SUNY Charter Schools Institute
The State University of New York

A comprehensive guide to implementing additional, mission-aligned measures for student success

ACTIVE INGREDIENTS

# STORY

I'm often asked where the idea for our Active Ingredients originated. And the answer is, within our schools, as is so often the case. In fact, I still remember the very day, when on a late Friday afternoon visit, I was ever so gently brushed in the hallway by a pack of scampering students, each adorned with a bright red backpack almost as tall as they were.

"We have a partnership with the regional foodbank," said the principal, smiling at the tiny scamperers. "Each Friday, every eligible student gets a red backpack full of food for the weekend. It helps with food insecurity, obviously, but it also helps us to build critical connections. You see, to take part in the program, each family has to return the empty backpack the following Monday." I could tell by the rising intonation in the principal's voice that this was a story they were eager to share.

"And when parents show up, our reading specialist leads a twenty minute program on tactics for oral reading fluency and comprehension and provides them with both a take home cheat sheet and additional materials that enhance their child's assigned reading for the week."

"Brilliant," I remember saying. "What improvement in student reading are you seeing?"

The principal hesitated. "The parents keep coming back and telling us how much they love the program, but, honestly we're not tracking any specific data on the backpack program or the parent program."

My heart sank – as an authorizer the anecdotes come readily. And they are, truly, lovely in that I have never heard an anecdote from a leader that doesn't warm the heart and fill the mind with visions of happy students, happy staff, and happy parents. But happy anecdotes without systems that result in credible, replicable data and evidence linking the projects and partnerships that inspire that happiness, well -- they are just stories. And, as stories, they fail to support schools in showing the results of their efforts.
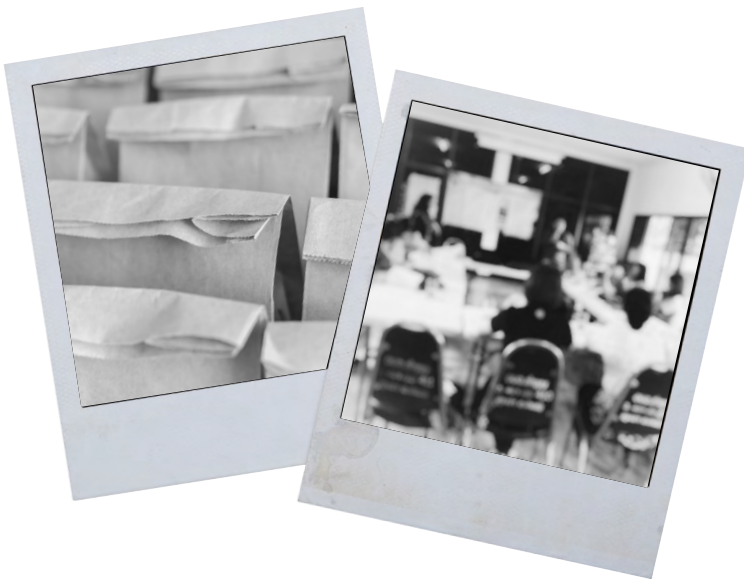
That is the core of Active Ingredients.  So many schools do so very much to 'activate' student academic success.  Could we find a way as authorizers to support our schools in wrapping their community partnerships, socio-emotional curriculum, service projects, capstones, etc. in an architecture that helps them credibly count, document, and convey real links to student success?

As authorizers, we like reading, writing, mathematics, and science – the core of academic learning. We appreciate having standardized, comparable measures of growth and absolute knowledge.  But we also know that those data fail to capture what schools put in place to drive student content knowledge and skills. Active Ingredients is focused on doing just that – providing schools and authorizers systems for measuring and reporting out the strong recipes for student success being deployed in our most successful charter schools.

This workbook (old school trapper keeper style) is the first step in sharing what we've learned.  My hope is you'll find it useful, nourishing in accomplishing your authorizing goals, and a strong tool for your authorizing backpack.



Susie Miller Carello
Executive Director, State University of New York
**Charter Schools Institute**

*\*Anecdotes Aren't Enough: An evidence-based approach to accountability for alternative charter schools by the National Association of Charter Authorizers.*

# BACKGROUND

In an era when standardized testing isn't predictably available, how can schools and authorizers make meaningful claims about school success? At a time when annual state assessments primarily serve to mark how challenging closing historic education gaps for our most vulnerable students has become, how do authorizers identify and uplift examples of student growth? Authorizers need credible and replicable data from schools that describe high quality programs and demonstrate positive outcomes for students that support their academic success. This is especially important when standardized test scores are not an option.

The best educators know that supporting students' development in other areas can have a positive impact on students' academic achievement. Many of the most successful schools aim to maximize student success by supporting learning in additional ways such as socially and emotionally, through internships, or project-based opportunities.

**THE ACTIVE INGREDIENTS PROJECT IS AN OPPORTUNITY FOR SCHOOLS TO DEMONSTRATE KEY OUTCOMES FOR THEIR STUDENTS IN ADDITION TO TEST SCORES. AUTHORIZERS AND SCHOOL LEADERS WORK TOGETHER TO CREATE AN ENVIRONMENT FOR RESPONSIBLE, REPLICABLE, AND CREDIBLE COLLECTION AND REPORTING OF ADDITIONAL MEASURES OF STUDENT AND SCHOOL SUCCESS, IN TANDEM WITH TRADITIONAL MEASURES.**

With this potential in mind, the Institute first introduced the concept of Active Ingredients to its portfolio of charter school leaders in early 2017. The group convened to explore existing interest, anticipate challenges, and highlight opportunities in a project dedicated to expanding the collection and reporting of student data. Schools and programs serving students with the most vulnerabilities emerged as a target population with the most potential for this exploration. The following year, with increased interest and direction, the Institute convened authorizers, content experts, educators, leaders, and policy advocates to share learning and explore the opportunities and challenges authorizers would experience with collecting additional, nontraditional, measures of student success.

This expert convening in 2018 successfully produced a preliminary draft framework for the Active Ingredients project that included the following important findings that would later guide the development and implementation of a pilot project:

• insights around conditions for success and specifically the need for a School Developed & Articulated Theory of Change;

• examples of Active Ingredient measures organized into domains and including definitions;

• suggested audiences and uses for additional measures;

• recognized limitations of the project and framework; and,

• additional resources.

Theory of Change, mission alignment, and example Active Ingredients are a foundation of the project and are prominent in the workbook. Because of this, they deserve additional discussion.

# THEORY OF CHANGE AND MISSION ALIGNMENT

It quickly became clear because of the investment of time and resources required of both schools and authorizers when measuring and reporting new measures that an increased importance should be placed on the identification of any additional measures. Authorizers wanted a tight alignment between additional measures, key levers for student success, and outcomes for students in order to drive toward meaningful and compelling new data. Schools who understand these relationships between their program and student outcomes identify measures that are better aligned and therefore a school Theory of Change emerged as a critical element and activity of implementing Active Ingredients.

A "Theory of Change" is essentially a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context. It is focused in particular on mapping out or "filling in" what has been described as the "missing middle" between what a program or change initiative does (its activities or interventions) and how these lead to desired goals being achieved. Through this approach the precise link between activities and the achievement of the long-term goals are more fully understood. This leads to better planning in that activities are linked to a detailed understanding of how change actually happens. It also leads to better evaluation, as it is possible to measure progress towards the achievement of longer-term goals that goes beyond the identification of program outputs."*

# THEORY OF CHANGE

In order to better understand Active Ingredients and its origins, the following outline of the project's Theory of Change (TOC) details the assumptions, conditions, activities, and results that are the underpinnings for all of the Active Ingredients work.

## PROJECT ASSUMPTIONS

**Assuming...**

- All students can learn.

- School success is a combination and culmination of academic and non-academic learning and growth.

- The primary objective of schooling is preparing students academically so they are ready to successfully engage in the next level of school or life.

- Academic outcomes remain as prioritized outcomes and Active Ingredients are additional measures that never replace primary academic outcomes.

- Authorizers perform a critical role in establishing processes and systems that allow schools to credibly communicate school quality.

- Active Ingredients is a project focused on the needs and practices of authorizers supporting and encouraging the collection and reporting of meaningful additional student data.

## CONDITIONS

**If...**

- Participating schools have a reasonably developed concept of their theory of change and are able to document or articulate it in a basic format.

- Schools and authorizers select mission aligned additional measures that represent critical levers in the school model contributing to student success.

- There are incentives in and around the school/authorizer relationship for innovation.

- Participating schools successfully use data to inform their interventions and authorizers are committed to pursuing the necessary knowledge and capacity development required for the additional data collection and analysis.

- The necessary relationships for change exist at the school and authorizer level.

## ACTIVITIES

### And...

- Identify schools well positioned to pilot

- Mutual agreement on ingredients and additional measures

- School selects a feasible tool Implementation plan

- Data Collection

- Data Analysis

- Project Evaluation

## OUTPUTS

### Then...
- Authorizers develop bodies of data for less tested measures for future study.

- Lessons learned and tools from the Active Ingredients project are shared broadly.

## SHORT-TERM OUTCOMES

### And then...
- Participating authorizers change or incorporate processes for considering additional measures into their systems.

- Additional authorizers show interest and test the framework and provide input for future revision.

## LONG-TERM OUTCOMES

### Ultimately...
- Well-studied Active Ingredients and measures may be used by authorizers during high-stakes decisions along with the traditional measures.

- Additional, credible methods of describing student success are more widely accepted.

- Serving the most-difficult to measure student populations becomes incentivized because quality programs can be better identified and acknowledged.

# SAMPLE ACTIVE INGREDIENTS & DOMAINS

The project identified several sample Active Ingredients using four domains to develop additional measures. The categories are organized by commonalities and/or relationships between Ingredients and the type of results for students they support. These categories are not mutually exclusive or exhaustive but are areas of high interest to the field and are viewed as high potential.

## DOMAINS

| | |
|---|---|
| ACADEMIC LEARNING RESULTS | POST-SECONDARY READINESS RESULTS |
| CO-ACADEMIC LEARNING RESULTS | LEARNING ENVIRONMENT RESULTS |

These Active Ingredients exist within, not outside of, the identified conditions for success as illustrated. We caution authorizers against incorporating additional measures without sufficiently establishing the conditions necessary for success.

As we discuss in the **Active Ingredients Sample Measures** resource, not all domains are recommended for use in the same way. There is room for schools to use additional measures in multiple ways and there is a great deal of learning still to be done about how these perform over time. Although, an additional measure may not end up being useful for authorizer reporting, schools may find these new measures useful for program continuous improvement cycles.

It is important to note that many of the sample Active Ingredients may look familiar. This project was focused on identifying Active Ingredients or program elements that many schools were already doing that could be measured to better communicate student success to authorizers and other stakeholders. What is innovative here is pushing the boundaries of data reporting and how schools measure their impact on students, and ultimately, quality.
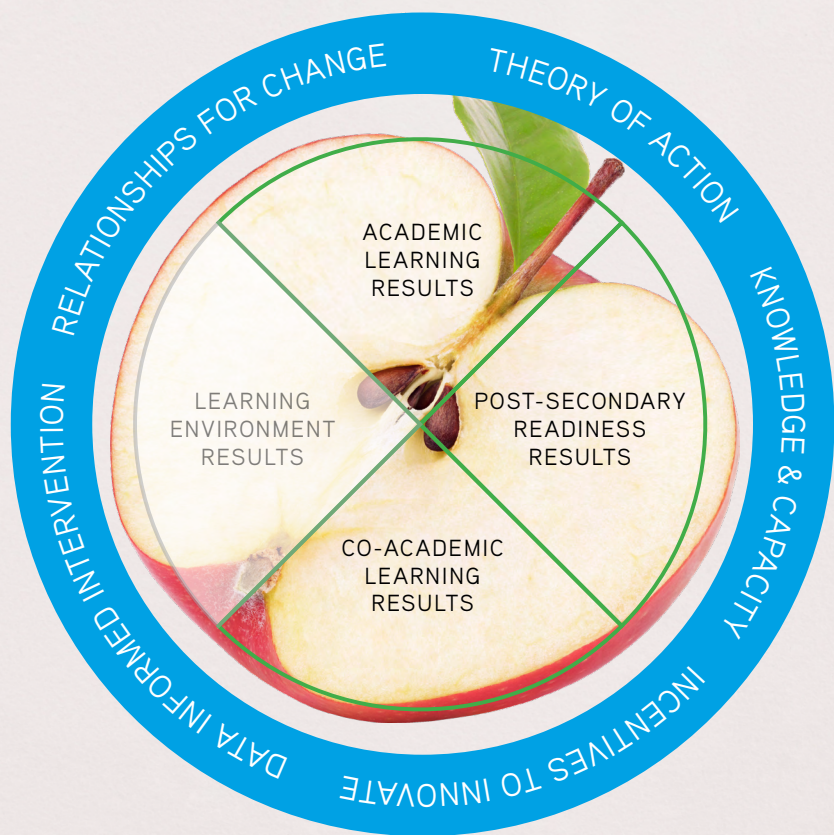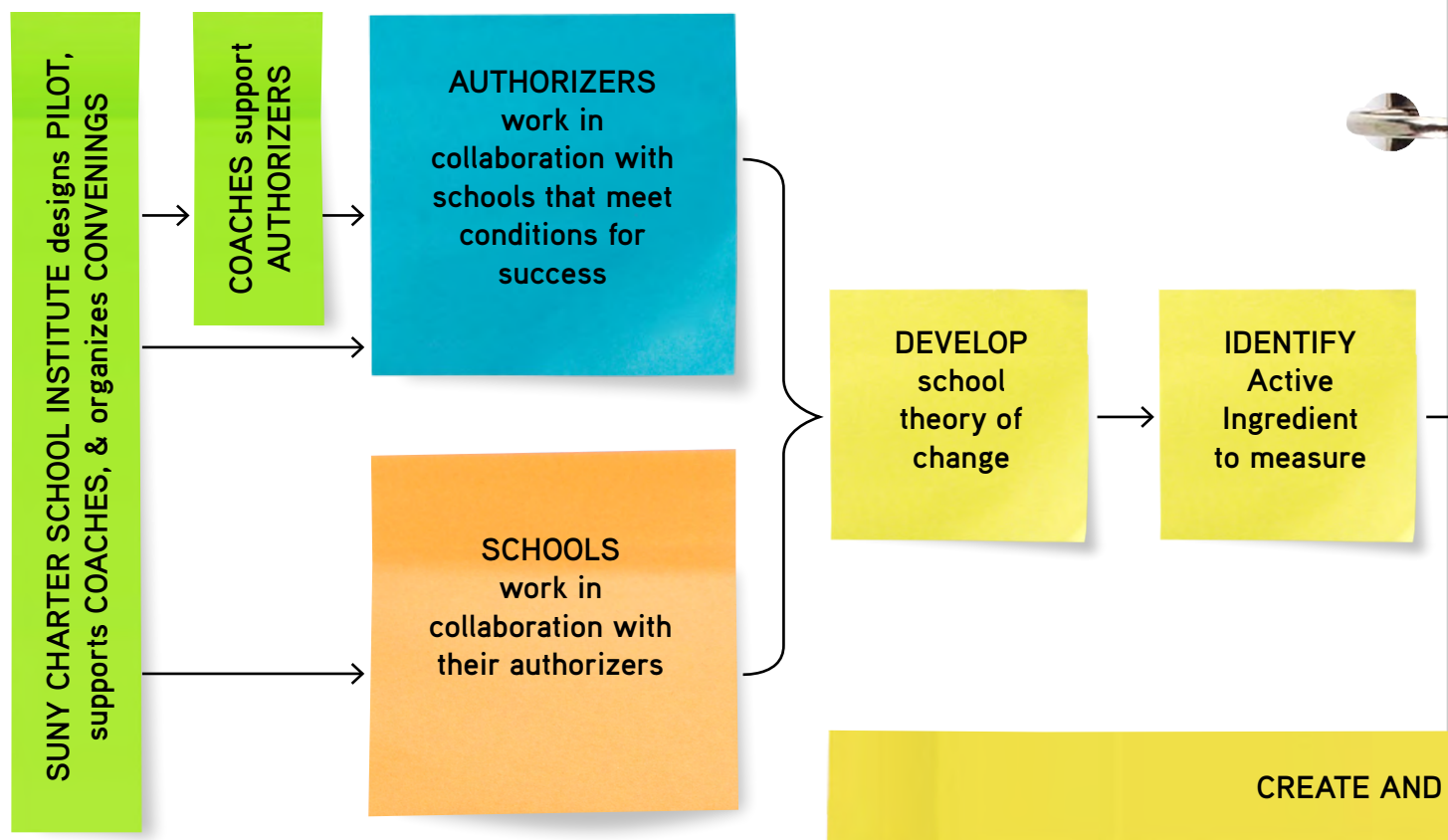
In 2019, the project launched a pilot to test implementation of the Active Ingredients concepts. Pilot activities aimed to answer the following:

1. What do authorizers need to create an environment for responsible and credible collection and reporting of additional measures of student and school success?

2. Which conditions of success are most critical?

3. Do Active Ingredients support anecdotes of school success with needed evidence/data?

4. Which elements and practices add to the credibility of data?

5. Which Active Ingredients are of most use and interest to authorizers?

These questions have both informed the project development and also the evaluation frame.

