# EBITE RESOURCE GUIDE

## Introduction to Logic Models

**Purpose**

In this guide, you will learn what Logic Models are and how important they are to designing and implementing school or classroom practices or programs. You will also learn how to design your own Logic Model, guided by examples. Under ESSA, Logic Models are a requirement for Level 4 interventions.

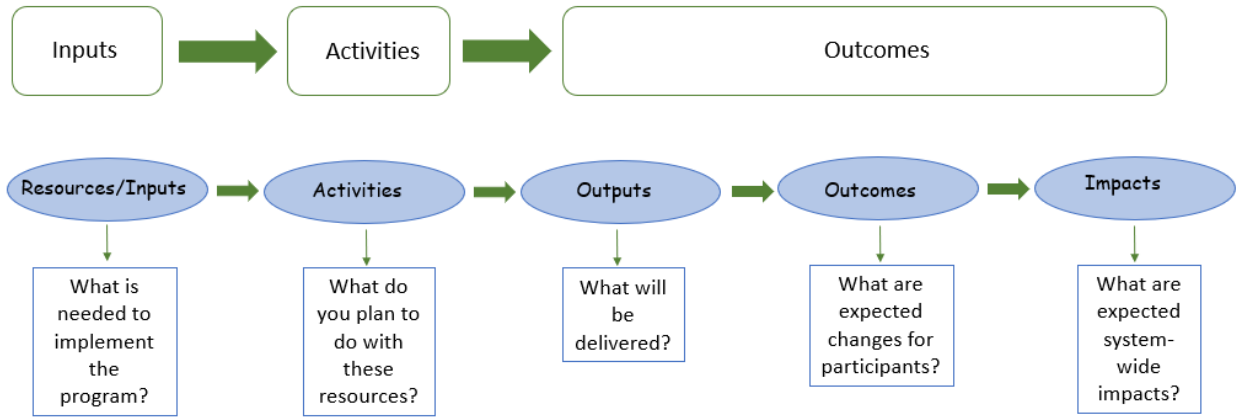
**What are Logic Models?**

After identifying a gap or problem area to be addressed (e.g., "we want to increase HS graduation rates") and your understanding of its underlying or "root" cause (e.g., "individual students experience lack of belonging at our school"), a Logic Model is used to outline your approach to addressing the problem. The Logic Model is a visual and systematic way to describe your approach in terms of the relationships between available resources, program activities, and anticipated changes or results. Logic Models show how a program is intended to "work" and how a series of activities is intended to achieve expected outcomes.[1] Developing a Logic Model for a problem statement or a program:

- enables you to think through all necessary resources/activities needed for the selected program
- assists in identifying clear outcomes and impacts of the selected program
- serves as a tool to help guide and measure your progress

When "read" from left to right, a Logic Model describes program basics over time from planning to expected results. The Logic Model corresponds to a chain of reasoning or "*If...then...*" statements which connect the program's parts.[2] The figure below shows how the basic Logic Model is constructed.

<u>Basic Logic (top) and Logic Model Components (bottom)</u>:




Activities and outcomes of a clearly defined Logic Model should be **SMART**: **S**pecific, **M**easurable, **A**ction-oriented, **R**ealistic and **T**imed. The **SMART** Goal approach assures reachable outcomes and helps with methodical planning to meet long-term goals.

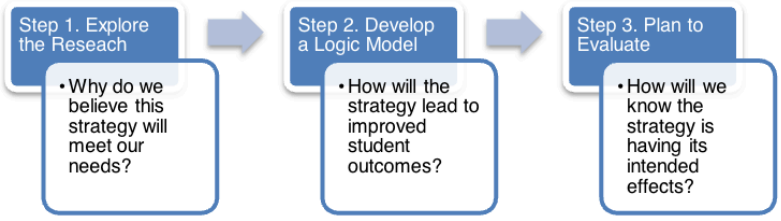
[1] W.K. Kellogg Foundation. (2004). W.K. Kellogg Foundation logic model development guide. Retrieved from https://wkkf.issuelab.org/resource/logic-model-development-guide.html

[2] W.K. Kellogg Foundation/Mosaica. Retrieved from https://cctst.uc.edu/sites/default/files/cis/using%20the%20logic%20model%20for%20program%20planning.pdf

**Why are Logic Models Important?**

After identifying the problem, exploring the research for support on underlying causes and potential remediations, and choosing a practice or intervention, developing a Logic Model is the next step an educator should take to help design and implement a program or intervention. The Logic Model provides support for the "evidence" on how a program is expected to work, particularly as a requirement for Level 4 interventions.

