

Common Indicators Network: Improvement Cycle Overview

The Improvement Cycle Framework is designed to support programs through a **sequence of activities that help to organize cycles of inquiry and improvement**. The framework makes explicit that **improvement first requires deep, evidence-informed reflection (inquiry)** to identify areas for growth, **followed by intentional action to make changes (improvement)** to and regularly assess progress against improvement goals. Improvement is inevitably non-linear, but this framework identifies key stages of progress. It is not the only way to describe or organize improvement efforts, but can be helpful in supporting programs through this complex work.



Identifying an Area for Inquiry

This step helps teams begin improvement efforts with a clear focus or direction. Programs **engage a broad group of stakeholders to select a high-leverage area related to candidate learning and development to explore further**. They generate questions within a broader category to help focus evidence gathering and analysis in the next stage.

Guiding Questions	Key Activities
<ol style="list-style-type: none"> 1. What is an outcome of candidate learning and performance that we collectively care about? 2. What measure(s) will tell us something about this outcome and is meaningful to stakeholders? 3. What question(s) do we have related to this outcome (e.g., do outcomes vary across candidates or programs)? 	<ul style="list-style-type: none"> • Engage a broad group of program stakeholders to select an area for focused inquiry, ensuring minoritized voices are meaningfully included • Consider existing programmatic challenges, priorities, and initiatives related to candidate learning
<p>Example: The college of education at DFI University calls together a group of faculty, district partners, and graduates. They review PRAXIS pass-rates, employer survey data, and feedback from an onsite review of their programs. They notice that outcomes for candidates in the Secondary Math program are lower than for candidates in other programs and select Secondary Math as an area for further inquiry.</p>	

Assessing Current Reality

This stage ensures programs dig deeply into more granular data related to the area of focus, moving beyond average outcomes to identify the specific candidates struggling and where. Programs **examine**

multiple sources of evidence in the area of focus to better understand the nature of strengths and opportunities for growth in candidate knowledge and skill. Through this examination of evidence they identify a more specific area for improvement.

Guiding Questions	Key Activities
<ol style="list-style-type: none"> 1. What patterns, inconsistencies, or gaps in outcomes across candidates and programs do we notice in the data? 2. What other data might we look at to triangulate and deepen our findings? 3. What areas of strength/growth emerge that we want to learn more about? 	<ul style="list-style-type: none"> ● Identify multiple data sources related to candidate knowledge and skill ● Engage in structured inquiry into these data with a broad group of stakeholders ● Identify areas of strength and opportunities for growth for the outcome
<p><i>Example: The DFI University team examines disaggregated Praxis subscale scores, key assessment data, evidence of candidate practice from early field experiences, and candidate and graduate feedback. They find that across all demographic groups and program pathways, undergraduate candidates in Secondary Math are not developing deep content and pedagogical content knowledge.</i></p>	

Identifying Causes

This step helps teams put a fine point on what they need to change to meet their improvement goal so they can design an intervention that will lead to systematic and sustainable improvement. Programs **surface root causes related to an identified area for improvement and engage a broad group of stakeholders to brainstorm and prioritize what needs to change.** This helps separate out mere symptoms from the actual drivers of an issue. Programs prioritize a root cause to address that is within their locus of control, focused on candidate learning, and for which they can rally stakeholders to improve.

Guiding Questions	Key Activities
<ol style="list-style-type: none"> 1. What are root causes of an area for growth? 2. How do different stakeholders experience and interpret this issue (e.g., what do they believe are potential root causes)? 3. What does the evidence suggest are likely root causes? 	<ul style="list-style-type: none"> ● Complete a root cause analysis to explore possible reasons for the area of growth ● Examine additional data and evidence needed to understand the root causes, (e.g. additional candidate observations, interviews, or focus groups; candidate work products, stakeholder surveys).

Example: The DFI University team convenes candidate focus groups and interviews with faculty, supervisors, and mentor teachers, and spends time observing candidate coursework, and student teaching. Two faculty members in the math department and college of education take the Praxis exam and reflect on the prioritized content. Based on this new evidence, they conduct a root cause analysis and identify three potential root causes. With their teacher preparation steering committee, they identify insufficient opportunities to practice enacting specific math pedagogies as the primary root cause driving lower-scores for candidate pedagogical content knowledge and decide to prioritize addressing this root cause through a systematic improvement effort.

