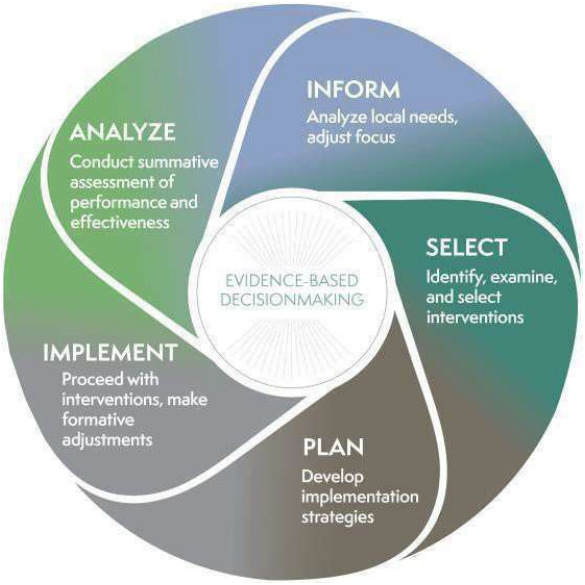

Evidence-based decision-making and reflection are the core of the entire continuous improvement process and are used in each step. The steps overlap, with each leading into the next, so that, for example, the Analyze step begins before the Implement step is completed; the color shading is intended to communicate thispoint.

Hale, S., Dunn, L., Filby, N, Rice, J., & Van Houten, L. (2016). ***Evidence-based improvement: A guide for states to strengthen their frameworks and supports aligned to the evidence requirements of ESSA. San Francisco: WestEd***

One of the broad intents of the Elementary and Secondary Education Act (ESEA) as amended by Every Student Succeeds Act (ESSA) is to encourage evidence-based decision-making as a way of doing business.

Beyond defining four levels of acceptable evidence below, the law provides states with more flexibility and authority, compared to what was allowed under No Child Left Behind regarding how states and districts handle selecting and implementing interventions.

§200.21 of ESSA requires a state to review and approve each comprehensive support and improvement plan in a timely manner. Further, the regulations require the state education agency (SEA) to monitor and periodically review each local education agency (LEA)'s implementation of its plan.

The provisions in ESSA also lend themselves to the use of an iterative, continuous improvement process. The law specifies that states are to continuously evaluate the effectiveness of interventions carried out under several federal grant programs (e.g., ESSA, 2015, Section 4624[10]).

Finally, regulations of ESSA (24 C.F.R. § 200.23, 2017) require states to evaluate the effects of evidence-based interventions on student achievement and other outcomes, and to disseminate the results of those evaluations to LEAs. Interventions must have an impact on "meaningful student outcomes".

"A continuous improvement process starts with the problem, rather than the solution."

The literature on decision-making in education reveals an array of factors that often influence decisions, including popular trends, political considerations, and the networks and information sources with which decision makers are connected. ESSA and, more generally,

the evidence-based decision-making movement emphasize the importance of evidence in informing decisions. Knowing and building on what has worked in the past, and specifically for whom and in what circumstances, offers a better chance of success in the future.

However, over focusing on the decision itself can perpetuate a "magic bullet" concept of improvement: the fact that a program produces positive outcomes on average does not mean that it will do so in every case. Deciding to implement a particular approach must be preceded by a thorough assessment of needs and hypotheses about the causes of issues and problems, to determine if a proposed program or practice is really appropriate and what adaptations may be necessary, and it must be followed by careful implementation and analysis of local outcomes.

Using data and evidence keeps the improvement process guided toward the desired outcomes.

A continuous improvement process starts with the problem, rather than the solution. It includes addressing a discrete issue or problem by systematically testing potential solutions while tracking well-defined and measurable goals. The process is meant to be iterative—data are collected, analyzed, and discussed frequently so that adjustments can be made to the intervention or program, and then data are collected and analyzed once again. In addition, the scale of the initial effort often begins small and expands over time as the intervention is refined. Using this process, schools and districts often start with a pilot intervention or activity and expand it as the fit to local conditions is better understood.

Continuous improvement cultivates a problem-solving orientation and close observation of the system that is producing the outcomes. This orientation is important to sustained improvement, especially when more than one change may be needed. Using data and evidence keeps the improvement process guided toward the desired outcomes.

"Evidence-based decision-making and reflection are the core of the entire continuous improvement process and are used in each step."

Step 1: **Inform:** A comprehensive needs assessment is the first step to analyze the needs of the education setting, in order to inform subsequent steps, particularly decisions that are made in step 2. Needs are analyzed by using input from as many stakeholders as possible: leadership, staff, parents and other community members, and students. The needs assessment data along with leading and lagging indicator data (test scores, attendance, discipline, grad rate, etc.) are used to identify and prioritize gaps in the educational setting, whether they are programmatic or service or staff related. Well- defined and measurable goals are developed from a careful analysis of these needs and gaps, and from hypotheses about which factors in the current situation might be causing problems and impeding attainment of desired outcomes.

Step 2: Select an Evidence Based Strategy: This step involves identifying, examining, and selecting evidence based programs, practices and interventions for the intended setting and population(s). The step might start with searching clearinghouses of evidence-based interventions, such as the What Works Clearinghouse (WWC), Evidence for ESSA, Promising Practices Network and others which have reviewed the research on many interventions (see SI Evidence Based Guidance for more

resources). Careful attention to the quality of both individual research studies and the body of evidence on an intervention is needed. Selection also includes taking stock of the specific context and educational environment(s) in which an intervention will be implemented, including the student population and the local capacity, resources, and strategic plans. What works in one place will not necessarily work in another. The results of this step provide the specifics needed to develop detailed implementation plans.

Step 3: Integrated Action Plan: In this step, a detailed implementation plan is developed for the selected interventions, to specify who will implement the interventions, when, and with what support. Planners determine what core features are needed for implementation with fidelity, and what adaptations may be needed. Also, necessary materials, technical assistance, and professional development for the actual implementation are either developed or contracted. Plans for analysis and/or evaluation are drafted, and data are collected to monitor progress.

Step 4: Implement: This step involves carrying out the intervention. It is important for this step to include the collection and examination of implementation data for formative feedback and improvement.
Educators will need to ensure that the interventions are being implemented as was planned in the previous step, and will need to correct problems (e.g., teachers not participating in the intended level of professional development) and document any promising adaptations that might be informative to others. Implementation is continually assessed in this step, through an iterative process, until the intervention is being delivered in a stable way.

Step 5: Analyze: In this step, data are collected about longer-term changes in primary desired outcomes. If there is progress toward the goals, the intervention can be continued and expanded when appropriate. If not, a new or additional strategy may be needed. This step may involve progress monitoring—tracking trends in outcomes over time. Or, if an intervention is stable enough, a rigorous evaluation of impact is appropriate. Finally, the findings from this step can be communicated outward; therefore, the entire community can benefit, as reflected in the ESSA requirement that states share evaluation information