FFY 2019 Indicator B-17/C-11 Annual Performance Report (APR) Optional Template

Section A: Data Analysis

What is the State-identified Measurable Result (SiMR). (Please limit your response to 785 characters).

The Maine Department of Education (Maine DOE) has chosen, as its SSIP, implementation of evidence-based professional development in the teaching of mathematics to improve the math proficiency of students with disabilities. This initiative has been named Math4ME ("Math for Maine"). The State-Identified Measurable Result (SIMR) is as follows: Students in grades 3–8 with Individualized Education Programs (IEPs) will demonstrate improved math proficiency as measured by math scores on the statewide Maine Educational Assessment (MEA) in the schools in which teachers receive Math4ME professional development. Maine reports proficiency as follows: Percent = number of grade 3–8 students with IEPs in the identified schools who

Has the SiMR changed since the last SSIP submission?

No

If "Yes", provide an explanation for the change(s), including the role of stakeholders in decision-making. (Please limit your response to 1600 characters without space).

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Progress toward the SiMR

Please provide the data for the specific FFY listed below (expressed as actual number and percentages).

Baseline Data: 33/219 (15.07%)

Has the SiMR target changed since the last SSIP submission? No

FFY 2018 Target: 17.00%   **FFY 2019 Target**: 17.00%

FFY 2018 Data: 86/868 (9.91%)   **FFY 2019 Data:** NA

Was the State's FFY 2019 Target Met? No

Did slippage[1] occur? No

If applicable, describe the reasons for slippage. (Please limit your response to 1600 characters without space).

Maine received federal approval for a waiver of statewide assessment administration for 2019-20 due to COVID-19 concerns. Therefore, slippage of the SIMR could not be evaluated.

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[1] The definition of slippage: *A worsening from the previous data AND a failure to meet the target.* The worsening also needs to meet certain thresholds to be considered slippage:
1. For a "large" percentage (10% or above), it is considered slippage if the worsening is more than 1.0 percentage point. For example:
   a. It is not slippage if the FFY 2019 data for Indicator X are 32% and the FFY 2018 data were 32.9%.
   b. It is slippage if the FFY 2019 data for Indicator X are 32% and the FFY 2018 data were 33.1%.
2. For a "small" percentage (less than 10%), it is considered slippage if the worsening is more than 0.1 percentage point. For example:
   a. It is not slippage if the FFY 2019 data for Indicator Y are 5.1% and the FFY 2018 data were 5%.
   b. It is slippage if the FFY 2019 data for Indicator Y are 5.1% and the FFY 2018 data were 4.9%.

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Optional: Has the State collected additional data *(i.e., benchmark, CQI, survey)* **that demonstrates progress toward the SiMR?**   No

If "Yes", describe any additional data collected by the State to assess progress toward the SiMR.
(Please limit your response to 1600 characters without space)*.*

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Did the State identify any data quality concerns, unrelated to COVID-19, that affected progress toward the SiMR during the reporting period? No

If "Yes", describe any data quality issues specific to the SiMR data and include actions taken to address data quality concerns. (Please limit your response to 3000 characters without space).

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Did the State identify any data quality concerns directly related to the COVID-19 pandemic during the reporting period?   Yes

If data for this reporting period were impacted specifically by COVID-19, the State must include in the narrative for the indicator: (1) the impact on data completeness, validity and reliability for the indicator; (2) an explanation of how COVID-19 specifically impacted the State's ability to collect the data for the indicator; and (3) any steps the State took to mitigate the impact of COVID-19 on the data collection. (Please limit your response to 3000 characters without space).

Maine received federal approval for a waiver of statewide assessment administration for 2019-20 due to COVID-19 concerns. Therefore, Maine was unable to evaluate the SIMR for FFY2019. Maine was unable to mitigate the impact of COVID-19 on the collection of statewide assessment data.