SUNY CHARTER SCHOOL INSTITUTE designs PILOT, supports COACHES, & organizes CONVENINGS

COACHES support AUTHORIZERS

AUTHORIZERS work in collaboration with schools that meet conditions for success

SCHOOLS work in collaboration with their authorizers

DEVELOP school theory of change

IDENTIFY Active Ingredient to measure

CREATE AND

This workbook guides authorizers and their interested schools through the activities and tasks that pilot participants completed and improves upon these activities based on what we learned via the pilot. Intended to create an environment and establish practices that support the credible and replicable collection and reporting of student data, this enhances stories of student success and serves to address an increasingly prevalent problem authorizers face.

The visual representation of the pilot project identifies the primary roles, activities, and anticipated outcomes. It also communicates the need for iteration and parallel processing that isn't always easy to translate when using a linear workbook format. Users will notice prompts throughout to revisit tools and revise plans.

A note on operating contexts: Definitions are important for clarity of how the terminology is used in any application with the acknowledgement that context matters and terms may be applied differently in different settings, schools, and states. This project does not make recommendations on specific measurement tools. Some references for selecting specific tools are included.



CHOOSE how to measure Active Ingredient

COLLECT DATA & CHECK FOR QUALITY

ANALYZE DATA

MAKE CHANGES TO EDUCATIONAL PROGRAM

IMPROVED STUDENT OUTCOMES

MAINTAIN BUY-IN WITH RELEVANT STAKEHOLDERS
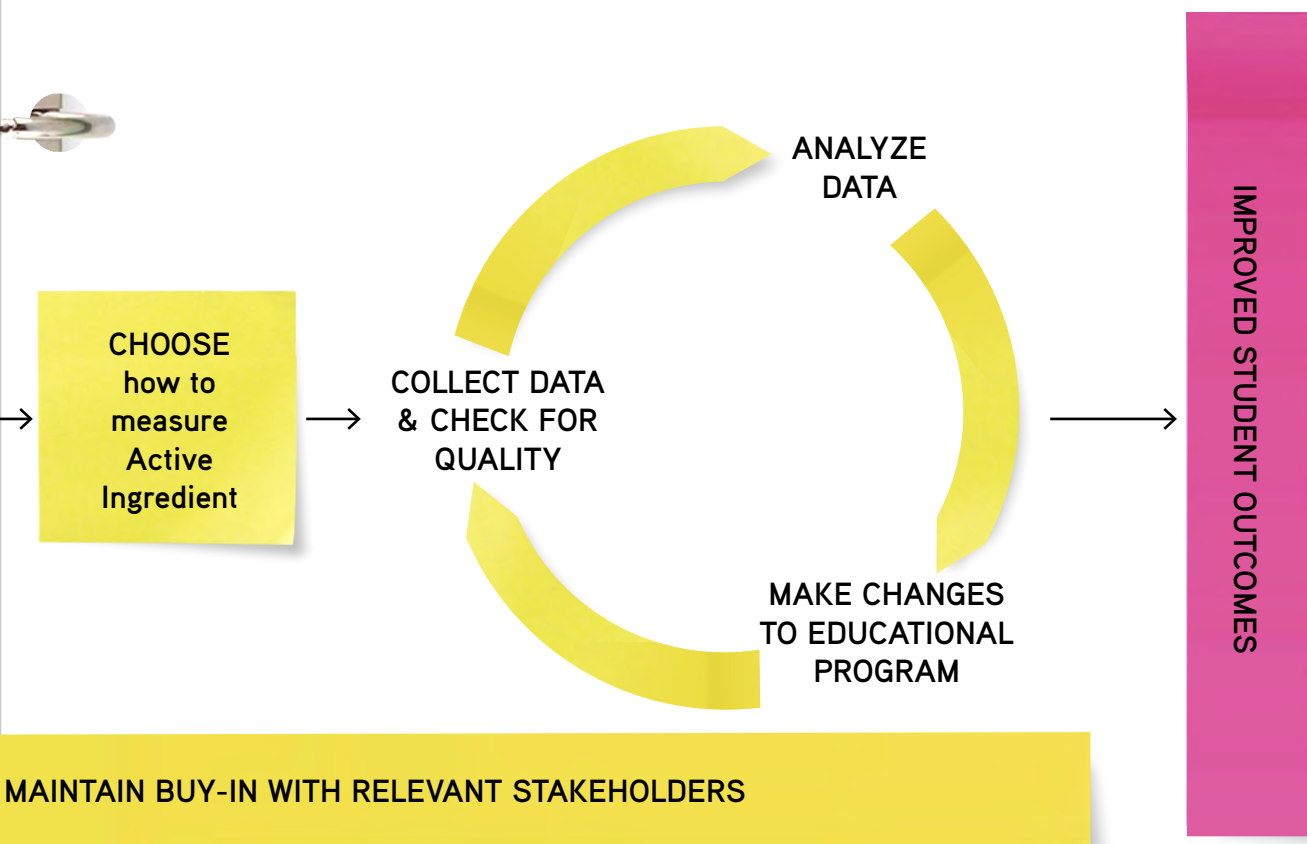
# HOW TO USE THIS WORKBO

## TYPES OF CONTENT

This workbook is a collection of materials that include a checklist of tasks, tools, examples, questions and prompts, links to external resources, and references. It is organized in a way that guides authorizers and schools through and between critical steps, and ultimately toward the identification of additional student outcome measures. It also helps users develop a detailed understanding of how Active Ingredients program inputs contribute to student academic success. This puts authorizers and schools on a path toward credible and meaningful data collection that further supports stories of student success.

**HALL PASS**

Student _Vanessa Threatte_
Date _9/29/2020_ Name
To _Active Ingredients Study Group_
From _English_
Time _11:05AM_ Class
Signed _____

**RETURN**

Time _____ Signed _____

## NAVIGATION KEY

Use the buttons along the bottom of the page to easily navigate the workbook.

> **NEXT Page**

< **PREV Page**

🔖 **Section Bookmarks**

☑ **Return to Checklist**

≡ **Return to Tools**

# TYPES OF GUIDEPOSTS

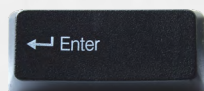*Look for these images throughout the workbook to orient yourself to the task at hand*

## THINK

### GUIDEPOSTS
resources to inform decisions making

## ACT

### GUIDEPOSTS
actions or decision points will often include a tool to complete

## COMMUNICATE

### GUIDEPOSTS
communication points that require sharing information related to the project in order to advance the project

# HOW TO USE THIS WORKBO

This workbook aims to address multiple audiences. The primary audience is charter school authorizers interested in developing practices that welcome additional data of student success. This work must be done in collaboration with schools and balance the autonomy of charter schools and the responsibility of accountability that authorizers bear. Authorizers and schools may seek to engage the professional support of consultants as coaches who may leverage this text as well. Ultimately, the guidance and insights presented in this workbook will prove useful to a variety of education scenarios including any organization responsible for delivering programming that supports student learning and those entities involved in the oversight and accountability for that learning.

For purposes of this workbook, the following definitions are assumed.

**AUTHORIZERS** the office or team created to support the legislated responsibilities of an entity or body legally responsible for granting charters for independent, autonomous public schools. Authorizing offices or teams are typically responsible for monitoring academic accountability, legal and fiscal compliance, and organizational viability. In some contexts, authorizing offices or teams are referred to as sponsors.

**SCHOOLS** the school or network-based leader or leadership team that represent or make decisions on behalf of the charter school program.

# ORGANIZATION

A few words on the organization of this workbook. This workbook is organized to provide detailed and explicit instruction on how to move through the activities and tasks systematically while also connecting relevant examples and prompts for further consideration when needed. This is achieved through phased grouping of guideposts.

## PHASES

There are roughly six phases of tasks and activities in this workbook. Each phase builds on the prior phase and prepares the user for the next. For each of the following phases, authorizers, school leaders, and coaches can anticipate the presentation of why activities in that phase are important, specific tools for that phase, and directions on how to use them. When possible, completed samples of tools offer further clarification and direction.

**Active Ingredients Workbook Phases**

1. Early planning

2. Preparing

3. Early Implementation

4. Mid-Implementation/ Data Collection

5. Late Implementation/ Data Analysis

6. Reporting and Reflection

Additionally, special commentary inserted throughout the workbook infuses the materials with context and brief examples. Users will notice "Guiderails" that provide additional guidance and context from a specific perspective such as authorizer or school. "In-sights" will offer vivid examples that further illustrate the guidepost.

## GUIDEPOSTS

Guideposts are activities, tasks, and deliverables critical to progress toward establishing additional measures for student success associated with school Active Ingredients. This workbook will guide users through each step while offering important insights whether you are an authorizer, school leader, or coach supporting the work. Within each phase, guideposts will require users to THINK, ACT, and COMMUNICATE.

LET'S GO!

# GUIDEPOST CHECKLIST

## I: EARLY PLANNING

1. Preview Active Ingredient Workbook
2. Initial School Communication/Share Materials
3. Assess Conditions for Success
4. Literature Review
5. Mutual Determination to Move Forward
6. Identify Domain or Learning Type
7. Coaching Decisions

## II: PREPARING

1. Create School Work Plan
2. Identify Active Ingredient
3. Document/ Develop Logic Model for Selected Active Ingredient
4. Socialize Active Ingredients with Stakeholders

## III: EARLY IMPLEMENTATION

1. Complete Active Ingredient Form
2. Data: Early Planning & Implementation
3. Socialize Active Ingredients with Stakeholders

## IV: MID-IMPLEMENTATION/ DATA COLLECTION

1. Data: Planning Collection
2. Review/Modify School Work Plan
3. Ongoing Socialization/ Communication regarding Active Ingredients with Stakeholders

## V: LATE IMPLEMENTATION/ DATA ANALYSIS & REPORTING

1. Data: Analysis & Reporting
2. Ongoing School Work Plan
3. Ongoing Socialization/ Communication regarding Active Ingredients with Stakeholders

Use the following guidepost checklist to keep track of progress and anticipate upcoming tasks.

TIP: you can click checklist items to jump to sections of the workbook!

*Because this is not a linear process, users should determine carefully when and how to move through guideposts in relationship to each other in a manner that fits local context.*

# DEFINITIONS

One of the objectives of Active Ingredients is to ensure shared meaning and understanding of quality education. Working across varied contexts requires the adoption of consistent language and meaning. The following definitions provide clarity and serve as a reference when using this guide.

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**in·gre·di·ent** (inˈgrēdēənt) *noun*
A programmatic learning or readiness component that contributes to the overall success of students; measuring student performance around these ingredients provides additional measures of student success and school success, and strengthens stories of school quality.

**learn·ing types** (ˈlərniNG tīps) *noun*
Types of learning that characterize the programmatic approach for an Active Ingredient. Learning types provide additional information about the nature of the intervention and the resulting learning students experience. Learning types also provide broad characterization useful in identifying and exploring a relevant research base.

Social/ Emotional Learning

Applied/ Experiential Learning

Individualized/ Personalized Learning

**mea·sure** (ˈmeZHər) *noun*
A statement about expected observable student performance related to an ingredient that includes specifics about which students, when, and how the performance is expected to be assessed.

**in·stru·ment** (ˈinstrəmənt) *noun*
A scale, survey, rubric, assessment, or observation protocol, etc. that allows the credible documentation of student performance on a specific ingredient.

**coach** (kōCH) *noun*
A consultant that offers expertise needed to guide or train an authorizer or school leader through essential tasks and activities that support the meaningful, credible, and replicable collection of new data.

**learn·ing & read·i·ness
re·sults / do·mains** (ˈlərniNG and,(ə)n ˈredēnəs rəˈzəlt / dōˈmāns) *noun*
Groups of ingredients or domains that organize them through commonalities and the types of results they produce for students:

ACADEMIC LEARNING RESULTS include traditional accountability measures but additional Active Ingredients included in this category may not be traditional academic outcomes or typically included in formal accountability plans. However, they are academic in nature and relate significantly to academic attainment or indicate academic progress and success.

CO-ACADEMIC LEARNING RESULTS are those ingredients that support student academic success but are not academic in nature themselves and may relate to social and emotional learning, or are delivered during wrap around support services.

POST-SECONDARY READINESS RESULTS are ingredients tied to student readiness for future opportunities beyond formal K-12 schooling and may include academic and co-academic learning results, as these domains are not intended to be mutually exclusive.

*LEARNING ENVIRONMENT RESULTS are ingredients that communicate school environment conditions and leadership practices that not only support but remove barriers to student success. Active Ingredients in this domain are unique in that resulting measures do not represent student performance and therefore have a more limited recommended use, but remain important to schools' success.

# EARLY PLANNING PHASE

The Early Planning Phase is composed of several guideposts aimed at providing schools and authorizers with the necessary background information to effectively plan for advancing their Active Ingredients work. Ultimately, activities in this phase determine if authorizers and schools will proceed and what support, if any will be needed to do so effectively.

## TOOLS & RESOURCES FOR THIS PHASE

Active Ingredients FAQ

Conditions for Success Rubric

Literature Review

Active Ingredients Sample Measures

## THINK

The primary resources reviewed in this phase include a recommended scan of this Active Ingredients Workbook and a provided literature review.

## ACT

There are three critical decision points for this phase:

1. a mutual determination to move forward between the authorizer and school which will be supported by the completion of the Conditions for Success rubric,

2. a decision on the domain or learning type for the Active Ingredient to be selected that will be greatly informed by a review of the literature, and

3. a decision on the need and use of outside coaching informed by the domain and learning type decision and supported by the conditions for success rubric.

## COMMUNICATE

Communication during this phase is mainly between authorizer and school as they negotiate their mutual interest in identifying an Active Ingredient and initiating new data collection and reporting practices associated with it.

# PREVIEW THIS WORKBOOK

## PURPOSE

An important first step in initiating Active Ingredients work will be to understand the scope (breadth and depth) of the undertaking. Therefore, please consider the following questions as you preview this workbook in its entirety. It will be extremely important to understand the broad strokes of the thinking, actions and communication required over the course of this effort.

## DIRECTIONS

**AUTHORIZERS** THINK:

Skim the workbook and **THINK** about the following:

- What actions have you already begun?

- What do you anticipate being your biggest challenge?

- What is your biggest advantage? What do you do well?

- What makes your charter law or school unique?

- What questions do you have?

## TOOLS

Active Ingredients Workbook

Color-coded labels indicate guidepost activities by audience/role:

AUTHORIZERS

SCHOOLS

# AUTHORIZER-SCHOOL COMMUNICATION

## PURPOSE

Authorizers and school leaders must work in concert to make mutually meaningful decisions as they negotiate the use of additional measures of student success for the Active Ingredients effort to be successful. Both parties need to be equally informed. The primary objective of this initial communication is to express interest in the work, its purpose, and to share information on what to expect from the process.

## DIRECTIONS

**AUTHORIZERS** **COMMUNICATE:**

When Active Ingredients work is authorizer-initiated, potential schools should be quickly brought up to speed on the purpose and benefit of identifying and measuring a school's Active Ingredients. On the other hand, when a school is motivated to capture data on their Active Ingredients to better communicate student success to their authorizer, this **COMMUNICATION** can occur in the opposite direction. Authorizers will need to clearly understand opportunities and potential Active Ingredients present for accountability. Regardless whether the effort originates from authorizers or schools, we recommend clear, concise, and *early communication*. The following tools can be used as part of these initial communications between authorizers and schools.

## RESOURCE

Active Ingredients FAQ
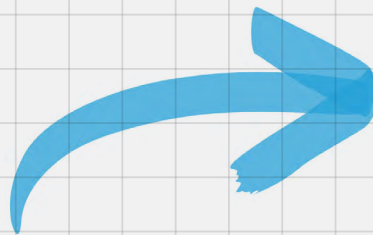
If this is done on a voluntary basis, not every school will say "yes" to participating in Active Ingredients. One charter authorizer in the pilot project contacted three different schools and only one agreed to participate. Starting the process of recruiting schools early gives you time to make sure you find a school that will be fully on board.

One of the first actions authorizers took as pilot participants was to share an initial communication with schools that included an FAQ.

Sharing the Active Ingredients Workbook will be the most important initial communication between authorizers and schools. Understanding the complete scope of work early-on was one of the most important pieces of feedback received as part of the pilot project.

# ASSESS CONDITIONS FOR SUCCESS

The commitment and relationships across all levels of school staff and leadership are critical to the implementation of any theory of action or change. As all of the above conditions are interrelated, it is critical to note that a simple top-down approach to implementing and measuring Active Ingredients is insufficient. Future communication guideposts are significantly focused on stakeholder communication for this reason.

## PURPOSE

Early Active Ingredients work prioritized a series of conditions and characteristics that would support the successful implementation of additional measures. Understanding strengths and areas for growth associated with these conditions will help authorizers and schools initiate this work well informed of both assets and needs. This understanding will also inform upcoming decisions about whether to work with a coach or not.

**Conditions for Success:**

- School Developed & Articulated Theory of Action/Change
- Commitment to Selecting Mission Aligned Additional Measures
- Incentives to Innovate
- Data Informed Intervention Design
- Commitment to Knowledge & Capacity Development
- Necessary Relationships for Change

Probably most significant of these conditions is the connection between theories of change and identifying additional measures. Remember, there must be tight alignment between selected additional measures, key levers for student success, and outcomes for students. Schools who better understand these relationships between their program and student outcomes are better positioned to identify measures that are mission aligned. A significant focus of attention and effort on this topic is outlined during the logic model/ theory of change guidepost in the next phase dedicated to preparing for implementation.

## DIRECTIONS

**SCHOOL LEADERS ACT**: Use this rubric to self-assess your school's current readiness to develop additional *measures* of student success. The categories can be used as prompts to reflect on capacity and to anticipate needs during your development of Active Ingredients. It is encouraged that your completed form be used to engage your authorizer in a conversation about a plan of action as additional measures are developed. Please respond to the degree the following conditions of success are present. Examples of observable characteristics (or "look-fors") found in positive and strong examples are provided to assist in rating. Not all characteristics need be present to agree.