**The Three Steps to Using Level 4 Evidence-based Strategies**[3]




After exploring existing research, the Logic Model provides a visual and a systematic framework for an educator to map out all important components of a targeted issue and its solution. It is a wonderful tool to guide lesson planning, selection of high-quality instructional materials for teaching, as well as program implementation, monitoring, and evaluation.

**How are Logic Models Used?**

*Program & Evidence Implementation*

The Logic Model is the foundation of one's program and evaluation. It should be continually used to check progress throughout the program. The Logic Model:

- Helps anticipate and discover problems within aspects of the selected program
- Allows necessary corrections and improvements to be made while the program is in operation

The most basic Logic Model is a picture of how you believe your program will work. It:

- Uses words/graphics to describe the sequence of activities likely to bring about change
- Illustrates how activities are linked to the results the program is expected to achieve

*Program Evaluation*

The process of creating a Logic Model provides a roadmap to developing a robust program evaluation. The outputs, outcomes, and impact sections of the Logic Model provide benchmarks to measure performance and program success.

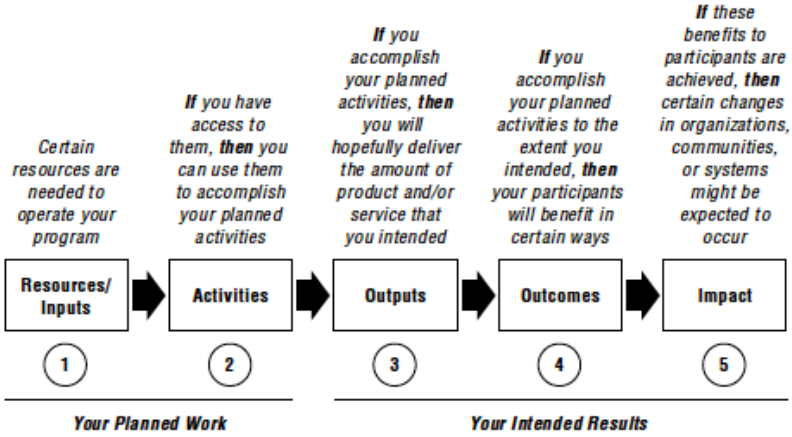
**Parts of a Logic Model**

While variations in Logic Models exist, the shared goal is to identify the inputs and activities that will lead to desired learning gains, behaviors, and other effects. Based on W.K. Kellogg Foundation's well-

[3] Empowered by Evidence: Using Level 4Evidence Strategies, Ohio Department of Education Retrieved from https://education.ohio.gov/getattachment/Topics/Research-Evaluation-and-Advanced-Analytics/5-Steps-to-Being-Empowered-by-Evidence/Empowered-by-Evidence-Resources/Evidenced-Based_Level-4-Guidance.pdf.aspx?lang=en-US

known Logic Model guide[4], the following graphic illustrates the "if… then…" logic that guides program implementation decisions. We provide an example using the Kellogg template (Appendix A) below.

**"If-Then" Logic to Guiding Logic Model Development[4]**




**Getting Started**

*Here is an example situation: In your Ohio school district, you discovered that last year approximately 12% of the high school students in your area dropped out of school. How can you increase student engagement and high school graduation rates?*

| Planning | Examples/Considerations |
|---|---|
| **1. Resources/Inputs:** People as well as financial, organizational, and community resources available to address an issue | *coordinators, mentors, teachers, data input team, funding supports* |
| **2. Activities:** actions to be completed using the resources available | *Activities could be based on those from a collaborative home-school-community intervention, such as mentor check-ins, designed to increase likelihood of students staying in schools (See other activities in example Logic Models below)* |
| **Intended Results** | **Examples/Considerations** |
| **3. Outputs:** types, levels, and targets of services resulting from activities; evidence of activities occurring | *1386 students at risk of disengagement or dropout served through classroom-wide or individual activities; 8 training sessions for mentors delivered throughout the year* |
| **4. Outcomes**: immediate specific changes in target group | *Outcomes could be short- or long-term. For example, after 3 months, improved mentor-student relationships are expected; after 1 year, student motivation and school engagement will increase* |
| **5. Impact:** fundamental long-term changes occurring in the classroom, school, or organization resulting from program activities | *school drop-out rate decreases to 9% or less within 3-5 years* |

[4] W.K. Kellogg Foundation Logic Model Development Guide, 2004

| Overall Context | Examples/Considerations |
|---|---|
| **Assumptions:** underlying beliefs about how your program will work that impact program success; based on theory, research, evaluation knowledge, etc. | *Research shows that student engagement impacts retention and motivation. Engaging students through mentoring will decrease drop-out rates.* |
| **External Factors:** environmental conditions at school, community, and home that you have little control over but can affect attainment of outcomes | *Degree of teacher-family connections. For example, schools with stronger existing teacher-family connections may experience stronger program benefits* |

Note that assumptions and external factors are important contextual or theoretical factors that help understand how well a program, practice, or intervention may be implemented in your own setting.