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Section B: Phase III Implementation, Analysis and Evaluation

Is the State's theory of action new or revised since the previous submission?   No

If "Yes", please provide a description of the changes and updates to the theory of action
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Did the State implement any <u>new</u> (previously or newly identified) infrastructure improvement strategies during the reporting period? No

If "Yes", describe each <u>new</u> (previously or newly identified) infrastructure improvement strategy and the short-term or intermediate outcomes achieved. (Please limit your response to 1600 characters without space).

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Provide a summary of each infrastructure improvement strategy that the State <u>continued</u> to implement in the reporting period, including the short-term or intermediate outcomes achieved. (Please limit your response to 3000 characters without space).

Maine Education Policy Research Institute (MEPRI):
Maine DOE has maintained its contract with MEPRI to serve as the external evaluator of the SSIP. MEPRI is a University-of-Maine-based research center with two decades of experience providing research, program evaluation, and policy analysis to Maine schools, government and community agencies, and the Maine State Legislature. Based on this long relationship, MEPRI personnel have detailed knowledge of Maine's educational data and initiatives. The SSIP evaluation continues to be coordinated by Janet Fairman, Ph.D., an Associate Research Professor of Education at the University of Maine, and Craig Mason, Ph.D. a Professor of Education and Applied Quantitative Methods at the University of Maine. Based on the combined expertise of MEPRI researchers to conduct and communicate quantitative analyses, including value-added and growth models, qualitative methods, and survey design, their continued involvement significantly benefits the Math4ME initiative.

Maine DOE Math Specialist/Math4ME Trainer:
Jennifer Robitaille, the Maine DOE Math Specialist, led the 2020-2021 Math4ME trainings. Due to the COVID-19 pandemic, all Math4ME trainings continued but were transformed into remote, synchronous and interactive sessions. Nancy Lander co-led the training for all cohorts and continues to support LEA coaches and coaches Math4ME teachers. The former Maine DOE Math Specialist, Cheryl Tobey, is now with the Maine Math and Science Alliance (MMSA) and continues to bring a wealth of experience and math content and pedagogical expertise to the Maine DOE as she continues to collaborate with the new department math specialist and lead Math4ME coach and provide consultation services.

Math4ME Coaches:
For the 2020-2021 school year, Math4ME coaches consist of the Lead Coach (Nancy Lander) and 3 returning (2019-2020) LEA-Level Coaches. The Lead Coach has been also responsible for coaching, Fidelity-of-Practice observations, and ad-hoc instructional guidance (including maintenance/update of the Math4ME Padlet Website) and currently coaches 8 participants. Nancy's continued contribution and commitment have been crucial to the success of the Math4ME initiative. The additional LEA-Level Coaches conducted support cycles for 10 participants. LEA coaches were also trained in fundamental concepts in math content and pedagogy and provided with ongoing support from the lead trainer.

Math4ME Cohort 4 Teachers:
Math4ME Cohort 4 consisted of 18 teachers from 13 schools spanning 7 LEAs. These teachers received their initial Math4ME training in the summer of 2019. The participating Local Education Agencies (LEAs) were selected based on an application process that assessed readiness and capacity to institute evidence-based improvement practices in teaching mathematics.

OSEP-Funded Technical Assistance: Maine continues to benefit greatly from the support and assistance of OSEP-funded technical assistance centers. The IDEA Data Center and other agencies have provided indispensable guidance, consultation, and coordination through all steps of Maine's SSIP development and implementation.

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Provide a description of how the State evaluated outcomes for each improvement strategy and how the evaluation data supports the decision to continue implementing the strategy. (Please limit your response to 3000 characters without space):

2019-20 End of Year Teacher Survey:
Perceptions of coaching supports, trainings, and implementation practices were investigated through surveys conducted near the end of the school year. The response rate was 96% (n=43) of the 45 teachers in the program. Seventy-nine percent of the new cohort felt the October workshop was very useful or extremely useful. The December workshop was seen was very useful or extremely useful by 73%. Both workshops for the returning cohort were also were rated very useful or extremely useful by 80% participants. In each of the four National Council of Teachers of Mathematics (NCTM) Principles to Action practice areas, 95%-98% of teachers agreed or strongly agreed that they were better prepared to implement the practice. Teachers felt the Math4ME program had a positive effect on their students' mathematics learning. They reported students were more engaged in mathematics, students became more confident and willing to share their thoughts, and that students became more willing to try to find alternate representations and solutions.