**AUTHORIZERS ACT**: The rubric is not intended to produce a "grade" or "passing score" but rather summary of assets and needs that schools and authorizers consider when planning for support or considering whether to proceed. If authorizers are engaging multiple schools the relative "readiness" can be used to make decisions of how to allocate resources or prioritize engagement.

**TOOL** Conditions for Success Rubric

# REVIEW THE LITERATURE

## PURPOSE

The literature review should be used to better understand the research landscape for many of the Active Ingredients examples. Schools and authorizers can easily identify resources for topics of interest and either find reinforcement by the presence of a research base or motivation to explore and better understand less documented approaches.

## DIRECTIONS

Browse the resources linked below.

The literature review summarizes the conceptual rationale, research evidence, and sources for example Active Ingredients. It also provides notes on the limitations of current research.

The Research Examples by Learning Type provide brief examples of research around school activities for each of the learning types. There is also an associated reference list that expands on sources of additional information for each topic.

**AUTHORIZERS** & **SCHOOLS** **THINK** about the following during your review:

*Which examples or topics interest you most?*

*What does your school do well?*

*Is it important to you that there is a significant, existing research base for your Active Ingredient?*

*Do you have the bandwidth or interest to create a new credible and valid measurement instrument to pursue the documented ingredient?*

## RESOURCES

Literature Review

Learning Type Research Examples

Learning Type Reference List

# MUTUAL DETERMINATION TO MOVE FORWARD

## PURPOSE

After reviewing the purpose and background of Active Ingredients project, the scope of the proposed activities, the implications of the available research base for the areas of interest, and the landscape of assets and needs for your authorizing and school contexts, you arrive at a critical juncture. At this point, authorizers and schools mutually determine if they can and should commit to moving forward with their development of Active Ingredients and the collection and reporting of additional measures of student success.

## DIRECTIONS

**AUTHORIZERS** & **SCHOOLS** **THINK** about:

This critical step to move forward needs to be mutual between authorizer and school. Discuss/consider the following *questions*:

Are the capacity and resources available to make this a priority?

What are the incentives to pursue this? What challenges should be anticipated?

How will we use this new information?

What will success look like?

**AUTHORIZERS** & **SCHOOLS** **ACT:**

Will you move forward?

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Additional/alternate questions to discuss:

- What are the required deliverables if any from the Active Ingredients Workbook?

- Which are optional?

- What are the boundaries for new measures if any?

- How will additional measures be selected?

- What are the expectations for outcomes? How will goals be determined?

- How will initial data be used?

# IDENTIFY DOMAIN
# OR LEARNING TYPE

## PURPOSE

The decision to move forward has been made. Let's get to work. For this guidepost, you will be asked to narrow the field of possibilities for your Active Ingredient by identifying a domain or learning type. Whether or not you already have an ingredient in mind, this step is important because it informs areas of knowledge or skill-sets you may decide to pursue as a coach. Beginning to refine your area of work also allows you to delve deeper into related resources and literature.

## DIRECTIONS

This initial decision point may be left completely up to school leaders or may be heavily influenced by the local policy landscape.

## SCHOOLS ACT:

Identify a domain and/or learning type to explore.

## TOOL Active Ingredients Example Measures
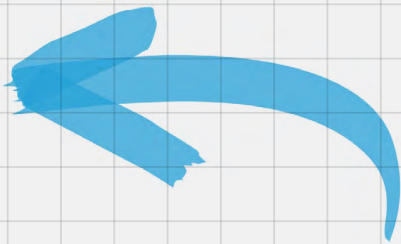
One school chose to focus on academic skills. While they originally planned to focus on their students in special education and IEP goal progress, they eventually chose to use interim assessments to track progress for their students receiving Tier 2 interventions. The population and measurement changed, but the school maintained their focus on academic skills.

# COACHING
# DECISIONS

Focus on building needed capacities so that new processes can be incorporated into existing work flows as opposed to engaging a consultant to "do" this project. Active Ingredients has long term potential to enhance authorizing practices.

Coaching is recommended at the authorizing level. Although there was significant interaction between coaches and schools during the pilot experience it was primarily through the engagement with the authorizer. Authorizers and schools will need to negotiate the role of coaching with schools based on individual contexts and relationships to honor the autonomy of schools.

## PURPOSE

Coaching was an approach leveraged during the Active Ingredients pilot project. The concept developed from the desire to develop the best process possible and increase the likelihood of success. The project recruited education experts to help in the development of resources and to pair with authorizers to support them through this new and evolving process. Each authorizing context varies and schools invariably will gravitate toward different Active Ingredients. Coordinated coaching provided a consistency in approach to implementing Active Ingredients. A coaching model also supported the development of needed capacities for authorizers to continue work beyond the pilot engagement and provided needed content and process *support*.

## DIRECTIONS

### AUTHORIZERS ACT:

If an authorizer chooses to engage a consultant to coach them through the development of Active Ingredient processes they should consider the needs surfaced by the Conditions for Success Rubric, the content areas associated with the domain or learning type of the Active Ingredient(s) their schools are interested in, and the needs of their operating contexts. Two areas of expertise to consider:

Content expertise: general education, special education, opportunity youth, authorizing practices, early childhood education, English language learning, student assessment

Process expertise: project planning/management, logic modeling, accountability, data analysis, school program design, research

# PREPARING PHASE

Characterized by several guideposts that prepare schools and authorizers to implement their plans, users lay the foundation to measure student outcomes of their Active Ingredients. This phase focuses effort on not only creating a plan of action but also deeply understanding and describing the selected Active Ingredient(s) and associated data.

## TOOLS & RESOURCES FOR THIS PHASE

Logic Model Frame

Active Ingredients Communication Deck

## A PREVIEW OF THE GUIDEPOSTS IN THIS PHASE

### THINK

Users will leverage a variety of external links to resources that support the development of logic models. Sample work plans that pilot participants used are also provided for ideas on how to organize and plan for the work to come.

### ACT

There are two major deliverables during this phase:

1.  Documenting a school work plan with key deadlines and deliverables; and

2.  Initial documentation or further development of logic models that outline the relationship between Active Ingredients and student outcomes or theory of change.

### COMMUNICATE

During this phase, authorizers and schools will inform their internal stakeholders about what the Active Ingredients work is and why it is important.

# CREATE SCHOOL
# WORK PLAN

## PURPOSE

School leaders involved in the pilot project benefited from the use of a planning session to clearly outline deadlines and deliverables. The exact sequence and timing of activities varied based on the specific Active Ingredients involved, as well as the capacity of the authorizer and school. Participants found that it was most effective to break down critical tasks into monthly action items in order to advance toward the guideposts.

## DIRECTIONS

**AUTHORIZERS** & **SCHOOLS** **ACT:**

- Use the examples linked below to develop a list of deliverables for the project and deadlines. Our partners used a variety of methods to comprehensively track the work they completed, work they were doing, and work yet to be done. Regardless of the individual team's approach, the following components or characteristics were critical:

  - Shared development of the plan with those completing the work;

  - A comprehensive list of tasks or activities to be completed;

  - Assignment of roles (who's responsible for tasks, who should be involved or consulted);

  - Realistic estimates of time for the work to be completed;

  - Defined deliverables with due dates;

  - Consideration of dependencies; and,

  - Flexibility to respond to needed adjustments.

## EXAMPLES

Work Plan Example

Pilot Project Timeline

One school brought in several members of their school staff to create their Active Ingredients team to work together throughout the project.  This included The Head of School, Special Projects Manager, Data Analyst, and  Director of Social Work. Not every school will need the same roles on their team, but making sure important stakeholders in the school help with this work can make it easier to create schoolwide buy-in later.

# IDENTIFY

# ACTIVE INGREDIENT(S)

## PURPOSE

At this point, we ask that you plant a flag and clearly define what you think your critical lever is for student success. In order to develop an effective plan for data collection, you will need to dive deeper and focus on a specific intervention or set of interventions. The work surrounding the remaining guideposts all stem from this decision point.

## DIRECTIONS

### SCHOOLS **THINK:**

What 1-2 unique or non-academic activities do you find most important for reaching your school's intended outcomes?

Thinking about the resources and activities you offer students, what 1-2 outcomes do you strive to achieve that are not captured in your existing accountability system?

Select 1-2 Active Ingredients your school wants to focus on.

### SCHOOLS **ACT:**

Define your Active Ingredients in one sentence.

A school with a robust focus on social-emotional skills identified grit as their Active Ingredient. Focusing on this skill helped the school look more closely at the types of lessons and activities they provided to students to develop grit. The school was able to demonstrate some of the nuanced offerings they provide to students that are not captured by the existing accountability system.

# DOCUMENT/DEVELOP

# LOGIC MODEL

Both authorizers and schools should take care to distinguish process measures and outcome measures. They are easy to confuse. Remember: process measures help you ensure that interventions and programs are being delivered as intended. Outcome measures are the end results you wish to achieve for your students.

## PURPOSE

The logic model guidepost helps ensure that you identify meaningful, mission-aligned Active Ingredients and measures. The logic model is a tool to develop understanding of the goals and outcomes you want to produce for students, and also a tool to communicate the process for achieving these results. Because both the process and outcomes will be described in detail, the logic model produces a clear outline of process measures and outcome measures to ensure the activities are on track to create the intended outcomes.

## DIRECTIONS

**SCHOOLS** **THINK:** What is your school trying to achieve?

What are the resources you bring together to make your school successful?

What types of activities (programs, interventions, and ongoing actions) does your school engage in to reach its intended outcomes for students?

What happens as a result of these activities in the short and long term?

In what ways can you monitor that these programs, interventions, and ongoing actions are being implemented as planned?

**ACT:**

Use the logic model frame to explore the relationship between your selected Active Ingredient and outcomes for your students. In the process, you may find greater clarity around what that critical lever is in your school program and what the resulting impact is for students. This may cause you to refine or shift your Active Ingredient selection. Respond to the prompts:

1. Active Ingredient: Identify or quickly describe the Ingredient in "big picture" terms.

2. Resources/Inputs: What do you need in order to implement the intervention or Active Ingredient?

3a. Process Inputs or Activities: What activities will you do that lead to student learning?

3b. Process Measures: How will you assess the effectiveness of your activities?

4a. Outputs and Outcomes: What measurable outcome results from your activities. What are the student outcomes—changes in attitudes, behaviors, skills, abilities?

4b. Outcome Measures: How will you measure/evaluate these student outcomes?

**AUTHORIZERS** **ACT:**

Review completed logic model for clarity and alignment with the mutual objectives of this work.

**TOOL** Logic Model Frame

**REFERENCE LINKS**

Logic models: A tool for effective program planning, collaboration, and monitoring

Charter Schools Program Logic Model Workshop

W.K. Kellogg Foundation Logic Model Development Guide

Creating a well thought out logic model took some school and authorizer teams several months. However, the benefit of this rigorous process was that several schools refined their initial thinking and ended up choosing a different, more critical Active Ingredient than the one they initially identified. For example, one school originally wanted to primarily focus on improving student behaviors but ended up looking at workplace readiness activities because that was so important to the long-term success of their students.

# SOCIALIZE ACTIVE INGREDIENTS WITH STAKEHOLDERS

## PURPOSE

During this phase, the primary objective is to introduce directly involved school teams and leaders, including the governing board, to the Active Ingredients project and its benefits. You have identified the Active Ingredient, the benefit or student outcome, and how you will measure this learning, and it is time to share that great thinking. The end goal is to generate interest and support as you head into the next phase of the work.

## DIRECTIONS

### AUTHORIZERS & SCHOOLS COMMUNICATE:

Slides 1-23 of the Active Ingredients communication deck provide ready to use slides with an overview of the Active Ingredients project including its concepts, language and benefits. Users have the option of selecting slide formats that are optimized for brief verbal presentation or a version with more text for printing or email distribution. Authorizers and schools may include more detail around the specific implementation they are preparing including the Active Ingredient, theory of change, or student measure. This information is recommended for those individuals most closely tied to the project in its initial phase. This will help you to build a strong foundation of understanding and support for the project. When well-equipped with the language and understanding of the project, those early participants and contributors will help other stakeholders buy-in to the effort. There will be opportunities to share information more broadly in future phases.

**TOOL** Active Ingredients Communication Deck Slides 1-23

An authorizer in the pilot project helped one of their schools introduce the project to their charter board when the authorizer attended a regularly scheduled board meeting. Each stakeholder will benefit from learning about Active Ingredients from someone different. Charter boards are likely to be open to participating in something brought by the authorizer. School staff may be more receptive to learning about it from their school leader.

# EARLY IMPLEMENTATION

Guideposts during early implementation focus on planning for data collection and analysis. Authorizers and schools will better understand the implications and needs associated with their new data collection stream by completing a data planning protocol. This will prepare authorizers and schools to communicate objectives and data collection processes clearly to other stakeholders.

## TOOLS FOR THIS PHASE

[Active Ingredient Measure Data Form](#)

[Data Planning Protocol](#)

[Stakeholder Understanding Rubric](#)

[Active Ingredients Videos](#)

# 3

## A PREVIEW OF THE GUIDEPOSTS IN THIS PHASE

**THINK & ACT**

THINK & ACT: There are two primary tasks during this phase:

1. Completion of the Active Ingredient Measure Form that details selected Active Ingredient, its connection to the school theory of change, additional measure and details about the measurement instrument. In completing this form, you will build on data planning work you completed in prior phases to fully flesh out the details of your Active Ingredient, its connection to your theory of change, and how you will measure outcomes. This becomes an important organization and communication tool that you can use with your school community.

2. Early Planning and Implementation for Active Ingredient data collection using the Data Planning Protocol. Authorizers and schools begin negotiating the additional data to collect and report for the identified Active Ingredient(s). focusing on meaningful, credible, and replicable data practices.

**COMMUNICATE**

Communication during this phase is primarily internal for authorizers and schools as they inform their stakeholders about what the Active Ingredients work is and why it is important.

# COMPLETE ACTIVE INGREDIENT MEASURE DATA FORM(S)

## PURPOSE

This tool provides a common architecture for the development of Active Ingredient measures. The structured format supports schools and authorizers in developing meaningful and credible measures.

## DIRECTIONS

### SCHOOLS ACT:

Complete the Active Ingredient Measure Data Form linked below. Use the completed logic model from phase two to identify 1-2 student outcome measures that best represent the mission of your school and that most strongly support academic success for your students. You can also use the examples as a guide. If you intend to track multiple student outcome measures, you should complete a separate form for each measure.

## TOOL Active Ingredient Measure Data Form

## EXAMPLES

Applied Learning Example

Social Emotional Learning Example
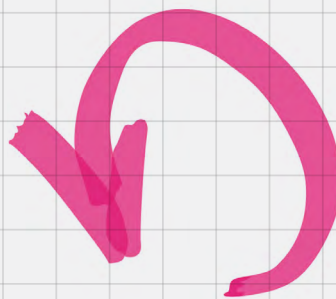
# DATA: EARLY PLANNING
# & IMPLEMENTATION

## PURPOSE

This guidepost is designed to help you get specific about the data you will collect to track your Active Ingredients. Before you go too far you will want to identify right targets using contextual information you already have about your Active Ingredients. will be and what contextual information supports the targets you set. You will also need to identify the tools and data sources that need to be in place to collect the data for your Active Ingredient. You and your authorizer will also vet the quality (including validity and reliability) of the data you intend to collect and consider how relevant the data will be given your school's mission and priorities. After you're clear on that, you'll want to plan for the staff capacity and support needed to implement data collection with fidelity.

## DIRECTIONS

### SCHOOLS THINK:

What specific indicator will you use to track your Active Ingredient?

What specific target are you trying to reach with the indicator you have selected, if any?

Where will you derive the information needed to track your specific Active Ingredients indicator? What will be needed in terms of staff capacity and training in order to collect data with fidelity?

If applicable, what information do you have to validate the quality of the tool you are using to collect your Active Ingredient indicator?

### AUTHORIZERS THINK:

Are the school's approach and data methodologically sound and valid?

Will the data the school intends to collect actually measure what they believe it measures?

Does the school have the capacity to implement the data collection and analyses they are planning?

Are the school's plans for data collection relevant and aligned given what you know of their results and intended outcomes?

### SCHOOLS ACT:

Use the template to create SMART indicators with ambitious but realistic targets. Then, create a clear plan for data collection and for training and engaging staff.

**TOOL** Data Planning Protocol  Questions 1-4

# SOCIALIZE ACTIVE INGREDIENTS WITH STAKEHOLDERS

## PURPOSE

In this phase, you will develop more detailed messaging around the connection between the Active Ingredient, the school theory of change, and additional measure and share this information with a widening school audience. Authorizers continue to communicate internally with their governance structure and teams about the implications and use for Active Ingredients in authorizing as any potential limitations.

## DIRECTIONS

There are three opportunities for communication during this phase.

**SCHOOLS** **COMMUNICATE:** Reinforce the language and benefit of the Active Ingredients work through precise communication that connects the additional measure to the school theory of change and outcomes for students. School leadership can use the resources in the Communication Deck-Learning Types slides to craft messaging for internal teams.

**AUTHORIZERS** **COMMUNICATE:** Communicate the school's articulated Active Ingredient(s), theory of change, and additional measure to staff. Authorizer teams will need to explore the implications for data collection and evaluation and clearly articulate the benefits and limitations of the forthcoming data.