⇨ **Your Turn:** Use the Logic Model Development template in Appendix A (Click here to download an editable copy) to sketch out *your* specific need(s). Examples of completed Logic Models can be viewed in Appendix B.

**Resources**

Guides on Logic Model development

- Logic Model Development Guide, W.K. Kellogg Foundation (2004)
- Definitions of Logic Model Components, Institute of Education Sciences (n.d.)
- Empowered by Evidence: Using Level 4 Evidence-Based Strategies, Ohio Department of Education (2018)
- Developing Logic Models for Teacher Leadership Initiatives, Ohio Department of Education (2019)

Videos

- Video Explaining Logic Models, Pennsylvania Coalition Against Rape (2:48min)
- Video Introducing the Education Logic Model, Institute of Education Sciences (7:01 min)

Logic Model Examples

- Literacy Rate Improvement, New York Public Library Logic Model (2016)
- Emozi Social Emotional Learning Program Logic Model, PATHS program (2021)
- Example Logic Model for Schoolwide SEL Intervention, RAND Corporation (2017)
- Curriculum Evaluation Example Logic Model, Learning by Making, Sonoma State University (2017)
- 4-H Developing Youth Leaders Logic Model, University of Wisconsin-Madison (2009)
- College Ready Sample Logic Model, REL Northeast & Islands (2014)
- Check & Connect: A Comprehensive Student Engagement Intervention, University of Minnesota (2014)

**Appendix A: Kellogg Logic Model Template[5] (Click here to download an editable copy)**

| Resources | Activities | Outputs | Short- & Long-Term Outcomes | Impact |
|---|---|---|---|---|
| *Resources needed to achieve our program:* | *To address our issue, we will use our resources to accomplish the following activities:* | *In accomplishing our planned activities, we will deliver the following number of services to participants:* | *If planned activities are accomplished, we expect these immediate and long-term changes:* | *If benefits to participants are achieved, we expect these changes in our organizations, communities, or systems:* |
| | | | | |

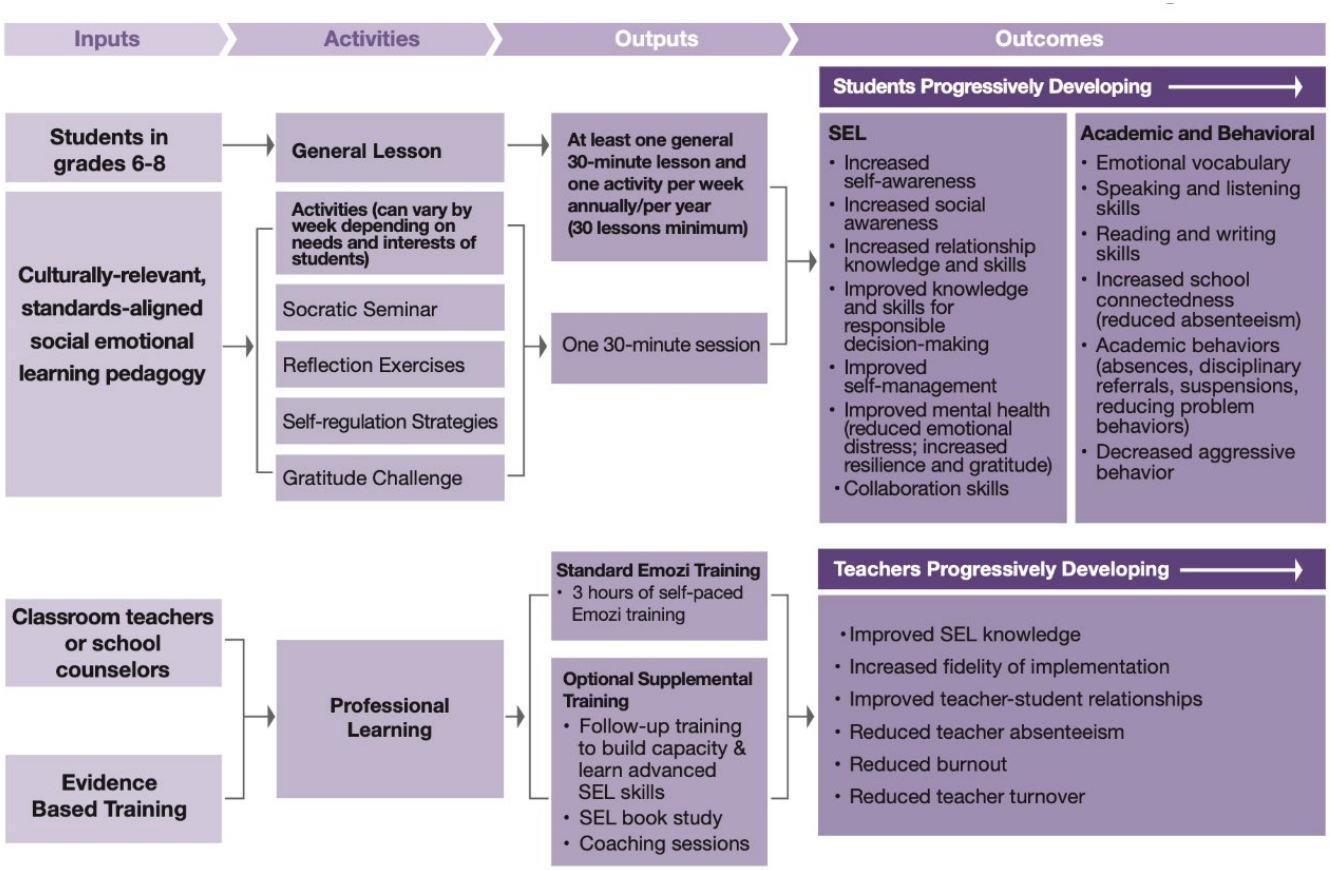
| Assumptions: | External Factors: |
|---|---|
| | |

