Background

“Business as usual” approaches to teacher training and support are likely to be insufficient. In fact, even well-intended, well-implemented math professional development programs have fallen short in improving student outcomes (e.g., see Garet et al., 2016; Gersten et al., 2014). We urge states to draw from the best available research to help LEAs design and implement robust training and support programs for math educators.

The following principles seem essential to any training or support program that seeks to build local capacity:

- **Push for horizontal and vertical coherence.** To the extent possible, model the importance of well-aligned and mutually reinforcing strategies for setting expectations, building teacher capacity, diagnosing student progress, and intervening with struggling students throughout their K–12 trajectory.
- **Draw from expertise inside and outside the system.** Schools and districts can (and do) learn a lot from each other as well as from external experts, including from local universities. Rather than continuing to “reinvent the wheel,” encourage LEAs to collaborate with others and model this principle by including different kinds of experts in state training teams.
- **Model continuous improvement.** States should encourage LEAs to set measurable and attainable goals for determining whether the program is being implemented as intended and resulting in desired changes.

Below are two examples of continuous improvement models that involve collaboration among multiple stakeholders (practitioners, policymakers, researchers) and may be useful for states to consider:

- **Design-Based Implementation Research**
- **Networked Improvement Communities**

Look Fors

States should build the capacity of LEAs to support effective instruction for all students through programs that are robust, coherent, collaborative, and continuously refined as they are implemented. Plans address capacity-building efforts by describing ways in which SEAs will:

1. Encourage collaboration across schools and districts to better meet identified state needs;
2. Leverage partnerships with institutions of higher education and nonprofit and/or for-profit entities to increase SEA and LEA capacity to support and sustain teacher professional learning initiatives;
3. Model continuous improvement by providing support for LEAs to track ongoing progress and make adjustments based on data they are collecting and analyzing throughout the life of the program; and
4. Continuously return to the evidence and wisdom of the mathematics community to support the design and implementation of robust training and support programs for math educators.

States with Promising Features

The following states were identified as a result of the Promising Features Survey in which 13 state plans were reviewed by mathematics leaders across the country. Related text from the full state plans mentioned below can be found in Tool #12 at [http://nctm.org/essatoolkit](http://nctm.org/essatoolkit).

- **Connecticut** will provide technical assistance, resources, and training to LEAs as they develop collaborative district professional learning systems using tools developed by the state, with a focus on collaborative learning among educators in formats that are conducive to adult learning.
- **Maryland** will provide opportunities for collaboration across LEAs, including specific instructions, guidance, models, and templates to guide this collaboration.
- **New York** will convene labs for interested district teams that focus on developing data-driven strategies to address gaps in equitable access and designing comprehensive systems of educator development and support.

Developed in partnership with the National Council of Teachers of Mathematics, Math Teachers’ Circle Network, and the Association of State Supervisors of Mathematics (2017)