**AUTHORIZERS** & **SCHOOLS** **COMMUNICATE:** Use the Stakeholder Understanding Rubric to informally how well you are doing at communicating the importance and activities of your Active Ingredients project with various stakeholders and how your success at this grows and develops over time. Having this self-assessment will allow authorizers to effectively adjust and clarify their messaging over time. Authorizers and school leaders have three stakeholder groups to consider when completing the rubric (school staff, parents, governance members). The rubric provides observable characteristics or "look fors" associated with a developing sense of the roles of SEL/whole child learning, applied/ experiential learning, and individualized/personalized learning. The tool provides basic suggestions to support stakeholders through this development and offers citations and examples related to the three learning types.

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Having a tool that is meaningful to stakeholders is the easiest way to gain buy-in. At a school that chose to look at student mental health services, mental health workers helped support data collection because they saw the direction connection between their work and the data. As a result, they saw their highest response rates ever for their mental health screening tool during the Active Ingredients pilot.

**AUTHORIZERS** & **SCHOOLS** **COMMUNICATE:**
Additionally, authorizers and school leaders may find the more detailed videos on specific participant schools useful for communicating examples of implementation. These videos might be circulated via email, screened at staff team or at board meetings to explain how other schools have approached and applied the concepts of the project. These examples can be of great support as schools refine their language about their implementation and for authorizers to think more broadly about the potential of wider implementation.

### TOOLS

Communication Deck- Learning Types (Slides 24-34)

Communication Deck- School Template (Slides 35-39)

Stakeholder Understanding Rubric

Active Ingredients Videos (Broome Street Academy and NYC Autism Charter Schools videos)

# MID-IMPLEMENTATION/ DATA COLLECTION PHASE

In the mid-implementation phase, authorizers and schools test new data collection processes and complete the data collection designed to measure their Active Ingredient.

## TOOLS FOR THIS PHASE

Data Planning Protocol

Active Ingredients Communication Deck

Active Ingredients Posters

- Example A
- Example B
- Example C

## A PREVIEW OF THE GUIDEPOSTS IN THIS PHASE

### THINK

Authorizers and schools will think about what has worked and what hasn't as they reflect on their planning. Additionally, there are significant opportunities for Authorizers and schools to work together as they carefully plan for data collection.

### ACT

Data collection begins in this phase! Authorizers, school leaders, and coaches (when applicable) will review and modify their work plans leveraging concepts of continuous improvement. Authorizers and school leaders will continue to work through the Data Planning protocol in this phase.

### COMMUNICATE

Communication during this phase is primarily internal for authorizers and schools as they inform their stakeholders about what the Active Ingredients work is and why it is important.

# DATA:

# PLANNING COLLECTION

The school that chose to focus on academic learning for their students receiving Tier 2 interventions had to consider how often their assessment tool could be given and which specific students would take it. They chose a tool that all students at their school take quarterly, so they only had to consider the appropriate sample of Tier 2 students when analyzing their data. Having a quarterly assessment allows them to see student progress mid-year rather than only at the end of the year. This was particularity helpful when students were unable to take assessments at the end of the 2019-20 school year.

## PURPOSE

Now that you know what you want to track, let's get even more granular about the type of data that needs to be collected. Answering these questions now will ensure you have exactly what you need when it's time to analyze and make meaning of your data. During this stage, you'll determine what sets of students will be included in your data collection, what unit of analysis is most important for you, and what contextual data you will want to have available later to make responsible declarations about your Active Ingredient.

## DIRECTIONS

**SCHOOLS** **THINK:**

How frequently will you collect the information needed to track your Active Ingredient?

Which students or groups or students will be included in the information you collect for your Active Ingredient?

What "unit of analysis" will you focus on for the Active Ingredients you track?

**AUTHORIZERS** **THINK:**

Are the samples of students that are included in schools' Active Ingredient data collection plans large enough or representative enough to make needed generalizations about their impact and results?

**SCHOOLS** **ACT:**

Define clear plans and criteria for whose results are tracked for the purposes of measuring your Active Ingredient.

**TOOL** Data Planning Protocol  Questions 5-7

# REVIEW/MODIFY

# SCHOOL WORK PLAN

## PURPOSE

As time passes and work evolves on complex projects, needs shift. This guidepost serves as a reminder to review and modify your work plan as needed. Realistic and efficient plans sustain the motivation of teams.

## DIRECTIONS

**AUTHORIZERS** & **SCHOOL LEADERS** ACT:

At this stage in the project – authorizers, school leaders, and coaches (when applicable), should review and modify their work plans to address:

- unanticipated needs of support;

- delays requiring extended deadlines; and,

- breakthrough and new ideas.

**Additionally, SCHOOL LEADERS ACT:**

The collection of new data also presents the opportunity to explore and incorporate process measures into internal continuous improvement cycles. Process measures, introduced during the logic model guidepost, are not measures that would typically be reported to authorizers (and therefore outside the scope of this project) but are immensely useful for schools in monitoring the quality implementation of program elements and interventions. The following reference links can be explored for more information regarding continuous improvement.

## REFERENCE LINKS

Creating a Culture of Continuous Improvement

About Continuous improvement

# SOCIALIZE ACTIVE INGREDIENTS
# WITH STAKEHOLDERS

## PURPOSE

At the school level, the number of staff and stakeholders directly impacted by the project continues to grow as you begin to collect data. Look for champions within your teams--individuals who show particular dedication and investment in the Active Ingredients work--to support you in socializing and building buy-in at this point. For authorizers, their teams are negotiating new data collection with participating schools and may want to begin the work of educating their governance stakeholders about the role of different learning types in overall student achievement.

## DIRECTIONS

**AUTHORIZERS** & **SCHOOLS** **COMMUNICATE:**

Based on insights gleaned from Stake Holder Understanding Rubric during phase three, authorizers and school leaders can continue to share key messages and examples with greater specificity. Now, you and other project leaders can share these messages more broadly through a variety of formats such as presentations, printed slides, discussions, and posters. The Active Ingredients Poster series provides a variety of visuals, core statements, and key messages to educate viewers about the project.

If school staff have to collect the data themselves, it is important that they are part of the feedback loop on how data collection occurs. The school focusing on student grit piloted Active Ingredients in only one classroom. It was important for that teacher to be part of the conversations about data collection in order to maintain fidelity over data collection long-term.

## TOOLS

**Active Ingredients Communication Deck**

**Active Ingredients Posters**

# LATE-IMPLEMENTATION/ DATA & REPORTING PHASE

In this last phase, you begin to see the fruits of your labor by collecting and analyzing data using the systems you refined in phases one through four.

## TOOLS FOR THIS PHASE

Data Planning Protocol

Active Ingredients Communication Deck

# ANALYSIS

**5**

## A PREVIEW OF THE GUIDEPOSTS IN THIS PHASE

### THINK

Schools and authorizers will examine the outcomes data and identify the most compelling and meaningful questions for further analysis. These questions will determine the types of data that the school ultimately reports to the authorizer.

### ACT

Schools and authorizers will take the final steps in determining the data stories their Active Ingredients efforts reveal and begin planning future cycles of data collection and reporting.

### COMMUNICATE

In this phase schools and authorizers explore what new learnings they have gleaned from data collection, and what questions and clarifications remain to be addressed as they refine their approach to measuring their Active Ingredient.

# DATA:

# ANALYSIS & REPORTING

## PURPOSE

As a result of all your careful planning, you are so close to learning something important about your school's impact. This guidepost will help you define how you intend to analyze the data you have collected. You will have to be specific about the analysis questions that are most relevant for your school and how you will share these findings with your various stakeholders.

## DIRECTIONS

**SCHOOLS** **THINK:**

What analysis questions do you want to answer about the relationship between your Active Ingredient and academic outcomes in your school?

What other data do you need to collect to answer your analysis questions?

What relationship did you see between your Active Ingredients and the other academic measures you tracked?

**AUTHORIZERS** **THINK:**

Are the analyses conducted by the school and the key findings clear, reliable, and actionable?

**SCHOOLS** **ACT:**

Conduct analyses that are appropriate for the type of data collected and use contextual information to ensure you are drawing appropriate conclusions.

Get analytical support or advice if you do not have the capacity in-house conduct more complex analyses.

**TOOL** Data Planning Protocol

# REVISE/REVIEW

# SCHOOL WORK PLAN

## PURPOSE

The final stage of this work plan is to reflect on the project work as a whole and plan for the next data cycle. After analysis and reporting are complete it is important that authorizers and school leaders take stock of what worked that they must continue doing and what didn't work that must be adjusted so that they can plan effectively, additional cycles.

## DIRECTIONS

### AUTHORIZERS ACT:

Decide what feedback regarding reported data is important to share as schools begin planning for future data cycles.

What were the strengths of the data stories presented?

What additional information would be helpful in order to use this Active Ingredient for higher stakes decision making?

### SCHOOLS ACT:

Decide if the next data cycle will continue with the same measure and instrument how they can continue to improve students' perceptions of mental health supports.

Will the number of students tested expand? Will additional classes or grades be included in the next cycle?

Is it appropriate to add additional measures?

What additional supports or content knowledge are needed to sustain or expand the work?

Even though schools in the pilot project were unable to complete their spring 2020 data collection due to school closures, most remained committed to continuing to measure their Active Ingredient in the future. One school plans to look closely at student survey questions they administered to determine with they need to be changed to better capture how students perceive mental health supports. By analyzing past data and looking critically at your logic model, you can refine your measurement and data collection on a regular basis.

# ONGOING COMMUNICATION
# WITH STAKEHOLDERS

## PURPOSE

Throughout the phases and guideposts of this workbook authorizers and school leaders have been guided through evolving approaches to communication with their stakeholders. The final communication task is to reassess how well various stakeholder groups understand and support the work of this project, and to refine your approach to ongoing communication.

## TOOLS

Stakeholder Understanding Rubric

Active Ingredients Communication Deck

# NEXT STEPS

For authorizers and their schools, creating an environment and establishing practices that support the credible and replicable collection and reporting of student data continues to be a critical part of our work on behalf of students. The activities outlined in this workbook are just the start.

There is potential for more research to be done on the implementation of Active Ingredients and how school leaders can generate the support needed while building efficient and durable systems that are required to ensure lasting success. We hope that the challenge of exploring the use of Active Ingredients has generated some solutions, and also more questions. We invite you to join the Active Ingredients Project.

## A FEW IDEAS AROUND HOW TO CONTINUE YOUR PARTICIPATION

- Get involved! If you leverage the tools in this workbook, please consider submitting your completed forms to be included in the Institute's growing library of Active Ingredients examples showcased on the Active Ingredients project website. Your work will contribute to a growing body of knowledge on this topic.

- Require a clear depiction and rationale for the school's theory of change in your charter application materials. Through pilot activities, participants learned that the shared clarity gained from defining a Theory of Change would have been helpful as part of their charter application. One authorizer decided to build it into its new school application process.

- Identify any barriers in the existing accountability system and your role as an authorizer with regard to including additional outcome measures in renewal decisions. If state statute is a barrier, determine the feasibility of lobbying the legislature for waivers or amendments.

- Consider your full portfolio of schools and group them based on which ones you would work with first to pilot Active Ingredients along with which schools you may need to do additional work with prior to starting Active Ingredients down the line.

Regardless of your path forward, we hope that you will join us and stay in touch.

## FOR MORE INFORMATION

### PROJECT MATERIALS

ActiveIngredientsProject.org

Active Ingredients Implementation Evaluation Report

Active Ingredients Example Library

### FEATURES

US DOE Profile on Authorizer Use of Nontraditional Measures (Forthcoming)

Bellwether Report: Standardized or Customized? How Charter School Authorizers Can Better Support Diverse, High-quality School Options

### RELATED/ADJACENT PROJECTS

ACE Charter Schools: National Campaign for Highest Needs Students

National Charter Schools Institute's A-GAME

# ACKNOWLEDGEMENTS

# PROJECT TOOLS

FAQ

Conditions for Success

Literature Review

Sample Measures

Logic Model Frame

Communications Deck

Measure Data Form

Data Planning Protocol

Stakeholder Understanding Rubric

Active Ingredients Videos

Active Ingredients Posters

- Example A
- Example B
- Example C

Check out the individual tools and examples available in the document library on the project site!

ActiveIngredients Project.org

## WHAT IS THE ACTIVE INGREDIENTS PILOT PROJECT?

Simply put, this pilot project was an opportunity for schools to demonstrate outcomes for their students besides test scores. The Active Ingredients pilot project aimed to create an environment for responsible and credible collection and reporting of additional measures of student and school success, in tandem with traditional measures of academic success. It was not the intention of those contributing to the project to replace existing academic measures, but rather to enhance stories of programmatic impact with the addition of data tightly aligned to school missions and theories of change. The pilot allowed schools the space to innovate without consequence in order to find ways to better tell their story with data. Ultimately, the pilot project will contribute valuable insight to a growing national conversation among educators about how to capture growth and impact in co-academic areas of development.

## WHO PARTICIPATED?

Pilot project participants included authorizers and schools. Five different charter authorizing institutions from around the country participated in the Active Ingredients pilot project. Each authorizer invited 1-3 schools within their portfolio to participate. Both the authorizers and their selected schools agreed to participate so that they could explore ways to capture a school's progress toward its chartered mission. The project provided expert coaches to support the selection of appropriate measures and provide guidance on Active Ingredient data collection and reporting.

## WHAT WAS THE PROJECT TIMELINE?

Activities for this project began in spring 2019 with planning for pilot implementation. Data collection occurred during the 2019-20 school year, and the final report was completed in October 2020.

## WHAT DID PARTICIPANTS DO?

Each authorizer worked with the school(s) to identify an Active Ingredient that is central to the school's theory of change and that contributes to students' academic success. The authorizer also (with the help of an expert coach) selected an appropriate method of measuring that Active Ingredient. The school's responsibilities included creating an implementation and data collection plan for the 2019-20 school year, collecting data, and reporting it to the authorizer. The authorizers provided guidance to the schools as necessary during the data collection phase, and worked with coaches to document successes and challenges along the way. All participants attended a mid-pilot national convening in February 2020 to share progress and learn from each other.

## WHAT DATA WERE USED AND HOW WILL THEY BE USED?

Descriptive data about the participating schools and their programs will be used to describe pilot participants and share how additional Active Ingredients measures were selected and relate to the school program. De-identified student data will also be collected to investigate the credibility of new data collection and reporting processes. Lastly, reflection data will be collected from participants to make recommendations for future improvement to the framework and processes.

## WHAT HAPPENED AT THE END OF PILOT PROJECT?

The project concluded with an evaluation report and a set of resources and tools other interested schools and authorizers can use to add additional measures of student success.

# ACTIVE INGREDIENT

## CONDITIONS FOR SUCCESS RUBRIC

School Leaders: Use this form to self-assess your school's current readiness to develop additional measures of student success. The categories can be used as prompts to reflect on capacity and to anticipate needs during your development of Active Ingredients. We encourage you to use your completed form to engage your authorizer in a conversation about a plan of action.

Please respond to the degree the following conditions of success are present. We provide examples of observable characteristics (or "look-fors") found in positive examples to assist in rating. Not all characteristics need be present to agree.

## SCHOOL DEVELOPED & ARTICULATED THEORY OF ACTION/CHANGE

Agree:

- Somewhat concise TOC/TOA (e.g., does not include everything)
- Can state why adults do what they do (connecting this to a letter for students)
- Can articulate the importance of selecting a measure and tool aligned to the TOC/TOA
- Embedded within decisions made (e.g., principal can cite it in a recent decision)
- Students articulate purpose in a way that connects to TOC/TOA

Strongly Agree:

- Using a well understood model that is documented clearly in written materials that are shareable.
- Can cite the process they use and have used to construct this TOC/TOA
- All staff can articulate and explain how they fit into the TOA/TOC
- Reflective on how it has changed and why
- Staff revisit during staff meetings/decision makers
- Understandable to an outsider

**Strongly Agree**          **Agree**          **Disagree**          **Strongly Disagree**

NOTES:

## COMMITMENT TO SELECTING MISSION ALIGNED ADDITIONAL MEASURES

- Articulate gaps in how existing measures represent their work
- Explain how additional measures will support the school's efforts
- Identify potential measures aligned to mission
- Describe past efforts to supplement existing measures

- Plan and budget for staff time to execute additional measures
- Demonstrate that all relevant staff beyond school leaders are onboard with additional measures
- Show support for board and partners

**Strongly Agree**          **Agree**          **Disagree**          **Strongly Disagree**

NOTES:

## INCENTIVES TO INNOVATE

School level:

- Staff stability and quality
- Stability of school "influencers" (e.g., boards and funders)
- Stated commitment to serving all kids, especially those perceived as "hardest to serve" (have quality metrics that demonstrate the diversity of the school's students and clearly define "hardest to serve")
- Record of making solid/good/holistic schools that achieve desired outcomes (process is good and outcomes are good)
- Have political capital to spend based on good track record (indicator on ability to take risks)

Authorizer level:

- Staff stability and quality
- Stated commitment to accurately capturing a school's impact in its entirety
- Capacity and relations to "coach" as well as authorize (there is a clear distinction between low stakes "pilot" and experimentation versus high stakes; creating time and space for innovation and progress)
- Thoughtful about "carrot and stick" continuum and when/how to proceed

**Strongly Agree**          **Agree**          **Disagree**          **Strongly Disagree**

NOTES:

## DATA INFORMED SCHOOL INTERVENTION DESIGN

- Instructional leadership uses an interim data dashboard/report to support teachers or professional development offerings
- Instructional leadership shares interim data reports with instructional staff

- School staff discuss using data to inform instruction and adjustments
- School leadership can reference decisions made based on data
- School leader has a system for sharing data with school board

**Strongly Agree**          **Agree**          **Disagree**          **Strongly Disagree**

NOTES:

## COMMITMENT TO KNOWLEDGE & CAPACITY DEVELOPMENT

- Size of staff meets needs of organization or there are plans in place to address staff ration and needs.
- Staff share learning with each other formally and informally (e.g., meeting agendas, interviews, and observations)
- Staff identify needs for knowledge/skills and seek expertise to address these needs

- Articulate ways the school staff have grown, why, and plans to continue to develop
- Plans to further develop are aligned to what students need to improve and/or the TOA/TOC
- Seek out and secure resources to make these improvements possible

**Strongly Agree**          **Agree**          **Disagree**          **Strongly Disagree**

NOTES:

## NECESSARY RELATIONSHIPS FOR CHANGE

- External partnerships particularly with community institutions relevant to their mission/data focus and with higher education institutions and researchers
- Collaborative history with authorizer *(have had prior discussions on the topic)*

- In-school collaboration especially between: data entry/collection personnel, practitioners, and leadership.