[5] https://wkkf.issuelab.org/resource/logic-model-development-guide.html

## APPENDIX B: Examples of Completed Logic Models

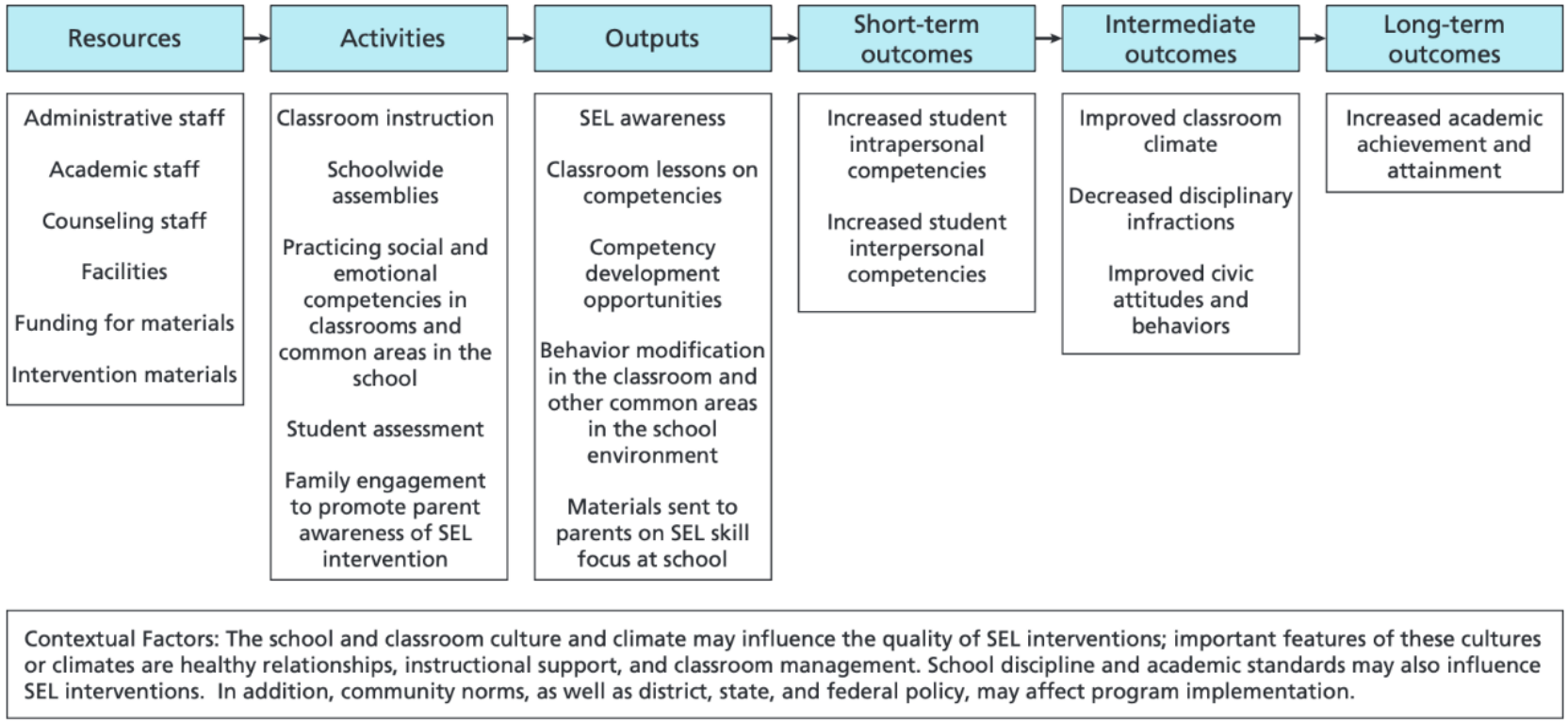
Here are examples of completed logic models. There may be deviations from the W.K. Kellogg Foundation logic model described above. Nonetheless, logic models share foundational elements to show how a program is intended to "work" and how a series of activities is intended to achieve expected outcomes.