2019-20 Coach Survey:
Coaches' perspectives on the support they provided was obtained through an online survey. All twelve coaches responded. Almost all (92%) indicated that teachers paid the most attention to the practice area of helping students use and connect mathematical representations. Coaches felt teachers showed growth in understanding the mathematics learning process and teaching principles through the year. Half of the coaches felt using and helping students use and connect mathematical representations was the area of greatest improvement. All but one coach felt the Math4ME program had a somewhat positive or extremely positive effect on students. The coach who had a neutral opinion of Math4ME felt it reinforced what was already being done. Ninety-two percent of coaches shared their Math4ME experience with other teachers who were not in the program. Nine coaches (75%) felt their sharing with teachers not in the Math4ME program had somewhat affected or very much affected the non-participating teachers' practice.

2019-20 Fidelity-of-Practice Classroom Observations:
Classroom observations were conducted by the math coaches at one or two points in the school year. Teachers were scored on 2-3 indicators of practice using the Fidelity-of-Practice Rubric. The new Cohort 4 was observed twice during the school year and the returning Cohort 3 was observed once. There was observed improvement in implementing the principles in between the initial and second observation of Cohort 4 in all NTCM Principles to Action instructional areas.

2020 Post-Training Survey:
After the 2020 training, a survey was conducted to gather participants perspectives on the training. Participants indicated that the training was valuable, information was clearly presented, and they would recommend the training to other colleagues. Almost all teachers and coaches (95%) believed they would use

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Provide a summary of the next steps for each infrastructure improvement strategy and the anticipated outcomes to be attained during the next reporting period. (Please limit your response to 3000 characters without space)**:**

Maine recently announced that the Measures of Academic Progress (MAP) suite of assessments developed by Northwest Evaluation Association (NWEA) will be used for the 2021 state assessment tool. The Maine DOE will renew its contract with MEPRI to serve as the external evaluator of the SSIP. The Math4ME team has met with MEPRI associates to discuss additional student achievement measures that may be highlighted in components of this new assessment. The components of this assessment will be more sensitive to gains made by special education students in the Math4ME program.

Additionally, there will be a shift in the main trainer position. Math4ME trainer for 2021-2022 will be Cheryl Tobey of MMSA. Ms. Tobey was the department specialist in the earliest stages of Math4ME development and has a wealth of math professional development and extensive experience with developing sustainable programming. Jennifer Robitaille, the department math specialist, will continue to serve as a Math4ME consultant. Nancy Lander, who has been an integral part of the project from day one, will continue as the lead coach for Math4ME and will support small teacher and paraprofessional groupings for next year. Additional LEA coaches will continue to support the work. The MMSA trainer and lead coach will have the time and capacity to focus on the continued development and refinement of Math4ME training content and coaching which will benefit participants and their students' growth.

During the summer a group of approximately 4 new LEAs will be recruited for the 2021-2022 Math4ME programming. The recruitment of the LEAs will continue to be based on an established application process that assesses readiness and capacity to institute evidence-based improvement practices in teaching mathematics, however, there will be a focus on recruiting from rural areas. LEAs will be asked to identify special educator and paraprofessionals pairs to participate in Math4ME. Frequently in special education classrooms paraprofessionals spend extended periods of instructional time with students. Students taught by Math4ME educators and their paraprofessionals will have increased exposure to the conceptual understandings of mathematics. This consistent pedagogical approach should show additional student learning gains.

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Did the State implement any <u>new</u> (previously or newly identified) evidence-based practices?