**Strongly Agree**          **Agree**          **Disagree**          **Strongly Disagree**

NOTES:

## CAPACITY & TIME

- Current leadership and staff have the time needed to develop and complete new work streams and build necessary teams; or,

- Active Ingredient or intervention area is currently a well-established and supported intervention within the school program that existing staff can reasonably accommodate development of the new measure

**Strongly Agree**          **Agree**          **Disagree**          **Strongly Disagree**

NOTES:

Overall Notes:

Identified Needs or Areas of Development:

# ACTIVE INGREDIENT

SUNY **Charter Schools Institute**
The State University of **New York**

## LITERATURE REVIEW

|  | Conceptual Rationale | Research Evidence | Sources | Notes/Examples |
|---|---|---|---|---|
| **GROWTH ASSESSMENTS** | Student cognitive achievement as measured by test score growth will increase their likelihood of high school graduation, college attendance, and employment because these levels of attainment are based on cognitive ability. | Test scores are a highly predictive measure of future salary and hourly wage attainment. It is far more predictive than measures of attainment, such as years of schooling. | Bowles, Gintis, & Osborne (2001)

Murnane et al (2000)

Hanushek & Woessmann (2008) | This evidence is based various assessments but not those administered as part of high-stakes accountability systems. |
| **GRADUATION RATES (CREATIVE COHORTING)** | Graduating from high school is an essential step in students, acquiring employment after school. As a result, graduation should be highly predictive of wages for students. | Students on track to graduate in their freshman year are four times as likely to graduate. Freshman GPA is equally predictive of graduation. Absenteeism of 10% or less is also highly predictive of graduation. | Allensworth & Easton (2007)

Kemple, Segeritz, & Stephenson (2013)

Roderick et al (2014) | While four-year graduation rates are most common, some research uses five-year rates. There isn't any research looking at anticipating length of time to graduation at time of enrollment. |
| **CTE SKILLS COMPLETION** | Attendance in career and technical education ("CTE") programs should prepare students for careers after high school. For other students, CTE is a way to create relevance between courses and what students want to do later in life. | Students who enroll in vocational CTE programs or career academies demonstrate a higher likelihood of graduation and higher average salaries. Dual enrollment in college courses while in high school increases college attainment as well as first-year GPA and the need for course remediation. | CTE

Dougherty (2018)

Meer (2007)

Page (2012)

Dual Enrollment

An (2013a)

An (2013b) | Studies of CTE and dual enrollment often struggle to isolate the causal effects of programs, so most of the work is correlational and should be taken with caution. |
| **PROGRESS ON IEP GOALS** | Student IEP goals are intended to support students in make progress in areas of need based on their disability. For academic related goals, student progress on IEP goals should also correlate with academic improvement in that area more broadly. | The limited evidence is mixed on the relationship between academic goal attainment and student achievement. There is some indication that the rigor of the goal matters more than achieving the goal, and that IEP goals in ELA are more correlated than math. | Fuchs, Fuchs, & Deno (1985)

Karvonen & Huynh (2007)

La Salle, Roach, & McGrath (2013) | |

| | Conceptual Rationale | Research Evidence | Sources | Notes/Examples |
|---|---|---|---|---|
| **CREDIT ACCUMULATION** | For students in high school, course credits are the route to graduation. There are a variety of methods to obtain credits, but depending on how they are obtained, students may actually demonstrate different levels of proficiency and thus other later outcomes. | No effects of credit recovery on student mathematics or reading.<br><br>Early college 9th graders were more likely to take and complete algebra I and college prep math courses. They had fewer absences and lower likelihood of suspension. advanced math course at various ages is shown to have a positive relationship with mathematics test scores, college enrollment, and college attainment | Credit Recovery<br><br>Woodworth et al (2015)<br><br>Early College<br><br>Edmunds et al (2012)<br><br>Advanced Math<br><br>Byun et al (2015)<br><br>Domina (2014)<br><br>Gaertner et al (2014) | Methods of credit accumulation are very different from one another and may be appropriate for different students. The literature from one should not be construed to be applicable to another. |
| **SOCIAL EMOTIONAL LEARNING** | Social emotional learning ("SEL") encompasses attributes such as social skills, self-esteem, empathy, emotional intelligence, problem solving, conflict resolution, coping, and stress reduction. These skills may enable students to tackle challenges in school. In turn, students with strong SEL skills may be more likely to perform well academically. | Self-awareness (Perceived Competence Scale for Children) has been found in several studies to relate to increased student academic performance. Emotional regulation (particularly with the head toes knees shoulders task) was found to be correlated with improved student achievement. It is difficult to determine the direction of causality in self-efficacy studies, but there does appear to be a small positive relationship between it and academic performance. | Self-Efficacy<br><br>Liew et al (2008)<br><br>Talsma et al (2018)<br><br>Self-Awareness<br><br>Denham & Brown (2010)<br><br>Emotional Regulation<br><br>Denham & Brown (2010)<br><br>Graziano, Reavis, Keane, & Calkins (2007) | Tools for assessing SEL:<br><br>*https://www.rand.org/education/projects/assessments/tool.html<br><br>*http://www.aasa.org/uploadedFiles/Publications/Newsletters/The_Leaders_Edge/2011/Social-Emotional-Learning-Assessment-Measures-forMiddleSchoolYouth.pdf |
| **CIVIC CONSCIOUSNESS/ ENGAGEMENT** | Civic engagement is generally seen as an outcome in itself; however, there may be reasons to think that civic engagement also relates to academic achievement. Students who are engaged in their community both in and out of school may similarly be engaged in school and their education. | The very limited research on the relationship between community and volunteer service and student test scores found positive results for community service required for class, voluntary community service, and participating in high school student government. | Davila & Mora (2007) | It is hard to isolate the direction of causality in this research. Most studies try to look at the outcome of civic engagement, not civic engagement as causing other outcomes. |

| | Conceptual Rationale | Research Evidence | Sources | Notes/Examples |
|---|---|---|---|---|
| **HEALTHY CHOICES** | Students' health may be directly related to their ability to focus and devote time to their school work both in and out of school. Healthier students are likely to have more energy that can be put toward schoolwork. Furthermore, the cognitive effects of drug use can be deleterious to students' academics. Teen pregnancy may reduce the time and attention a student has to give. | High scores on the Healthy Eating Index ("HEI") increased fruit and vegetable intake and lower caloric intake of fat on the Diet Quality Index—International ("DQI-I") were associated with higher academic performance. Overweight and obesity as measured by body mass indexwere related to lower school/social functioning. Teen pregnancy related to about two fewer years of education and about 90% lower likelihood of high school completion than women who have children over age 30. Drug use has a large negative relationship with student dropout, making them two to five times more likely to dropout than their peers. | Healthy Diet<br><br>Florence, Asbridge, & Veugelers (2008)<br><br>Swallen et al (2005)<br><br>Teen Pregnancy<br><br>Hofferth, Reid, & Mott (2001)<br><br>Drug Use<br><br>Bray et al (2000)<br><br>Fergusson et al (2003)<br><br>Lynskey et al (2003) | These are not causal studies, only correlational. |
| **ATTENDANCE** | Attendance at school is an essential requirement for a school to be able to carry out its mission. If students are in school, they are able to acquire new knowledge. In addition to simply attending, students who are actively engaged in the material and coursework in school may be more apt to take in the information from the teacher. | Unexcused absences and chronic absenteeism are strongly negatively correlated with both reading and mathematics test score achievement. Higher attendance is also correlated with higher GPA. Attendance as early as 4th grade can predict whether students are on track for graduation in 9th grade. Engagement, measured by self-reported discipline and attendance, were negatively related to school dropout. Using the Engagement vs. Disaffection Scale, there is evidence that engagement is an important aspect of classroom culture that relates to higher student grades. | Attendance<br><br>Gottfried (2009)<br><br>Gottfried (2010)<br><br>Kieffer et al (2014)<br><br>Chronic Absenteeism<br><br>Gershenson, Jacknowitz, & Brannegan (2017)<br><br>Gottfried (2014)<br><br>Engagement<br><br>Archambault et al (2009)<br><br>Reyes et al (2012) | Tools for measuring engagement:<br><br>*https://ies.ed.gov/ncee/edlabs/regions/southeast/pdf/REL_2011098.pdf<br><br>*Fredricks & McColskey (2012) |
| **MOTOR SKILLS/PHYSICAL EDUCATION** | Sports may play an important role in engaging students in school as well as imposing GPA requirements for participation. Physical education and sports, however, may both also take away from instructional time and focus on academics for students. Physical activity may give students energy needed to focus in school. | A systematic review of literature on school based physical education ("PE") found mixed results for the relationship between PE and academic performance. Physical education results are somewhat dependent on the level of physical activity and prior fitness level, with moderate/vigorous activity being more likely to have positive effects. Student involvement in sports has a positive relationship with GPA, test scores, attainment of a B.A., employment, and wages. | Physical Activity<br><br>Coe (2006)<br><br>Fox et al (2009)<br><br>Rasberry et al (2011)<br><br>Wittberg et al (2012)<br><br>Sports<br><br>Barron, Ewing, & Waddell (2000)<br><br>Fox et al (2009)<br><br>Lipscomb (2007) | |

| | Conceptual Rationale | Research Evidence | Sources | Notes/Examples |
|---|---|---|---|---|
| **ACCESS TO SERVICES** | Access to services, particularly on campus, means that students are more likely to get care they need. Healthier students are likely to have better attendance and more days of learning. | Several meta-analyses of school-based mental health interventions have found positive academic outcomes for students in the schools. School-based health centers that provide medical and mental health show more evidence that they improve academic outcomes for students seeking mental health support. There is weak evidence that students who use school-based health centers have higher GPAs and are less likely to drop-out. | Mental Health<br><br>Baskin et al (2010)<br><br>Becker et al (2014)<br><br>Suldo et al (2014)<br><br>Health Centers<br><br>Geirstanger et al (2004)<br><br>Kerns et al (2011)<br><br>Strolin-Goltzman (2014)<br><br>Walker et al (2010) | There is likely a correlation between usage of services and other student characteristics that are not able to be controlled for in the current research. |
| **SOFT SKILLS** | Similar to social emotional skills, soft-skills are traits that improve an individual's interpersonal relationships, productivity, and reliability, which are all valued in the workplace. | There is a wealth of research that focuses on various soft skills, sometimes referred to as non-cognitive skills. There is evidence that Big 5 personality factors relate to positive lifetime outcomes such as graduation, employment, and wages. These factors, as well as locus of control, resilience, effort, and curiosity, are not necessarily correlated as strongly with IQ, but independently can result in positive effects. | Borghans, Meijers, & Ter Weel (2008)<br><br>Heckman & Kautz (2012)<br><br>Heckman, Stixrud, Urzua (2006)<br><br>Segal (2008) | Tools for measuring soft skills:<br><br>http://forumfyi.org/files/soft_skills_hard_data_0.pdf 4 |
| **HIGH QUALITY INTERNSHIPS** | Internships and apprenticeships, like career and technical training, are opportunities for students to apply their learning to the real world and feel a greater connection between academic work and their future endeavors. This in turn may engage students in learning to a greater degree, keeping them in school, and increase their performance. | All of the research related to internships and apprenticeships is confounded with the literature on CTE, as these are often critical components of CTE. See above for the findings on CTE. | | |
| **MICRO-CREDENTIALS** | Micro-credentials or digital badges are meant to function in two ways. First, students have a "physical" goal they are trying to achieve that is related to acquisition of skills. This mechanism may increase student engagement in their learning. Second, outsiders, whether they be universities or employers, are able to observe specific skills that individuals possess. This extra information should provide new and/or more information to admissions officers or employers. | As this area is burgeoning, there is no evidence on the outcomes for students who acquire micro-credentials or digital badges. | | |

| | Conceptual Rationale | Research Evidence | Sources | Notes/Examples |
|---|---|---|---|---|
| **INDEPENDENT LIVING SKILLS** | Life skills are often related to other subjects taught in school. Some life skills are likely to help students acquire and maintain a job, and live independently. | For students with disabilities, there is evidence from the 1990s regarding small to moderately large positive effects on independent living for students with improved self-care, life skills, or adaptive skills acquisition. The specific skills learned, however, are less clear, as there is either no relationship or poor evidence on how individual interventions support outcomes such as graduation, employment, or independent living. | Alwell & Cobb (2009)<br><br>Mazzotti et al (2014)<br><br>Repetto et al (2002)<br><br>Test et al (2009)<br><br>Woolf, Woolf, & Oakland (2010) | Much of the research in this area is outdated and involves single-subject research that may not apply to larger scale implementation. |
| **COMMUNITY PARTNERSHIPS** | Community partnerships perform a few roles that may relate to school improvement. First, community-based organizations are an additional way to get parents involved in schools. Second, utilizing the resources of other organizations lessens the school's burden to provide everything for students. Lastly, engaging community members creates an investment by citizens in the well-being of the school. | There is significant evidence that increased parent involvement is positive for students. There is less evidence around the role of community organizations in parent involvement and schools. One study found that engaging community organizations into an obesity prevention program had positive results while another found community mentors helped with absenteeism. New York's Harlem Children's Zone found no relationship when looking at outcomes for community organizations. | Parent Involvement<br><br>Hill & Tyson (2009)<br><br>Jeynes (2012)<br><br>Henderson & Mapp (2002)<br><br>Community Organizations<br><br>Dobbie & Fryer (2011)<br><br>Hoelscher et al (2010)<br><br>Sheldon & Epstein (2002) | Most of the literature around community partnerships is theoretical and design centered rather than evidence-based. |
| **SCHOOL CULTURE** | A healthy school culture is related to positive staff relationships, respect, and goal alignment. Schools with good school climates are likely going to have happier staff and students, better staff retention, and fewer conflicts. These shorter term outcomes are likely to also relate eventually to better student academic outcomes. | Schools with a collaborative culture also had positive outcomes in mathematics, with parent-teacher communication quality relating positively to both English and mathematics outcomes. Another study looked at academic optimism, academic emphasis, efficacy, and trust, finding that they were also related to positive student outcomes. Goal focus and clarity as well as the ability to adapt and meet demands despite stress were also found to be linked to student test scores. | Gruenart (2005)<br><br>Hoy, Tarter, Hoy (2006)<br><br>MacNeil, Prater, Busch (2009) | These studies on school culture are based on school staff self-reports and their correlation with student test scores. They should not be taken as causal. |

| | Conceptual Rationale | Research Evidence | Sources | Notes/Examples |
|---|---|---|---|---|
| **TRAUMA-INFORMED CARE** | Many students experience some type of trauma that can have a negative impact on their ability to flourish academically, socially, and emotionally. Trauma-informed practices in school can potentially mitigate those affects by providing a caring and supportive environment with embedded services in the school environment. | Unfortunately, this area of research is too new for any body of work to be available. The limited research indicates greater understanding of trauma and referral of students for services after professional development. One other study of a two-year classroom curricula showed no effects overall, but reduction in post-traumatic stress disorder ("PTSD") and depressive symptoms in the most severe students. | Alwell & Cobb (2009)<br><br>Mazzotti et al (2014)<br><br>Repetto et al (2002)<br><br>Test et al (2009)<br><br>Woolf, Woolf, & Oakland (2010) | Jaycox et al (2009)<br><br>Perry & Daniels (2016) |
| **SAFETY** | School climate is composed of many dimensions, including academics, community, safety, and environment. Schools with a positive school culture may form better relationships between students and teachers, which in turn may increase student attendance or behavior. These schools may also have more satisfied teachers, and thus lower teacher turnover. | Academic climates that emphasize high expectations and standards for students have lower student disengagement and better student outcomes. There is some evidence that positive school climate is also related to lower levels of aggression, violence, and sexual harassment in schools. Multiple studies have found a relation between school connectedness and positive teacher-student relationships and school satisfaction and academic outcomes. | Loukas, Suzuki, & Horton (2006)<br><br>Thepa et al (2013)<br><br>Wang & Degol (2016)<br><br>Zullig, Huebner, & Patton (2011) | These studies are based on school staff and student self-reports and their correlation with student test scores. They should not be taken as causal. |
| **TARGETED PROFESSIONAL DEVELOPMENT** | Teachers are the primary contributors within schools to student achievement, so it is rational to expect that using professional development to increase teacher skills and/or capacity should also improve student academic outcomes. | The research evidence on professional development generally shows small or null results on student achievement despite the number of high quality studies that exist. There is some indication that more intensive professional development (over 14 hours) is likely to yield positive results for students. It is hard to isolate the other aspects of professional development that may be most effective in the current literature. | Arens et al (2012)<br><br>Bos et al (2012)<br><br>Buysse, Castro, & Peisner-Feinberg (2010)<br><br>Hill, Beisiegel, & Jacob (2013)<br><br>Yoon et al (2007) | |