1. Emozi Social Emotional Learning Program Logic Model, PATHS program (2021)[6]



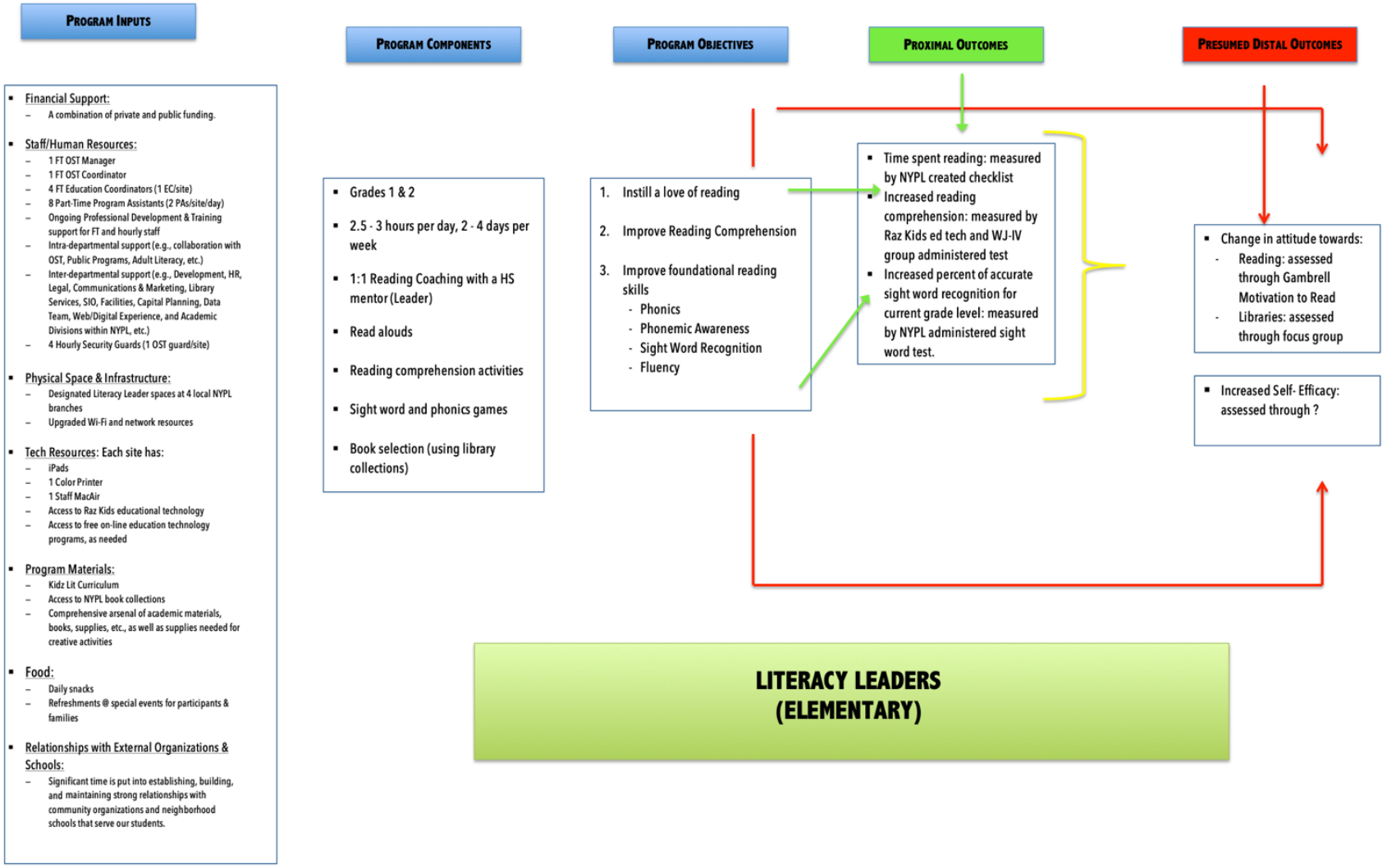

[6] https://static1.squarespace.com/static/5c6448da8155123e169a7979/t/6181a7f2eef4ac6d305b86c0/1635887092347/Emozi-LogicModel.pdf