No

If "Yes", describe the selection process for the <u>new</u> (previously or newly identified) evidence-based practices. (Please limit your response to 1600 characters without space):

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Provide a summary of the <u>continued</u> evidence-based practices and how the evidence-based practices are intended to impact the SiMR. (Please limit your response to 1600 characters without space):

Math4ME training continued in 2020 but training was shifted to remote, synchronous interactive professional learning experiences. Professional learning sessions were held during the summer and the fall. The sessions focused on training teachers of grades 3-8 special education students in the fundamental concepts in math content and pedagogy with a focus on the National Council of Teachers of Mathematics (NCTM) principles and standards. Each Math4ME cohort 4 teacher will participate in two observation cycles with one of the Math4ME coaches. In addition to coaching, participants are supported with ad-hoc assistance from the Lead Coach and LEA-Level Coaches and are provided with numerous technical assistance resources.

Additional supports provided to Cohort 4 teachers include: informal observations with feedback, model teaching of math routines, model lessons, co-plan lessons, analysis of formative assessment results with teachers, methods of evaluating students for math levels to report strengths and needs, and other supports as requested by the teacher. Numerous resources relevant to math content and pedagogy may be found on the Math4ME Padlet website, including learning trajectory resources, formative assessment tools, and full research articles on evidence-based teaching practices. The website also contains preconference coaching tools, coaching visit overview, and other materials used by the Coaches and Math4ME teachers for the coaching visits. It can be accessed at https://padlet.com/MathProbes/Math4MEcohort4.

The continued practice of developing teachers' conceptual understanding of mathematics and mathematics instruction through professional learning and coaching will lead to a change in classroom practices. The

Describe the data collected to evaluate and monitor fidelity of implementation and to assess practice change. (Please limit your response to 1600 characters without space)*:*

Post-Training Survey:
A link to the Post-Training Survey is emailed to participants at the end of the final day of training. The survey includes Likert-scale questions regarding participants' perceptions of the training and its expected impact and several open-ended questions to collect participants' views on 1) most beneficial aspects of the training, 2) least beneficial aspects of the training, 3) readiness to implement new knowledge from the training, and 4) a general open-ended question for any other comments the participants want to share.

Teacher Fidelity-of-Practice Assessments:
Math4ME Coaches conduct classroom observations of trained teachers to document fidelity-of-practice of the Math4ME training strategies and practices. Fidelity is measured using a rubric of indicators adapted from the National Council of Teachers of Mathematics Principles to Actions (2014). They include 1) Establish Mathematics Goals to Focus Learning, 2) Use and Connect Mathematical Representations, 3) Build Procedural Fluency from Conceptual Understanding, and 4) Implement Tasks to Promote Reasoning and Problem Solving. The rubric is contained in the Phase III Year 2 Report.

Post-School Year Survey:
An online confidential survey was emailed to Math4ME teachers and coaches near the end of the 2019–20 school year. Questions were designed to collect information that would be useful, formative feedback on participants' experiences and impacts of the professional development and coaching at the individual teacher

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Describe the components (professional development activities, policies/procedures revisions, and/or practices, etc.) implemented during the reporting period to support the knowledge and use of selected evidence-based practices. (Please limit your response to 1600 characters without space):

Cohort 4 training consisted of a 2 day summer session and two 1 day sessions in the fall. The training was designed to build participants' understanding of mathematics concepts, hone diagnostic skills for identifying students' difficulties and misconceptions, and expand teachers' repertoire of practices for teaching and supporting struggling students.

Cohort 4 teachers continue to receive 2 cycles of coaching support during the 2020-2021 school year. Each cycle includes a coaching component that focuses on the teachers' self-selected areas of math focus and a Fidelity-of-Practice observation. The coach and the teacher have a pre-conference in which the teacher chooses elements from the indicators contained in the NCTM Principles to Actions as the areas of focus. The teacher and coach discuss the planned lesson and consider questions such as the learning goals, the mathematical concepts that will be presented, and the planned teaching strategies. During the visit, the coach observes the teacher in the classroom and notes the teacher's use of instructional practices related to the selected indicators. The coach and teacher then discuss aspects of the lesson that went well, areas that were challenging to teach, areas in which students had difficulties, and evidence-based strategies that can be used to deliver effective instruction in the identified areas. The coach follows up with a written response to the teacher regarding the post-observation discussion and provides additional feedback to the teacher.