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# ACTIVE INGREDIENT

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## SAMPLE MEASURES

## ACADEMIC LEARNING RESULTS

**Academic Learning Results** include traditional accountability measures, but additional Active Ingredients included in this category may not be traditional academic outcomes or typically included in formal accountability plans. However, they are academic in nature and relate significantly to academic attainment or indicate academic progress and success.

| | Definition | Examples | Sample Measure |
|---|---|---|---|
| **GROWTH ASSESSMENTS** | Measures academic progress over time, typically over the course of a school year, in contrast to point-in-time achievement tests. | Reading, writing, mathematics, science, history | The school will administer the [assessment name] to [describe student group] and achieve [growth target] in [Active Ingredient name] attainment in [target percentage] of students by [terminal grade or fixed date]. |
| **GRADUATION RATES (CREATIVE COHORTING)** | Graduation rates by "degree of difficulty" considers the severity of instructional need upon student enrollment and categorizes students for graduation cohorts. | Young (15-16 years old) off track (YOT)<br><br>Moderately off-track (MOT)<br><br>Severely off-track (SOT)<br><br>Candidates for Alternative Diploma (CAD)<br><br>On track | [Target graduation rate] of students admitted SY [school year] and identified as ["degree of difficulty"] will graduate in [4yrs, 5yrs, or 6yrs] by date (typically August). |
| **CTE SKILLS COMPLETION** | Completion of CTE pathways or dual enrollment programs during high school and passing technical skill assessments that are aligned to industry recognized standards. | CTE programs<br><br>CTE concentrations<br><br>CTE dual enrollment | [Percentage] of CTE concentrators will pass technical skills assessments that are aligned to industry recognized standards during reporting year [reporting year]. |

| | Definition | Examples | Sample Measure |
|---|---|---|---|
| **PROGRESS ON IEP GOALS** | Schools are already required by law to report to families individual student progress on IEPs. Schools report in aggregate the percentage of IEP goals students meet annually. *Schools should take care to ensure goals are appropriate and rigorous. | Functional goals<br><br>Academic goals | Of a total of [total number of IEP goals] for [total number of students with IEPs] [target percentage of goals met] of goals will be met by the end of the school year. |
| **CREDIT ACCUMULATION** | Monitoring and reporting of progress passing required and critical courses. Evidence suggests early college credits and advanced math credits are strong predictors of post-secondary matriculation and completion. | Credit recovery<br><br>Early college<br><br>Advanced mathematics | [Target percentage] of target student group] will complete [target credit accumulation] by [terminal grade or fixed date]. |

# CO-ACADEMIC LEARNING RESULTS

Co-Academic Learning Results are those ingredients that support student academic success but are not academic in nature themselves and may relate to SEL, or are delivered during wrap around support services.

| | Definition | Examples | Sample Measure |
|---|---|---|---|
| **SOCIAL EMOTIONAL LEARNING** | *SEL is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. (**https://casel.org**)* | Interaction with adults and peers<br><br>Adaptive social behavior<br><br>Self-concept<br><br>Self-efficacy<br><br>Self-control | The school will administer the [assessment name] to [describe student group] and achieve [target score] in [Active Ingredient name] attainment in [target percentage] of [student grouping] by [terminal grade or fixed date].<br><br>*We recommend schools select SEL assessments that evaluate and report results in the aggregate (class/group) and not at an individual student level. |
| **CIVIC CONSCIOUSNESS AND/OR ENGAGEMENT** | Involvement or work in the community that leads to skill, knowledge, and increased connectedness and purpose. | Service learning<br><br>Issue United Nations<br><br>Student government | [Target percentage] of [target student group] will complete [meaningful experience target] by [terminal grade or fixed date] as evidenced by [pre-established criteria]. |
| **HEALTHY CHOICES** | Choices positively influenced by a student's belief regarding their health and well-being and impacting their overall health and longevity. | Reduced pregnancy<br><br>Personal regulation<br><br>Healthy eating<br><br>Healthy weight<br><br>Safe choices | [Target percentage] of [target student group] will have a healthy range body mass index ("BMI") or reduce their BMI by [target percentage reduction] after [identified program participation length] participation in [program name]. |
| **"ADULTING" SKILLS** | Skills typically needed to be an independent and functioning adult. | Driver's license and/or voter registration<br><br>Financial literacy<br><br>Personal care<br><br>Parenting skills | [Target percentage] of [target student group] will successfully demonstrate ["adulating skill"] by [terminal grade or fixed date] as evidenced by [pre-established criteria such as teacher rubric]. |

| | Definition | Examples | Sample Measure |
|---|---|---|---|
| **ATTENDANCE** | Attendance measures are important because students are more likely to succeed academically when they attend school on a regular basis.<br><br>*Consider attendance/engagement designations:<br><br>Long term absence (LTA/students who have stopped attending); Disengaged (attend between 5% and 50%); Somewhat engaged (attend at least 3 days/week); and, Engaged (consistently attend 4 days/week or more). | Reduced chronic absenteeism<br><br>Attendance/engagement rate<br><br>Attendance/engagement growth | [Target percentage] of [target student group] will have improved their engagement designation by [describe designation improvement]. |
| **MOTOR SKILLS/ PHYSICAL EDUCATION** | *Fine motor skills have been shown to be a strong predictor of later reading and writing achievement while gross motor skills have been linked to fluid intelligence. Physical exercise was also shown to support executive functioning (planning, decision making, and cognitive flexibility) and positively impact academics.* (**https://www.ncbi.nlm.nih.gov**) | Dance<br><br>Aerobic fitness<br><br>Tae Kwon Do<br><br>Agility<br><br>Sports | The school will administer the [assessment name] to [describe student group] and achieve [growth target] in [Active Ingredient name] attainment for [target percentage] of students by [terminal grade or fixed date]. |
| **ACCESS TO SERVICES** | Students have a variety of basic needs that if gone unmet can be a barrier to school and life success. Schools serving students from under-resourced communities frequently support access to needed services like medical care, understanding the positive impact this can have on student health and attendance. | Medical home<br><br>On-site service providers (medical, dental, mental health)<br><br>School partnerships with service providers | [Percentage] of students will have accessed [service] through outside referral, in-school provider, or partner provider during [reporting period]. |

**Post-secondary readiness results** are ingredients tied to student readiness for future opportunities beyond formal K-12 schooling and may include academic and co-academic learning results, as these domains are not intended to be mutually exclusive.

| | Definition | Examples | Sample Measure |
|---|---|---|---|
| **JOB/ "SOFT" SKILLS** | Soft skills are often interpersonal and contrast with hard skills that are job-specific. There is much debate about a definitive list of soft skills. This framework utilizes the curated list of skills presented in the "Forum for Youth Investment's From Soft Skills to Hard Data" report. This resource also provides guidance on measurement tools. | Initiative and self-direction<br><br>Relationships and collaboration<br><br>Critical thinking and decision making<br><br>Communication skills | The school will administer the [assessment name] to [describe student group] and achieve [target score] in [Active Ingredient name] attainment in [target percentage] of [student grouping] by [terminal grade or fixed date].<br><br>*We recommend SEL assessments that evaluate and report results in the aggregate (class/group) and not at an individual student level. |
| **HIGH QUALITY INTERNSHIPS** | *Because there are no guidelines consistently observed when defining high school internships, this framework adopts the National Association of Colleges and Employers, definition: An internship is a form of experiential learning that integrates knowledge and theory learned in the classroom with practical application and skills development in a professional setting.* (**https://www.naceweb.org**) | Marketing internships<br><br>Retail internships<br><br>Technology internships<br><br>Credit/no-credit internships<br><br>Paid/unpaid internships<br><br>Apprenticeships | [Target percentage] of [target student group] will successfully complete [high quality internship] by [terminal grade or fixed date] as evidenced by [pre-established criteria such as employer evaluations]. |
| **CTE COMPLETION** | Completion of CTE pathways or dual enrollment programs during high school and passing technical skill assessments aligned to industry recognized standards. | CTE programs<br><br>CTE concentrations<br><br>CTE dual enrollment | [Percentage] of CTE concentrators will pass technical skills assessments that are aligned to industry-recognized standards during reporting year [reporting year]. |
| **MICRO-CREDENTIALS** | *Similar to certifications, students take courses (lasting between four weeks and a year) to develop specific skills in certain fields.* (**https://www.onlineschoolscenter.com/micro-credentials/**) | Coding<br><br>Web development | [Target percentage] of [target student group] will successfully complete [micro-credential] by [terminal grade or fixed date] as evidenced by [pre-established criteria such as displaying application of knowledge]. |

# ADDITIONAL INGREDIENTS

In addition to the recommended Active Ingredients outlined previously, a number of ingredients that surfaced repeatedly that are important to student success yet don't represent student outcome measures. They are not likely to be used by authorizers to make high-stakes decisions but are included as additional ingredients to acknowledge how they contribute to school programs and student success.

# LEARNING ENVIRONMENT RESULTS

**Learning environment results** are ingredients that communicate school environment conditions and leadership practices that not only support but remove barriers to student success. Active Ingredients in this domain are unique in that resulting measures do not represent student performance and therefore have a more limited recommended use, but remain important to schools' success.

| | Definition | Examples |
|---|---|---|
| **COMMUNITY PARTNERSHIPS** | *Family-school-community partnerships are a shared responsibility and reciprocal process whereby schools and other community agencies and organizations engage families in meaningful and culturally appropriate ways, and families take initiative to actively support their children's development and learning.* (**https://safesupportivelearning.ed.gov**) | Partnerships with:<br>Businesses<br>Community-based organizations<br>Cultural organizations<br>Faith-based organizations<br>Institutions of higher education |
| **SCHOOL CULTURE** | The beliefs, attitudes, values, and assumptions shared by teachers, staff, and students. A positive school culture promotes student learning. | Culture of collaboration<br>Culture of benevolence<br>Relationship with families |
| **TRAUMA-INFORMED CARE** | *Shifted approach at the staff and organizational level that addresses the learning needs of children impacted by trauma. School culture, practices, and policies reflect an understanding of the needs of traumatized learners.* (**https://www.elc-pa.org**) | Staff training<br>Collaboration across child-serving systems |
| **SAFETY** | Protecting students from exposure to or threat of violence, theft, harassment, and substance abuse. Emotional and physical safety is linked to academic performance while unsafe school environments can put students at risk of becoming victims who are more likely to have poor attendance, fail classes, and drop-out. | Disciplinary infractions<br>School climate<br>Campus crime<br>Emotional safety/ caring adult |
| **TARGETED PROFESSIONAL LEARNING** | Targeted based on specific student and school needs, sustained over time with coaching, and monitored for impact on student learning. | Trauma informed care<br>Supporting at-risk populations<br>Student mentoring |

# AUDIENCE & USE

Identifying critical mission elements and key programmatic levers that impact student along with feasible and credible methods of measurement are essential activities in this process. Equally important is determining the most relevant use for the new information (e.g., program improvement, internal communication, communication with local stakeholders, or communication with with a charter authorizer about quality). Schools can and should use any additional measures to inform program improvement and communicate with local stakeholders, such as the community, families, and potential funders. After time, data points identified as meaningful and particularly useful in illustrating student progress may prove useful in advocating for schools during high-stakes decisions. It is for this reason we do not recommend learning environment results for communication with authorizers because they do not directly represent student progress. They are however well suited to describe conditions important to families when selecting a school and undoubtedly create conditions for or remove barriers to student success, and therefore are included in this framework.

# USE BY DOMAIN

|  | Program Improvement/ Internal Communication | Local Stakeholder Communication | Authorizer Communication |
|---|---|---|---|
| Academic Learning | ● | ● | ● |
| Co-Academic Learning | ● | ● | ● |
| Post-Secondary Readiness | ● | ● | ● |
| Learning Environment | ● | ● | |

# LIMITATIONS

This framework isn't perfect. It's a start. The refrain that accompanied the responsible warnings about the lack of comparative data, uncertainty about how data will behave overtime, validity, and reliability, was, DON'T WAIT, START SOMEWHERE. MEASURE SOMETHING. The spirit of innovation and the enthusiasm to push forward, to continue to "sharpen the pencil" on these ideas, and to "touch and feel something new" permeates this effort. It is only by "trying out" and finding what works will we get to measures that are useful to schools and authorizers making high-stakes decisions. The discussion of this framework's limitations is really a discussion of the opportunity it presents. In an ongoing effort to continue to develop and refine this framework, your feedback and comments are welcome at charters@suny.edu.

# CITATIONS

1. www.actionevaluation.org

2. www.casel.org/what-is-sel/

3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4792186/

4. http://www.naceweb.org/about-us/

5. https://www.onlineschoolscenter.com/micro-credentials/

6. https://safesupportivelearning.ed.gov/training-technical-assistance/education-level/early-learning/family-school-community-partnerships

7. https://www.elc-pa.org/resource/unlocking-the-door-to-learning-trauma-informed-classrooms-and-transformational-schools/

# RESOURCES

**DEVELOPING A THEORY OF ACTION**

Creating a Theory of Action for Improving Teaching and Learning

Action Evaluation Collaborative

**SOCIAL EMOTIONAL LEARNING (SEL)**

Collaborative for Academic, Social, and Emotional Learning (CASEL)

The Evidence Base for How We Learn: Supporting Students' Social, Emotional, and Academic Development

National Commission on Social, Emotional, and Academic Development

Find Out How to Build Social and Emotional Learning Skills; Compare Leading SEL Programs

**EARLY CHILDHOOD LEARNING**

NYS Early Learning Guidelines

NYS Core Competencies for Early Childhood Educators

**SERVING OVER-AGE AND/OR UNDER-CREDITED YOUTH (OAUC)**

Opportunity Youth Network

**COMMUNITY SCHOOLS**

Coalition for Community Schools

Community Schools: Promoting Student Success A Rationale and Results Framework

# ACTIVE INGREDIENT

## L O G I C   F R A M E

IDENTIFY; OR QUICKLY DESCRIBE THE INGREDIENT IN "BIG PICTURE" TERMS.

Follow up question:

KEY OR GUIDING QUESTIONS TO ESTABLISH A CLEAR DEFINITION
OF THE INGREDIENT

| RESOURCES/ INPUTS? | PROCESS | OUTPUTS In the presence of antecedent conditions… |
|---|---|---|
| | | OUTCOME |
| | MEASURES | MEASURES |

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## MEASURE DATA FORM

## 1. SCHOOL INFORMATION

**SCHOOL NAME:**

**GRADE LEVELS:**

## 2. ACTIVE INGREDIENT

**INGREDIENT NAME:**
Programmatic learning or readiness result that contributes to the overall success of students; measuring performance of these ingredients provide additional measures of student success and school success, and strengthen stories of school quality.

**DOMAIN & LEARNING TYPE:**
What domain does your ingredient align with? *(Academic Learning, Co-academic Learning, or Post-Secondary Readiness)* Which learning type does it support? *(Social & Emotional, Applied/Experiential, or Individualized Learning)*

**INGREDIENT DEFINITION:**
How would you describe your ingredients for your setting? How do you describe the related intervention or program input?

# 3. STUDENT MEASURE

**STUDENT MEASURE:**

How will you know that student learning has occurred? Who? What? When? How much? And how will you measure it? *Must be focused on a student outcome*

# 4. MISSION ALIGNMENT

**RELATIONSHIP TO THEORY OF CHANGE/ MISSION ALIGNMENT:**

Briefly describe how the Active Ingredient relates to the school's theory of change or mission. How does the ingredient support or contribute to student academic experience and outcomes?

**ASSESSMENT INSTRUMENT:**
Name and publisher of instrument used to assess or measure student learning

**ASSESSMENT FORMAT:**
Format of instrument used to assess or measure student learning *(assessment, survey, rubric, etc.)*

**ASSESSMENT AUTHOR OR CREATOR:**
Indicate publisher or creator of assessment or indicate if internally developed.

**REFERENCE OR SOURCES**
*(for internally developed only)*
For internally created assessment instruments please describe sources for items and any steps taken to support the validity of the assessment or instrument.

**PLANS FOR SCORING:**
How will assessments be scored? If scored internally, how will scorers be trained

**NUMBER OF STUDENTS ASSESSED:**
How many students will be measured?

**BENCHMARK/TARGET IF APPLICABLE:**
Does your assessment instrument provide or has your school identified a benchmark score related to grade level, age, developmental stage, etc. or has the school established a target *(could be absolute, growth, or comparison)*? If so, what is it and what is the rationale?

**EXPECTED FORMAT OF DATA:**
In what format will the measure data be? *(student level raw score, scale score, aggregate/class average, percent change, etc.)*

**MEASUREMENT SCHEDULE:**
When and how often will you assess or measure student learning for this ingredient?

**ANTICIPATED USE:**
How will you use this information? What will it help you learn?

**PLAN FOR COMMUNICATION:**
How will you share the additional data and information and who will be included?

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## STAKEHOLDER UNDERSTANDING RUBRIC

The purposes of this rubric are to: 1) help gauge levels of understanding and action about the Active Ingredients concept; and 2) provide guidance as to what strategies and materials are most appropriate to increase the stakeholder group's understanding of Active Ingredients.

The rubric is designed to guide the user to reflect on their interactions with and observations of the stakeholder group, in order to estimate their learning stage and identify the most appropriate actions to further socialize the stakeholders.