2. Example Logic Model for Schoolwide SEL Intervention, RAND corporation (2017)[7]



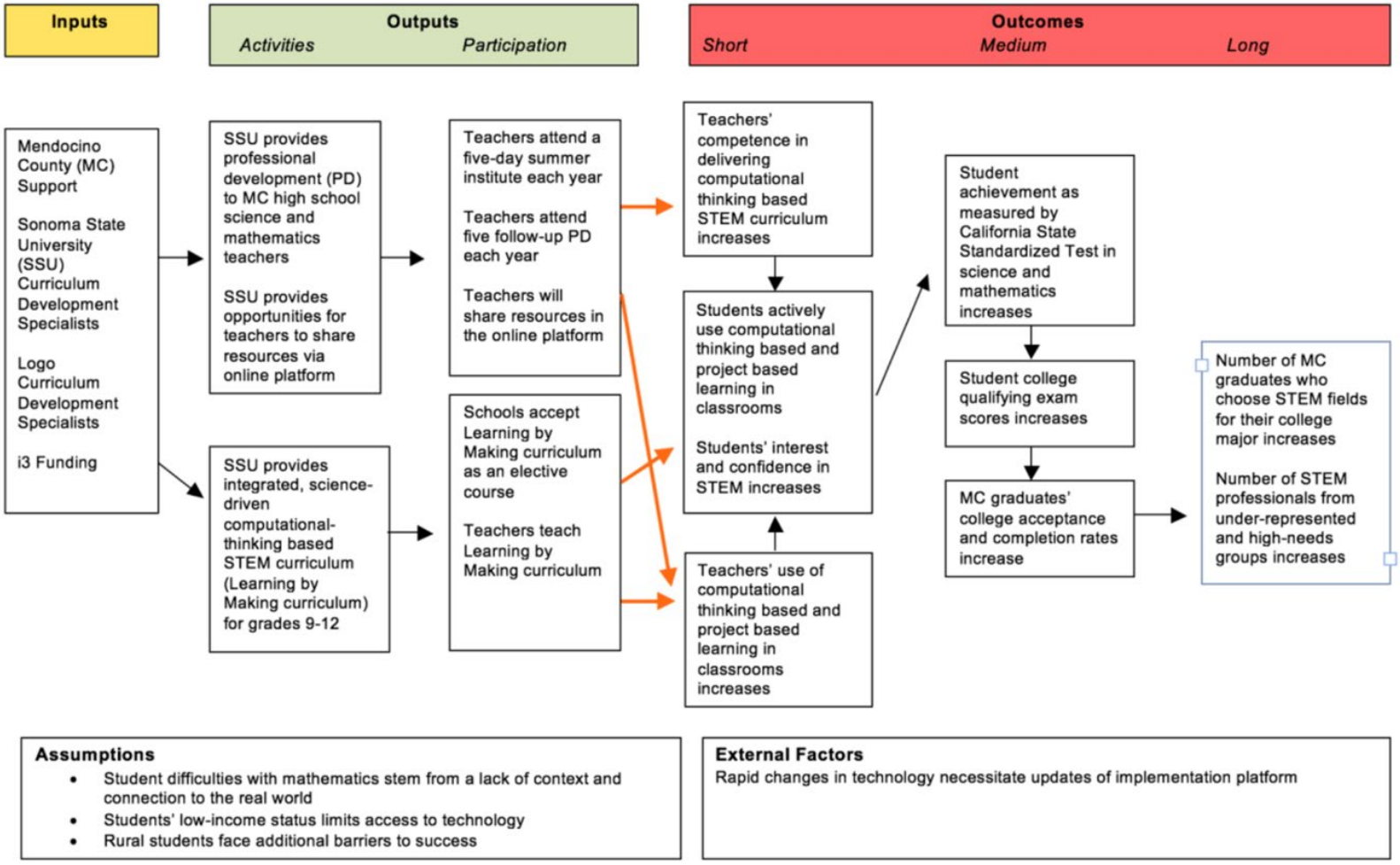

[7] https://www.rand.org/pubs/research_reports/RR2133.html (p63)

