leaders during fall 2024 in-person SVs Draft and finalize ANA cost questions for Year 3 annual survey
Jan – Mar 2025 **COMPLETED**	Identify SY2023–24 final treatment and comparison schools for QED Conduct SY2023–24 impact analysis	Clean ANA cost data obtained from public and non-public sources and school leaders during fall 2024 in-person SVs Clean/Analyze ANA cost Year 3 annual survey data Draft and finalize ANA cost questions for spring 2025 virtual FGs
Apr – Jun 2025 **COMPLETED**	Prepare description of SY2023–24 comparison coach study findings (narrative and tables) Work with ALSDE/OMI to receive outstanding SY2024–25 school math coach and individual math coach performance data Clean SY2024–25 school math coach and individual math coach performance data	Discuss ANA cost questions during spring 2025 virtual FGs (regional coordinator, district staff, and math coach as appropriate); discussed with OMI/ALSDE instead Analyze Year 3 annual survey ANA cost data

[14] HumRRO requested that ALSDE/OMI share SY2023-24 and SY2024–25 math coach performance data to complete this study. ALSDE/OMI provided SY2024–25 math coach performance data; however, because these data were not systematically collected, they cannot provide these data for SY2023–24. The SY2024–25 student performance data were not received until September 17, 2025, so associated analyses of the SY2024–25 student achievement data and math coach performance data, and reporting findings will be completed October through December 2025.

Year 3 Timing	Comparison[14]	Cost Effectiveness Analysis
July – Sept 2025 **PARTIALLY COMPLETED**	Conduct preliminary analysis of SY2024–25 school math coach and individual math coach data; if sufficient comparison schools, proceed with plans for retrospective QED study Identify SY2024–25 final treatment and comparison schools for QED Conduct SY2024–25 impact analysis Prepare description of SY2024–25 comparison coach study findings (narrative and tables)	Obtain updated ANA cost data from public sources; verify accuracy with OMI/ALSDE Triangulate public and non-public source, fall 2024 in-person SV, Year 3 survey, and spring 2025 virtual FG findings Prepare description of ANA cost findings by year and overall (SY2022–23, SY2023–24, and SY2024–25; narrative and tables)