## INSTRUCTIONS

1. Select the rubric appropriate to the relevant type of Active Ingredient.

2. For each row/learning stage, select a rating to reflect whether the stakeholder group exhibits No Evidence (1), Some Evidence (2), or Substantial Evidence (3) (see the Key for rating definitions). Write the rating number in the "Rating" column.

   *Note: It is expected that the learning stages will build on each other (i.e., it is unlikely that someone will score a 3 in Behavior/Action without first scoring a 3 in Awareness).*

3. If the score is below 3 in any row, use the "Action" column to determine what type of strategies might be most appropriate to move the stakeholders to the next learning stage.

4. For each Active Ingredient Category, add up the numbers in the score column. The total score will indicate whether the stakeholders can be characterized as Novice, Developing Supporter, or Informed Practitioner.

## KEY    Rating (0-3)

0  *N/A or Don't Know*

1  *No Evidence = No examples observed*

2  *Some Evidence = One or two isolated examples, or spotty implementation*

3  *Substantial Evidence = Multiple examples; School-wide, consistent implementation*

# WHOLE CHILD/SOCIAL EMOTIONAL LEARNING

| | School Stakeholders: | Family Stakeholders: | Governance Stakeholders: |
|---|---|---|---|
| | *Look for evidence that the **stakeholder(s) understand(s) the benefits** of using a whole child approach/ incorporating social-emotional learning in schools* | | |
| **AWARENESS / UNDERSTANDING** | Has explored partnerships with wraparound service providers<br><br>Teachers have requested support or training to address students social-emotional needs<br><br>School mission and/or theory of action includes reference to students' social-emotional well-being and development<br><br>Teachers or school seek to reform exclusionary discipline practices<br><br>School collects data on students' social, emotional, or behavioral well-being but does not use it to inform instruction or support services<br><br>**Other Observables:**          **Rating:** | Have asked for school to provide more supports to address students' social-emotional needs<br><br>Have asked school to reform exclusionary discipline practices<br><br>Parent-teacher organization has focused on topics related to students' social, emotional, or behavioral needs<br><br><br>**Other Observables:**          **Rating:** | Have inquired about providing supports to address students' social-emotional needs<br><br>Have inquired about or offered to help facilitate building partnerships with wraparound service providers to help meet students' needs<br><br>Have inquired about training or support for teachers to address students' social-emotional needs<br><br>Have requested and/or encouraged efforts to reform exclusionary discipline practices<br><br>**Other Observables:**          **Rating:** |
| | *If score is 2 or 1: Refer to Message Map to educate about SEL programs and whole child approachide examples of why schools and authorizers in pilot decided to adopt SEL/ whole child approach. OR Provide examples of why schools and authorizers in pilot decided to adopt SEL/whole child approach* | | |
| | *levels of understanding among stakeholder groups* | | |
| **BEHAVIOR / ACTION** | School-wide SEL curriculum is being implemented<br><br>Partnerships have been established with wraparound service providers<br><br>School-wide discipline approach is tied to strategies for supporting social, emotional, and behavioral growth<br><br>Teachers receive training in whole child approaches and SEL-related practices<br><br>Teachers collaborate with counseling department to integrate SEL into instruction<br><br>Staff includes specialized roles dedicated to supporting students' social and emotional well-being, such as social workers, wraparound services coordinator, director of restorative practices<br><br>School offers regular information sessions or trainings for parents about SEL programs<br><br>**Other Observables:**          **Rating:** | Parents attend information sessions and/or trainings about SEL/whole child approach<br><br>Parents participate in restorative conversations as needed<br><br>Parents collaborate with teachers and counselors to support students' social, emotional, and/or behavioral growth<br><br><br><br>**Other Observables:**          **Rating:** | Participate in information sessions and/or trainings about SEL/whole child approach<br><br>Have facilitated building partnerships with wraparound service providers to help meet students' needs<br><br>Support investing resources necessary to sustain specialized roles dedicated to supporting students' social and emotional well-being, such as social workers, wraparound services coordinator, director of restorative practices<br><br>Consistently request and review data related to students' social, emotional, and behavioral outcomes in addition to academic outcomes<br><br>Ensure that board includes member(s) with expertise in children's social-emotional development and/or SEL/whole child education<br><br>**Other Observables:**          **Rating:** |
| | *If score is 2 or 1: Refer to Message Map to educate about academic and other benefits of SEL/whole child approach...and provide support for/examples of designing a program aligned with a theory of action* | | |
| | *Refer to Active Ingredients Framework to provide support with identifying appropriate measures* | | |
| **RESULTS** | School collects relevant data and uses it to connect students to multi-tiered system of academic, social, emotional, and behavioral supports<br><br>Report cards include information about social emotional, behavioral learning over time<br><br>Annual report includes relevant indicators of SEL/ whole child outcomes  (such as attendance, test scores, school climate survey, valid assessment of behavioral/ cognitive/social skills and awareness)<br><br>**Other Observables:**          **Rating:** | Parent surveys or other data collection show that parents perceive improvement in their students' social, emotional, behavioral skills<br><br><br><br>**Other Observables:**          **Rating:** | Use data related to SEL/whole child outcomes to inform governing decisions<br><br>Use data related to SEL/whole child outcomes to inform continuous improvement and long-term strategic planning<br><br><br>**Other Observables:**          **Rating:** |
| | *If score is 2 or 1: Refer to Active Ingredients Framework to provide support with identifying appropriate measures* | | |

*Overall Scoring: Novice (1-4); Developing Supporter (5-8); Informed Practitioner (9-12)*

# APPLIED LEARNING

| | School Stakeholders: | Family Stakeholders: | Governance Stakeholders: |
|---|---|---|---|
| | *Look for evidence that the **stakeholder(s) understand(s) the benefits** of using a whole child approach/ incorporating social-emotional learning in schools* | | |
| **AWARENESS / UNDERSTANDING** | School has explored partnerships with businesses that could provide work experiences<br><br>School has explored partnerships with local higher education institutions<br><br>School theory of action includes reference to preparing students with career and technical knowledge and skills<br><br>Teachers or school leaders have attended professional development related to implementing applied learning programs<br><br>Individual teachers have integrated applied learning into their courses<br><br>**Other Observables:**　　　　**Rating:** | Parents have asked for school to provide more career and technical education opportunities<br><br>Parent-teacher organization has focused on topics related to career readiness<br><br>Parents or community members have approached school about partnering with their business or higher education institution<br><br>**Other Observables:**　　　**Rating:** | Have inquired about providing more career and technical education opportunities<br><br>Have inquired about or offered to help facilitate building partnerships with businesses that could provide work/ internship experiences<br><br>Have inquired about or offered to help facilitate building partnerships with local higher education institutions<br><br>Have inquired about training for teachers related to implementing applied learning programs<br><br>**Other Observables:**　　　**Rating:** |
| | *If score is 2 or 1: Refer to Message Map to educate about applied learning...and provide examples of why schools and authorizers in pilot decided to incorporate applied learning into educational model* | | |
| | *Examples of strategies/programs that the **stakeholder is implementing** to provide students with applied learning experiences* | | |
| **BEHAVIOR / ACTION** | School offers fully articulated applied learning program of study (e.g., CTE courses, apprenticeship/internship programs, early college high school)<br><br>Partnerships are established with local employers to provide work experiences<br><br>Partnerships are established with local higher education institutions to provide concurrent enrollment opportunities<br><br>Teachers receive training in applied learning approaches<br><br>Staff includes specialized roles dedicated to supporting applied learning, such as CTE director and instructors, internship coordinator, career counselor, early college enrollment coordinator<br><br>School offers regular information sessions or trainings for parents about applied learning<br><br>**Other Observables:**　　　　**Rating:** | Parents attend information sessions and/or trainings about applied learning opportunities<br><br>Parents collaborate with teachers and dedicated staff to support students' applied learning<br><br>**Other Observables:**　　　**Rating:** | Participate in information sessions and/or trainings about applied learning opportunities<br><br>Have facilitated building partnerships with local employers and/or local higher education institutions<br><br>Support investing in resources necessary to sustain specialized roles dedicated to supporting applied learning, such as CTE director and instructors, internship coordinator, career counselor, early college enrollment coordinator<br><br>Consistently request and review data related to students' applied learning outcomes in addition to academic outcomes<br><br>Ensure that board includes member(s) with expertise in applied learning<br><br>**Other Observables:**　　　**Rating:** |
| | *If score is 2 or 1: Refer to Message Map to educate about academic and other benefits of applied learning...and provide support for/examples of designing a program aligned with a theory of action* | | |
| | *Evidence that the stakeholder is **measuring and reporting the results** of programs that provide students with applied learning experiences* | | |
| **RESULTS** | Report cards include information about applied learning indicators, such as college credit accumulation, internship or work hours and performance ratings, progress toward trade certification.<br><br>School collects and reports data on outcomes associated with applied learning, such as engagement, attendance, college credit accumulation, ACT scores, college matriculation, trade certifications, and employment.<br><br>**Other Observables:**　　　　**Rating:** | Parent surveys or other data collection show that parents perceive improvement in their students' career, technical, and/or college readiness skills.<br><br>**Other Observables:**　　　**Rating:** | Use data related to applied learning outcomes to inform governing decisions<br><br>Use data related to applied learning outcomes to inform continuous improvement and long-term strategic planning<br><br>**Other Observables:**　　　**Rating:** |
| | *If score is 2 or 1: Refer to Active Ingredients Framework to provide support with identifying appropriate measures* | | |

*Suggested Scoring: Novice (1-4); Developing Supporter (5-8); Informed Practitioner (9-12)*

# PERSONALIZED LEARNING PLANS/IEPS

| | School Stakeholders: | Family Stakeholders: | Governance Stakeholders: |
|---|---|---|---|
| | *Look for evidence that the **stakeholder(s) understand(s) the benefits** of aligning IEPs/PLPs with college and career ready standards* | | |
| **AWARENESS / UNDERSTANDING** | School theory of action includes reference to preparing all students with college and career ready skills<br><br>Teachers or school leaders have attended professional development related to implementing standards-aligned IEPs/PLPs<br><br>Individual teachers have integrated standards-aligned PLPs into their classes<br><br>Individual staff write standards-aligned IEP goals<br><br><br>**Other Observables:**　　　　**Rating:** | Parents have asked for school to improve academic outcomes and college/career readiness for students with IEPs<br><br>Parent-teacher organization has focused on topics related to personalized learning and/or college & career readiness for students with IEPs<br><br><br>**Other Observables:**　　　　**Rating:** | Have inquired about improving academic outcomes and college/career readiness for students with IEPs<br><br>Have inquired about training for teachers related to implementing standards-aligned IEPs/PLPs<br><br><br>**Other Observables:**　　　　**Rating:** |
| | *If score is 2 or 1: Refer to Message Map to educate about standards-aligned IEPs/PLPs...and provide examples of why schools and authorizers in pilot decided to focus on standards-aligned IEPs/PLPs* | | |
| | *Examples of strategies/programs that **the stakeholder is using** to align IEPs and/or PLPs to college and career-ready standards* | | |
| **BEHAVIOR / ACTION** | Teachers receive training related to implementing standards-aligned IEPs/PLPs<br><br>Teachers consistently design instruction around standards-aligned PLPs for all students<br><br>Teachers work with IEP teams to develop standards-aligned goals for each student<br><br>IEP teams consistently align IEPs with students' PLPs<br><br>Staff includes specialized role(s) dedicated to supporting personalized learning<br><br>School offers regular information sessions or trainings for parents about standards-aligned IEPs/PLPs<br><br><br>**Other Observables:**　　　　**Rating:** | Parents attend information sessions and/or trainings about standards-aligned IEPs/PLPs<br><br>Parents collaborate with teachers and IEP team to develop standards-aligned goals for each student<br><br>Parents work with IEP team to align IEP and PLP<br><br><br>**Other Observables:**　　　　**Rating:** | Participate in information sessions and/or trainings about standards-aligned IEPs/PLPs<br><br>Support investing resources necessary to sustain specialized roles dedicated to supporting personalized learning<br><br>Consistently request and review data on outcomes related to students' IEPs/PLPs<br><br>Ensure that board includes member(s) with expertise in personalized learning and/or students with IEPs<br><br><br>**Other Observables:**　　　　**Rating:** |
| | *If score is 2 or 1: Refer to Message Map to educate about academic and other benefits of standards-aligned IEPs/PLPs ...and provide support for/examples of designing a program aligned with a theory of action* | | |
| | *Evidence that the stakeholder is **measuring and reporting the results** of standards-aligned IEPs/PLPs* | | |
| **RESULTS** | IEP teams regularly review  data about students' progress toward standards-aligned goals<br><br>School collects, reviews, and reports on academic outcomes and progress toward grade-level goals for all students with IEPs<br><br>School collects, reviews, and reports data on outcomes associated with standards-aligned PLPs, such as engagement, attendance, and career goal-setting.<br><br>**Other Observables:**　　　　**Rating:** | Parent surveys or other data collection show that parents perceive improvement in outcomes associated with standards-aligned PLPs, such as engagement, attendance, and career goal-setting.<br><br>Parent surveys or other data collection show that parents perceive that students with IEPs are progressing toward college and career-ready goals.<br><br>**Other Observables:**　　　　**Rating:** | Use data related to standards-aligned IEPs/PLPs to inform governing decisions<br><br>Use data related to standards-aligned IEPs/PLPs to inform continuous improvement and long-term strategic planning<br><br>**Other Observables:**　　　　**Rating:** |
| | *If score is 2 or 1: Refer to Active Ingredients Framework to provide support with identifying appropriate measures* | | |

*Suggested Scoring: Novice (1-4); Developing Supporter (5-8); Informed Practitioner (9-12)*

# ACTIVE INGREDIENT

## DATA PLANNING PROTOCOL

### PURPOSE

This protocol is designed to get specific about the data you will need to track your Active Ingredients. In order to measure your Active Ingredients, you will need to make sure that data are applicable, accessible, and understandable. This means you will need a plan for meaningful and responsible collection, analysis, and reporting/presentation of new data.

### DIRECTIONS

**Schools THINK:**
This tool will walk you through the data planning process with a focus on specificity and data integrity.
You will THINK about the following:

#### INITIAL PLANNING

1.  What specific indicator will you use to track your Active Ingredient?
2.  What specific target are you trying to reach with the indicator you have selected, if any?
3.  Where will you derive the information needed to track your specific Active Ingredients indicator?
4.  If applicable, what information do you have to validate the quality of the tool you are using to collect your Active Ingredient indicator?

#### COLLECTION

5.  How frequently will you collect the information needed to track your Active Ingredient?
6.  Who will be included in the information you collect for your Active Ingredient?
7.  What "unit of analysis" will you focus on for the Active Ingredients you track?

#### ANALYSIS

8.  What analysis questions do you want to answer about the relationship between your Active Ingredient and academic outcomes in your school?
9.  What other data do you need to collect to answer your analysis questions?
10. What relationship did you see between your Active Ingredients and the other academic measures you tracked?

**Authorizers THINK:**
Authorizers will want to consider the aforementioned questions as well with a focus on validity, feasibility, and relevance. Authorizers should THINK about:

• Are the school's approach and data methodologically sound and valid?
• Will the data the school intends to collect actually measure what they believe it measures?
• Does the school actually have the capacity to implement the data collection and analyses they are planning?
• Are the school's plans for data collection relevant and aligned given what you know of their results and intended outcomes?

**Schools ACT:**
Complete the Data Planning Protocol tool
*It is important to note that this process is not entirely linear. Some of the questions you will answer might make you want to reconsider your answers to earlier questions.*

# 1. WHAT SPECIFIC INDICATOR WILL YOU USE TO TRACK YOUR ACTIVE INGREDIENT?

**Your answer / notes:**

The indicator you select should follow the **SMART format** *(with emphasis on "M" for "Measurable")* and it should be **valid, actionable, easily understood and aligned with your school's priorities**. You can save time by finding existing examples of indicators that match the domain of interest for your school. If you need to create your own, make sure you weigh the cost/benefit of collecting and compiling the data. You also should make sure the indicator is actually measuring what you are intending to measure *(aka "***validity***")*.

**Authorizers should** pay particular attention to the validity of the indicator and whether it is aligned with the school's priorities. Before going too far attempting to track and measure something, it is important to know if it is really worth it.

**Additional Directions/ Considerations:**

To be clear about what you will track and ultimately share with your authorizer, you will need to articulate your Active Ingredient as a metric that is SMART *(Specific, Measureable, Achievable, Relevant, and Time-bound.)*.

The indicators you select should also be valid for the intended purpose; actionable; meaningful and easily understood by practitioners; and aligned with your school's priorities. You can learn more about this framework for "selecting effective indicators" **here**.

Depending on the type of Active Ingredient, you might struggle with the right indicator to select. For rigorously established domains *(e.g. college access)* there might be a standard set of indicators that you can rely upon *(e.g. seamless college enrollment rates or intention to pursue a college education)*. For other areas, you will need to be creative or know where to find example indicators.

If you are creating an original indicator, you should prioritize making sure that what you are considering is actually measurable *(the "M" in SMART!)*. If you don't have the data to measure the indicator, or, if it is too burdensome to collect, it will be of no value to you.

It might be valuable to start collecting new sets of data or compiling data you always had in-house to give you information relevant to your Active Ingredient. You just need to weigh the financial and staff investments needed against the value of the information you will gain as a result.

It is also prudent to consider whether your indicator would be valid and reliable. There are rigorous statistical methods that can be applied to determine validity and reliability but, for now, it's important to assess at the most basic level. Do you think your indicator measures what you want it to measure *(validity)*? Will the indicator you select provide consistent and stable information when measured repeatedly *(reliability)*? You can learn about reliability and validity **here**.