3. Literacy Rate Improvement, New York Public Library Logic Model (2016)[8]




[8] https://www.urbanlibraries.org/assets/AS-30._NYPL_Literacy_Leaders_Logic_Model.pdf

4. Curriculum Evaluation Example Logic Model, Learning by Making, Sonoma State University (2017)[9]

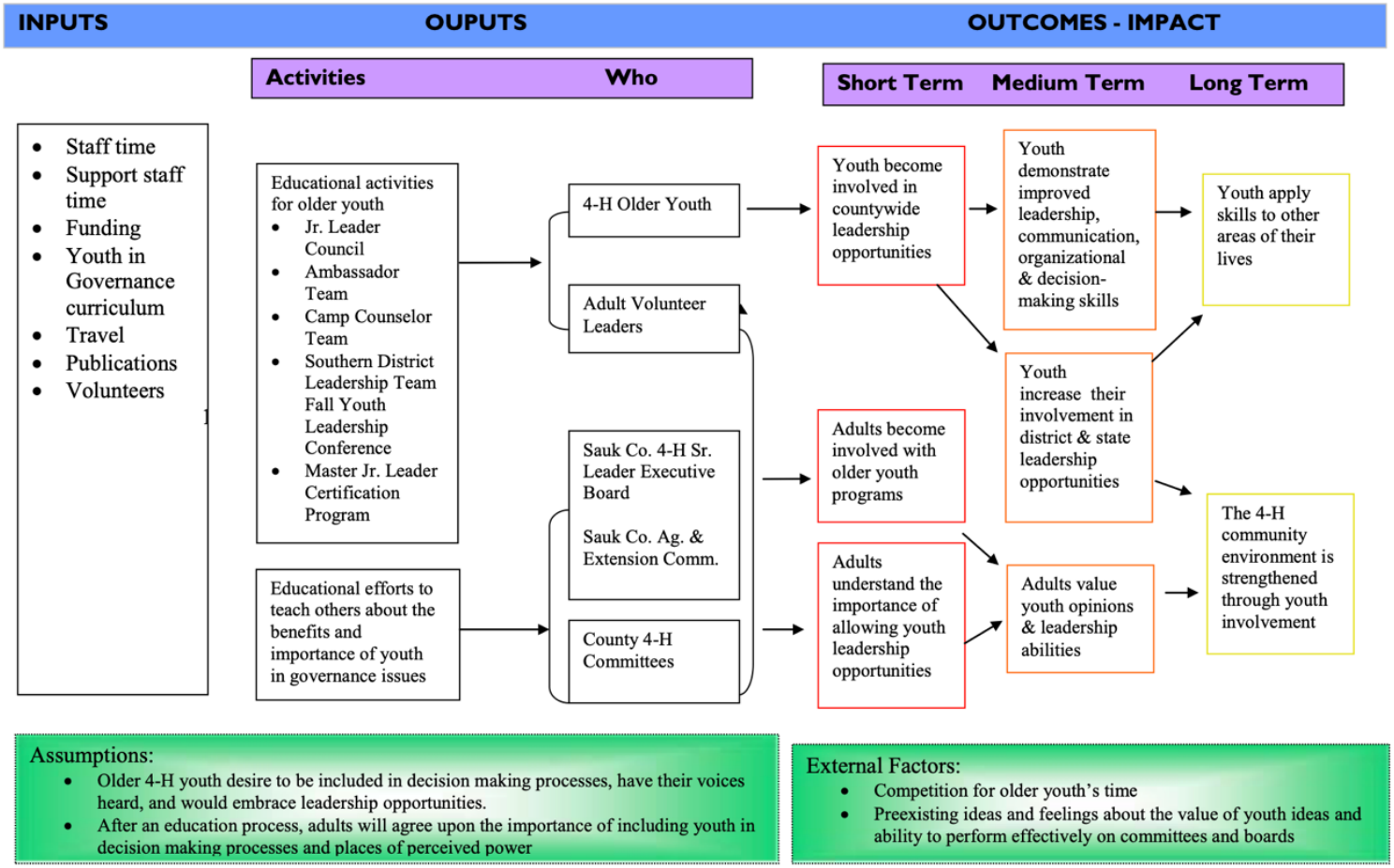



[9] https://lbym.sonoma.edu/lbympublic/wp-content/uploads/2018/06/LbyM_report.pdf

5. 4-H Developing Youth Leaders Logic Model, University of Wisconsin-Madison (2009)[10]

## Developing Youth Leaders: LOGIC MODEL

Situation: Older youth lack opportunities to learn and practice leadership skills that build strong citizens of the future. Research shows the importance of educating adults and building their commitment to help create the opportunities for youth to develop their leadership skills.