Developing a Theory of Action

Programs **design an intervention to address their primary root cause and develop a theory of action that articulates how they expect this intervention to improve outcomes** of interest. Programs articulate the specific outcomes they hope to see improve, as well as the activities and resources they will need to achieve those outcomes. This stage requires teams to identify the specific knowledge and skills teacher-candidates need to develop to reach their improvement goal, to sequence those, and to identify the types of changes to coursework and clinical experiences necessary to build those specific knowledge and skills.

Guiding Questions	Key Activities
<ol style="list-style-type: none"> 1. How have other programs tackled this issue? What does research tell us has worked before? 2. What might we try to address the underlying root causes of this issue? 3. What evidence will we collect to test our theory of action? Measured how? When? 	<ul style="list-style-type: none"> • Define outcomes for improvement • Brainstorm, research, and select an intervention to address the root cause • Identify measures to track progress and determine efficacy of the intervention • Document your theory of action, describing how you expect the intervention to help you achieve your improvement goals

Example: The DFI University team sets a goal of having all Secondary Math candidates scoring proficient or above by the end of student teaching on an observational measure of pedagogical content knowledge. They map a theory of action for how they will achieve this goal. They identify key activities, such as changing specific instructional tasks within the math methods courses and clinical experiences to align to key knowledge and skills. They identify the resources they will need to make those improvements, including who will implement changes, the specific learning they will need to do so effectively, and the materials and support they need to implement them. They seek feedback from the teacher preparation steering committee on their theory of action and make refinements.

Planning for Action

Programs **outline a detailed plan to implement an improvement strategy, gather evidence of progress, and assess overall efficacy.** Programs should include detailed timelines, allocate responsibilities to specific individuals, consider how they will monitor progress, and specify plans for communicating with stakeholders during implementation. Programs should think about how they will document learnings over the course of implementation to make course-corrections, refine their theory of action, and to inform future improvement efforts.

Guiding Questions	Key Activities
<ol style="list-style-type: none"> 1. What steps do we need to take? Who will take them? By when? 2. How feasible is this plan? What resources will we need? What are the risks and how will we account for them? 3. When will we come together to review progress? Who else will we communicate with about our progress? Why? How? 	<ul style="list-style-type: none"> • Develop implementation plans including a project timeline • Determine individuals responsible for implementation activities • Establish a progress monitoring schedule to support implementation
<p>Example: The DFI University team translates their theory of action into a detailed work plan. They assign individuals to create new instructional tasks to implement within their courses and clinical experiences to ensure candidates have sufficient opportunities to learn and practice enacting math pedagogies. They set criteria for the quality of those instructional tasks and assign deadlines. They map out when those new changes will be implemented and how they will monitor progress and impact on teacher-candidate learning, identifying the specific measures they will use and setting benchmarks for performance on the culminating observational measure. They document reflections after the implementation of each new instructional task and debrief to capture their learnings.</p>	

Implementing and Collecting Data

Programs **implement their improvement plans and gather evidence to monitor progress and assess the efficacy of their intervention.** Programs are encouraged to use evidence to refine their implementation plans at multiple points and to reflect on and document their learning to inform future improvement cycles.

Guiding Questions	Key Activities
<ol style="list-style-type: none"> 1. What are we learning about implementation from stakeholders? What has worked well and what hasn't? 2. What does initial data tell us? Do they suggest a need for refinement of the intervention? If so, what, by when? 3. What do the results mean for candidates? 	<ul style="list-style-type: none"> • Implement intervention • Collect evidence to monitor progress and assess efficacy towards goals • Refine theory of action and implementation plans based on evidence • Reflect on improvement process and document initial learnings
<p>Example: The DFI University team implements the new instructional tasks within the target courses. They monitor progress toward their goals and at the end of the year examine the percent of teacher-candidates in the Secondary Math program scoring proficient or above on the observational measure of pedagogical content knowledge. They look at these results overall and disaggregate by candidate demographics, program pathway, and degree area. They reflect on what worked well in terms of shifting outcomes and what did not work as well. They consider revisions to the instructional activities implemented in coursework, retooling their plan for next year.</p>	

References

Note: This is not an exhaustive list.

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