The coaches use data collected during the classroom observations to complete a Fidelity-of-Practice assessment of the observed teacher. As of March, all Cohort 4 teachers have been observed at least once formally and informally with follow-up oral and written feedback. Due to the COVID-19 outbreak, the coaching cycles are conducted remotely.

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Section C: Stakeholder Engagement

Describe the specific strategies implemented to engage stakeholders in key improvement efforts.
(Please limit your response to 3000 characters without space):

The Math4ME stakeholder group consists of LEA special education directors, teachers, consultants, Maine DOE Special Services personnel, the Maine Parent Federation, a member of the State Performance Plan/Annual Performance Report State Advisory Panel, and several higher education consultants and evaluators.

Since the last SSIP reporting period, the Math4ME team has held multiple small group meetings with both internal and external stakeholders, communicated through emails and held a full stakeholder meeting in April of 2020 to provide updates, seek guidance and make plans for the future of Math4ME. The concerns of stakeholders and the Maine DOE's plan for improvements based on this guidance are outlined in the next section of this report.

To continue stakeholder engagement, an online stakeholder meeting is planned for April 2021 to share implementation progress and the outcomes of the Cohort 4 trainings. At the meeting, the Maine DOE Math Specialist will lead participants through a variety of activities and discussions designed to showcase various components of the training and fidelity measures while providing a conceptual framework for stakeholders. Additionally, the external evaluator will present and discuss the evaluation results from the Cohort 4 data collected from surveys, interviews, fidelity checks, and student assessment results. Because the 2020–2021 is year five of the project, the stakeholders will be presented with decision points regarding future scale-up. These decision points will include the areas that address stakeholder concerns described below. Stakeholders will continue to be a critical component in providing guidance to the Maine DOE for future implementation and scale-up efforts.

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Were there any concerns expressed by stakeholders during engagement activities?

Yes

If "Yes", describe how the State addressed the concerns expressed by stakeholders.
(Please limit your response to 1600 characters without space)*:*

The stakeholders had concerns about the scope of the training, assessment measures, and sustainability. Each of these areas is addressed by the Maine DOE next steps for Math4ME.

Over the past five years the Math4ME trainings have focused on content that meets the needs of special education students in grades 3-8 and a formative assessment tool. The stakeholder group recommended pairing down the content and the grade bands to focus and intensify the intervention. In response to this, beginning in the fall of 2021, Math4ME will focus on educators and their paraprofessionals who work with students who are functioning at developmental grade levels between third and fifth grade. With the change in grade band, the content presented will focus on computational fluency as it aligns with the NCTM principles and standards.

The stakeholders have continued the discussion concerning the current measure of student proficiency and changes in proficiency over time. The Maine Educational Assessment (MEA), is broad-based and, compared to other assessments that might be used, does not focus on the more specific aspects of student learning that are expected to increase as a result instruction by a Math4ME teacher. Other assessments that are commonly used in classrooms have been identified and may be more sensitive to increases in student performance. A pilot of these additional assessment data are being examined this spring.

To address sustainability, the cohorts will include special educator and paraprofessional pairs. The pair of educators will support one another's practice and students will have more consistent Math4ME based instruction. These pairs of educators will work in a small group with a coach to create a community of Math4ME practitioners with the goal of adding other educators to this group from within the grade level, the

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If applicable, describe the action(s) that the State implemented to address any FFY 2018 SPP/APR required OSEP response. (Please limit your response to 3000 characters without space):

Maine has reported FFY2019 SIMR data, implementation activities, measures and outcomes achieved, a summary of improvement strategies, and data demonstrating implementation of these activities.

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