[10] https://fyi.extension.wisc.edu/programdevelopment/files/2016/03/LogicmodelStrengtheningclubleadershipJJens.pdf

6. College Ready Sample Logic Model, REL Northeast & Islands (2014)[11]

## Appendix B: College Ready Sample Logic Model

**Problem Statement:** Low-income high students in selected communities attend college at a lower rate than their middle class peers, leading to more limited opportunities, higher rates of unemployment, and lower earnings.

| Resources | Strategies and Activities | Outputs | Short-term Outcome | Long-term Outcomes | Impacts |
|---|---|---|---|---|---|
| *What resources are or could reasonably be available?* | *What will the activities, events, etc. be?* | *What are the initial products of these activities?* | *What changes are expected in short-term?* | *What changes wanted after initial outcomes?* | *What are hoped for changes over long haul?* |
| -Partnership with 3 public high schools<br>-Community mentors<br>-Local university space for parent meetings<br>-Volunteer college admissions directors for application workshop<br>-Student volunteers for childcare at parent meetings | -Local college mentorship program<br>-Peer mentors<br>-Student readiness program (workshops)<br>-Parent education (workshops) | -Recruit adequate # of mentors for student cohort<br>-Develop and deliver 12 workshops on college application process; SAT/ACT; FAFSA; college life<br>-Develop and deliver 6 workshops for parents<br>-High interest and attendance at all workshops for parents and students. | -Participating students apply to at least one college on time<br>-Parents report increased understanding of the college application process<br>-Students report increased readiness for college<br>-Participating students complete FAFSA forms on time | -Participating students are accepted to and attend college, remaining enrolled into the 3rd semester of college<br>-Participating students GPAs above 3.0 at college, into the 3rd semester<br>-Increased parental engagement in participating high schools' students education | -Low-income students in participating communities attend college at same rate as middle class peers<br>-Low-income students in participating communities graduate from college at some rate as middle class peers<br>-Participating high schools see increase in parent and student engagement<br>-Participating high schools state test scores increase by x% |

**Assumptions:** College attendance is desired goal for participating communities; high school leaders will remain consistent and support program; parents will show interest and participate in program.

[11] https://osse.dc.gov/sites/default/files/dc/sites/osse/publication/attachments/REL_Workbook.pdf

7. Check & Connect Logic Model: Promoting Student Engagement at School, University of Minnesota (2014)[12]

## Check & Connect logic model

| Situation | Inputs | Outputs | | | Outcomes | |
|---|---|---|---|---|---|---|
| | Human resources | Core elements | Intervention | Target population | Proximal | Distal |
| In October 2008, approximately 3 million 16–24-year-olds were not enrolled in high school and had not earned a high school credential. These status dropouts accounted for 8% of the 38 million 16-24-year-olds living in the U.S. (NCES, 2010). | Coordinator<br>Mentors<br>**Evidence theory**<br>▪ Student engagement<br>▪ Systems theory for home-school-community collaboration<br>▪ Resilience<br>▪ Cognitive-behavioral<br>▪ Intrinsic motivation<br>▪ Social capital<br>Research results<br>▪ Significantly increases the likelihood that students will stay in school | Relationships<br>▪ Focus on alterable indicators of disengagement<br>▪ Personalized, data-based intervention<br>▪ Long-term commitment<br>▪ Participation and affiliation with school<br>Problem solving and capacity building<br>Persistence-Plus | Check<br>▪ Mentors systematically monitor alterable predictors of school completion: attendance, academic performance, and behavior<br>Connect<br>Mentors<br>▪ Build relationships with students and families<br>▪ Problem solve with students<br>▪ Use "check" data to provide personalized and timely interventions | ▪ Students who are at risk of disengagement or dropout<br>▪ Eligible students are those who meet specific criteria defined by the referring institution, typically related to indicators of disengagement such as attendance, behavior problems, and academic performance | ▪ A relationship between the mentor and student<br>▪ Increased engagement in school and with learning<br>▪ Staying in school (decrease in tardies and absences; increase in attendance)<br>▪ Making progress in school (decrease in discipline referrals; increase in grades, credits earned, passing of required state tests)<br>▪ An increase in student—<br>» Awareness of the value of education<br>» Motivation<br>» School affiliation<br>» Commitment to school<br>» Perceived competence<br>» Self-regulation skills<br>» Problem-solving skills | ▪ School completion (defined as high school graduation with academic and social competence)<br>▪ Being prepared for postsecondary education and/or career |

**Contextual factors such as school, community, and family practices that can either inhibit or facilitate attainment of outcomes.**

[12] http://checkandconnect.umn.edu/contactus/About_and_SelfAssessment.pdf