If it makes more sense to select an indicator that is already widely utilized you can search for key studies on a particular domain or construct *(e.g. Grit)* or you can simply Google search the domain or construct of interest along with "measures of" or "indicators of" *(e.g. "measures of grit")*. For example, a "measures of grit" Google search would lead you to the **Grit Scale** from which you could select an indicator based on an overall grit score.

You can also look to these sources for indicators related to **college readiness and access**, **overall school quality**, **socio-emotional learning**, and **career readiness**.

**Support Resources/References:**

**University of California, SMART Goals: A How to Guide**

## 2. WHAT SPECIFIC TARGET ARE YOU TRYING TO REACH WITH THE INDICATOR YOU HAVE SELECTED, IF ANY?

**Your answer / notes:**

**Additional Directions/ Considerations:** After you select an indicator, you may want to make it specific by adding a clear target number you are trying to reach.

You will want to consider the following:

• Will you frame your target in absolute (e.g. the number of students who pass the career readiness test by 50 students) or proportional (e.g. 90 percent of students will have passed the career readiness test) terms?

• What benchmarking information will you use to make sure your target is realistic and achievable? Have you looked at any historical data for that indicator for your school to determine a baseline or trend line? You can set targets based on internal benchmarks, external benchmarks (using local, regional, or national comparison data, if available), or best practice or aspiration (e.g. 100% of high school students should have earned at least 3 college credits).

Depending on the indicator, benchmarking data can be hard to find. Local comparison information will likely be the hardest to find so you might need to reference national studies to find a good benchmark.

**You can look to these sources for potential national benchmark information:**

**Institute of Education Sciences "What Works Clearinghouse); Regional Education Laboratory "Ask A REL**;

You might also be able to source benchmark data through a simple Google search or a Google scholar search (for academic literature).

**Support Resources/References:**

**Six Questions to Ask When Setting KPIs in K-12**

**Institute of Education Sciences "What Works Clearinghouse"**

**Regional Education Laboratory "Ask A REL"**

You may want to add a target to the indicator you select. This target could be framed as a number or percentage but you should note the limitations of either approach. You can determine the right target using benchmarking information from internal data on past performance, external data (local or national), or some sort of aspirational goal or best practice.

Authorizers should focus on the ambitiousness of the target selected through this process. The goal is to find the balance between making the target too easily attainable and making it implausible based on existing benchmarking data or common sense.

**Your answer / notes:**

You should identify your data source **before** you determine your Active Ingredients indicator. Think about whether you can measure your AI directly (e.g. measuring attendance with actual attendance) or if you'll need to measure it indirectly (e.g. measuring engagement with classroom participation or surveys). You should also decide if you will use existing institutional data (e.g. graduation rates), use a homegrown tool (e.g. internally created survey), or use something "off-the-shelf" (e.g. a **validated survey instrument** or the **National Student Clearinghouse**). Consider that off-the-shelf tools could be more rigorous but might be cost-prohibitive or have inconsistent availability. Internal sources are likely more customized to your school's needs but they can also be labor-intensive or less statistically rigorous. You can look to these sources (**RAND Education Assessment Finder**, **Panorama Education Surveys**, etc.) to identify some external data collection tools you could use.

**Additional Directions/ Considerations:**

Before selecting your indicator you should know the data source. If not, you might have a situation where the indicator is not measurable or the cost of measuring it is too steep for the value you will receive in return.

Whatever sequence you used to identify your Active Ingredient data source, here are some areas to think about:

- Can the construct you are trying to measure through an indicator be measured directly or will it need to be measured indirectly? For example, if the construct you are measuring is attendance your indicator will be based on whether or not students attend school. If you are measuring a construct such as engagement, your indicator will be based on measures that approximate engagement such as, classroom participation, homework completion, or self-reports of feelings of engagement.

"Off the shelf" or "homegrown" - Will you source your data from an "off-the-shelf" tool (e.g. **Panorama Student Surveys** or **National Student Clearinghouse**) or will you create a homegrown source of data (e.g. an internally created survey or tracking instances of student using certain socio-emotional skills in the classroom)? If you are using something external that is off-the-shelf you will need to consider cost; the quality and limitations of the tool (e.g. for example, about **7 percent of higher education institutions do not report data to the National Student Clearinghouse**); your ability to access, compile, and understand the data derived from the tool, and the longevity and availability of the data source (e.g. was it a one-time source or will it be available annually?). If you are using something homegrown, is it part of your school's normal data collection (e.g. attendance data or graduation rates) or will you need to create something custom? If it requires creating a new tool or process, you need to consider any staff capacity constraints or any necessary staff behavior change (e.g. the need to input and monitor new data) that could comprise the data collection. A homegrown measure (a survey, for example) is likely not as rigorous and may lack statistical validity and reliability.

**Support Resources/References:**

**RAND Education Assessment Finder**

**Panorama Education Surveys**

## 4. IF APPLICABLE, WHAT INFORMATION DO YOU HAVE TO VALIDATE THE QUALITY OF THE TOOL YOU ARE USING TO COLLECT YOUR ACTIVE INGREDIENT INDICATOR

**Your answer / notes:**

**Additional Directions/ Considerations:**

It is critical you know whether your indicator is valid and, therefore, measuring what you think it is measuring. Relatedly, you should know whether the tool you are using to collect the data for your Active Ingredient is a validated tool. If you are collecting data from a source other than a test or survey (e.g. a database that tracks attendance or behavioral intervention plans) you will want to know how the data are collected into that source and any related data limitations that should be considered (e.g. the **issues with attendance data in schools**).

You can determine whether an off-the-shelf tool is validated by looking for any technical appendices that accompany the tool. **The RAND Education Assessment Finder** is one source for this information.

You will need to have some data analysis capacity on your team if you want to run some tests of the validity and reliability of any homegrown assessments or surveys. You can see an example of **some of the types of validity and reliability** you might want to investigate.

**Support Resources/References:**

**Reliability and Validity of Measurement**

**Forum Guide to Collecting and Using Attendance Data**

If you are using an external survey or assessment for your Active Ingredient, have you looked into the technical appendices to confirm the validity and reliability of the tool? If you are using an internal database as your source, you should know any limitations of the data source (e.g. what sources of data are missing). A homegrown survey or assessment likely warrants some basic **validity or reliability checks**.

With a focus on validity and data quality, authorizers should ensure they have access to the technical appendices associated with an active ingredient and understand what they say about the proper use of the data.

# 5. HOW FREQUENTLY WILL YOU COLLECT THE INFORMATION NEEDED TO TRACK YOUR ACTIVE INGREDIENT?

**Your answer / notes:**

Pay attention to the timeline for data collection so you can understand staff capacity needs, data analysis and reporting, and any data limitations. Frequently collected data might give you a more robust set of information for decision-making but can also be burdensome and more challenging to compile for reporting purposes. Single point in time data collection could make your indicators highly susceptible to external events among other limitations. But it might be the most appropriate depending on the indicator (e.g. college credit accumulation).

**Additional Directions/ Considerations:**

It is important to understand the data collection timeline so that you can consider the implications for staff time investment, for analysis and reporting of the data, and for any data limitations.

Data collected on a daily or even weekly basis could be burdensome if not managed appropriately. Likewise, an end-of-year single point in time tool (e.g. a survey) can be burdensome if implementation requires significant staff capacity during a busy time of the year. These considerations need to be factored in when selecting an indicator and data collection approach.

The timeline of the data collection also has implications for how and when you can report results. If the indicator is tracked daily, for example, you'll need to determine how you are going to summarize the results (using an average? A cumulative amount?).

Some data limitations might also be a function of the data collection timeline. For example, if you measure students' mental health via a survey at a single point in time, you lose a lot of variation in feelings about mental health throughout the school year and might draw improper conclusions. Your results are also highly susceptible to being influenced by external events (e.g. a pandemic) that have nothing to do with your interventions and planned actions. On the other hand, if your indicator is focused on college credit accumulation, a once per year data collection timeline is appropriate.

**Support Resources/References:**

Learning For Action: Developing a Measurement Plan

# 6. WHO WILL BE INCLUDED IN THE INFORMATION YOU COLLECT FOR YOUR ACTIVE INGREDIENT?

**Your answer / notes:**

**Additional Directions/ Considerations:**

Who you choose to include or not include in the data collected for your indicator has major implications for the results you will get and the ease of collecting data. You will want to consider the following:

What population do I intend to include in the data collected for my indicator? Will it be a collection of classrooms or one classroom? Will it be an entire school? Will it be a population of students who meet certain criteria (e.g. students who have patronized the school's mental health services)?

Will you collect data on the entire population or just a sample or subset? If a sample, how will you determine who is included in the sample?

If you are selecting a sample of students, you will want to consider how representative the students you select are of the wider population. If you do not have the capacity to statistically define the representativeness of the sample you use, you should at least "eyeball test" whether key demographic information for the sample (e.g racial demographics, family income, percent with special needs, etc) resembles the population demographics. For example, if you select students in an advanced placement class as the sample for a college readiness indicator, your results likely do not say much about the whole student population. To learn more about the pitfalls of selection bias, read **here**.

Does your indicator require a comparison of two groups? For example, you might be comparing students who utilized mental health services with students who did not use mental health services. Or, you could be looking at a cohort of students compared against that same cohort's results on an indicator in the previous school year or earlier in the school year (e.g. pre and post-survey). This will mean you need to have data available for all of the records that are relevant to your indicator.

**Support Resources/References:**

**Sniffing Out the Secret Poison: Selection Bias in Educational Research**

You need to decide who will be included in the data you collect for your Active Ingredient. Will you be comparing two groups (last year's students vs. this year's students, a cohort of students at two points in time, students who have received an intervention vs. those who have not, etc.)? Will you be including an entire population of students/ classes or a sample of the full group? If you use a sample, think about how representative the sample is of the full population. A key factor in your decision making will also be internal capacity to do the data collection. We would recommend you start with a smaller sample of students if you are working with an indicator that requires new data collection.

**Your answer / notes:**

Determine what "unit" of the school (e.g. students, classrooms, graduating classes, the school overall) you want to make determinations or claims about. This is your "unit of analysis". It should not be confused with your unit of observation —the level of data you collect. If you will need to move from one level of observation to another unit of analysis, make sure you know who will be responsible for (and capable!) aggregating and analyzing the data in the manner you need.

**Additional Directions/ Considerations:**

The data collection, analysis, and reporting that you do related to your Active Ingredient should be informed by the "unit of analysis" that is most relevant for you.

The unit analysis is the entity you want to make some claims about with the data you collect. This could be the school overall, classes at your school, or individuals. For example, if your indicator is the percentage of students in the senior class completing an internship before graduating, students are your unit of analysis. If your indicator is the school's average number of internship hours completed, you would use the school as your unit of analysis.

For both of these hypothetical indicators, your data collection would focus on students. This is because the "unit of observation" —the data you collect for your analysis— and the unit of analysis are two different things. It is important to pay attention to this difference because you will likely always collect data at the student level and will need to compile the information at the classroom level or school level to track your Active Ingredient.

If you are collecting data at the student level and your unit of analysis is at the classroom or school level, just plan your time and personnel for additional work on the data compilation and analysis side after collection is complete.

See more on unit of analysis **here**.

**Support Resources/References:**

**Research Methods Knowledge Base: Unit of Analysis**

**Your answer / notes:**

**Additional Directions/ Considerations:**

In order to make stronger claims about the importance of the Active Ingredient you select, you will need to be able to show it has a positive correlation with some of the traditional indicators of school success (test scores, graduation rate, attendance, college enrollment rates, etc.). This means that as your active ingredient indicator increases, some of the traditional measures of school quality increase as well. It **does not** have to mean that your Active Ingredient **caused** the traditional measures of school quality to increase.

The best way to be prepared to make claims about the relevance of your Active Ingredient is to define a planned set of data analysis questions. These questions will determine the type of data you need to collect alongside your Active Ingredient for later analysis.

You can define this question based on what you want to know to guide your decision making within the school. You can also define it based on the story of impact you want to be able to tell to your authorizer and external audiences. For example, let's say your school's mission is to serve a particularly vulnerable population and one of your key interventions is an expanded set of mental health services for students. You might want to create a data analysis question similar to this: "*Are students who take advantage of mental health services more likely to attend school than those who do not?*"

This question works because it accounts for the following considerations:

- It is **relevant** to the core priorities of your school.

- It is **specific** about its **unit of analysis** (students) and the **dependent** (school attendance) and **independent variables** (participation in mental health services) you intend to measure. More on independent vs. dependent variables **here**.

- It is **measurable with data you have available** in the school **or could easily collect** to answer this research question.

After you create a few well-defined data analysis questions, it will be easier to identify the other sets of data you will need to collect to validate your Active Ingredient. With the example above, you would need to have student-level attendance data and student-level data on participation in mental health services.

**Support Resources/References:**

**What are independent and dependent variables? (NCES)**

Your Active Ingredient will not mean much to your school, your authorizer, and your external audiences unless you can show (at a minimum) that it correlates with traditional indicators of school quality. That's why you will need to define a few data analysis questions that involve your Active Ingredient and other measures of success. These data analysis questions need to be **relevant** to your organization; **specific** about your unit of analysis, independent variable, and dependent variables; and **measurable** with data you can access in your school. When you know your data analysis questions you will know the type of data you need to collect in addition to your Active Ingredient indicator.

Just remember to be measured and practical with the analysis questions you ask. If you're too ambitious you might set your school up for a much larger data collection and analysis project than you have capacity for!

# 9. WHAT OTHER DATA DO YOU NEED TO COLLECT TO ANSWER YOUR ANALYSIS QUESTIONS?

**Your answer / notes:**

You'll want to understand **how** your Active Ingredient connects with other measures of school quality and whether there is a true relationship. In order to do that, you'll need to first think about other variables that impact your Active Ingredient and your school outcomes of interest. These could be mediating, moderating, or confounding variables.

It is important to consider these variables so you do not overestimate the value or impact of your Active Ingredients. Just remember not to go over-board as that means you will need to collect and analyze a lot more data at the end.

**Additional Directions/ Considerations:**

After you define your Active Ingredients and any data analysis questions that are a priority for your school, you will begin to see a core set of data you need to collect to answer your analysis questions.

The unit of analysis in your data analysis questions will tell you at what level the data you collect will need to be.

If your unit of analysis is at the classroom level (e.g. Do classrooms with a higher average grit score achieve greater proficiency on the state assessment?), you can collect data at a more granular unit of observation (e.g. student-level grit scores) and aggregate to the classroom level. But if your analysis question focused on the student-level (e.g. do students with more grit achieve greater proficiency on the state assessment?), you would be unable to answer your question if you only had access to classroom-level grit scores.

You will clearly need to collect data on your independent variable and dependent variables as well. But what may not be as obvious is whether you will want to collect data on both variables as a single point in time (e.g. Students' average grit scores and students' proficiency rates in a given year) or over a series of time (e.g. Students' average grit scores over a 3 year period and students' proficiency rates over the same period). Even if your Active Ingredient does not specify that you are looking at year-over-year improvement, you might want to collect data over time to add important context to your findings.

Here are some other types of data you might want to collect along with your Active Ingredients:

**Intervening or mediating variables** - A mediating variable explains the relationship between your Active Ingredient and other measures of school quality. For example, perhaps students with higher grit are more likely to attend school and students who attend school are more likely to have higher proficiency. Attendance could then be described as a mediating variable.

**Moderating variables** - A moderating variable explains the strength of the relationship between your Active Ingredient and other measures of school quality. For example, perhaps a student with higher grit who is in a class with a larger class size will be less likely to show proficiency improvements than high grit students in smaller classes.

**Confounding variables** - Confounding variables are the variables you might not have accounted for that have an impact on the measures of school quality you are analyzing. These are variables that should be considered to give you a clearer picture of the actual impact and connection between your Active Ingredient and your school's results. For example, teacher quality or engagement could be a confounding variable. Perhaps the teachers who sign up to track their students' grit are more effective teachers and the real reason why proficiency scores are increasing in those classes.

However, there is no ready-made list of potential mediating, moderating, and confounding variables that explain the relationship between your Active Ingredient and other measures of school quality. You will need to think of a list of factors that could be relevant and decide which of those factors are worth tracking alongside your Active Ingredient.

**Support Resources/References:**

**Types of variables**

**Your answer / notes:**

**Additional Directions/ Considerations:**

Now that you have finished collecting data for your Active Ingredients and other academic measures, you'll want to explore the data and consider any new insights you can gain.

If you want to have a firm understanding of the data related to your Active Ingredients, you should start with a review of summary statistics on the indicator.

For example, if you're looking at the "percent of high school students who have completed at least 9 college credits," you could look at a **five number summary** to inform yourself about the maximum and minimum number of college credits completed by your students. You'd also be able to tell the median number of credits completed.

This would help you place your Active Ingredient indicator in context. Perhaps, the median number of credits completed is 12. That might mean that you've made good progress or it could mean that your Active Ingredient target was not ambitious enough.

To answer that question, if possible/available, you might also want to look at data for that metric at earlier dates to compare with the current result. Ideally, if you had access to prior year data, you would have used that to determine a baseline for the indicator you selected. If not, it would still be a good time to compare your results past and present.

You might want to also look at some bivariate descriptive statistics of your Active Ingredients before you move to answering your data analysis question. For example, you could identify that female students in your school are much more likely to have completed college credits than male students. This piece of information could help guide you to consider mediating, moderating, and confounding variables that might impact your results.

Finally, you will look at your Active Ingredient indicator in relation to the academic measures you are tracking.

**Support Resources/References:**

**Find a Five-Number Summary in Statistics**