

Definitions of Logic Model Components

Problem statement

A problem statement is a description of the problem that the program is designed to address. A strong problem statement defines the problem as completely and specifically as possible.

Ask the following questions when defining the problem:

- What is the problem that creates the need for the program?
- Why is it a problem? Why do you care about this problem? What negative outcomes have resulted or will result if the problem is not addressed?
- What is known about the problem (through previous work, research, and so on)?
- For whom does the problem exist? Or whom does the problem target?
- Who has a stake in the challenge? Or who has a voice in what happens?

AMMP! example: Students at the middle school have low homework completion rates (lower than 40 percent) and low performance on state math assessments (only 25 percent proficient or advanced). In addition, the community around the middle school is experiencing issues with unsupervised students after school. Incidents involving middle school students are up 17 percent over the last three years. Stakeholders, including school staff, students, parents, police, property owners, and businesses, are concerned about the low performance and unsupervised after-school time. Research has indicated that low math performance in middle school is correlated with low graduation rates and that unsupervised after-school time is related to an increase in community issues.¹ The school district has recently received a federal grant and would like to use these funds to address the problem.

Resources

Resources are all the available means to address the problem, including investments, materials, and personnel.

- Resources are the inputs that enable the creation of strategies and activities to respond to the problem. They may include human resources, monetary resources, facilities,

¹ See, for example, “How Did Successful High Schools Improve Their Graduation Rates?” by J. Robertson, R. Smith, and J. Rinka, 2016, *Journal of At-Risk Issues*, 19(1), 10–18 (<https://eric.ed.gov/?id=EJ1104424>); and *Graduation Exam Participation and Performance, Graduation Rates, and Advanced Coursetaking Following Changes in New Mexico Graduation Requirements, 2011–15* (REL 2018-277), by J. Walston, C. Tucker, C. Ye, and D. H. Lee, 2017, U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest (<https://eric.ed.gov/?id=ED576327>).

expertise, curricula and materials, time, and any other contributions to implementing a program.

AMMP! examples: Grant funding, school facilities, school transportation, volunteer tutors, school staff, teacher-designed math extension activities, and partnerships with the local recreation center and businesses.

Activities

Activities are the actions taken to implement the program or address the problem.

- Activities may include, for example, professional development sessions, after-school programs, policy or procedure changes, use of a curriculum or teaching practice, mentoring or coaching, development of new materials, or other tasks.

AMMP! examples: Training of volunteer tutors, tutoring or homework help, outreach activities, math extension activities, recreational activities, and field trips.

Outputs

Outputs are the evidence of program implementation. Focus on how you know that the activities are occurring, not on whether they are having any impact.

- Outputs can include required deliverables, the number of activities, newly developed materials, new policies or procedures, observations of the program in use, the numbers of students or teachers involved, and other data that provide evidence of the implementation of activities in the program.

AMMP! examples: Student attendance in the program, hours of provided tutoring, tutor attendance in training, tutoring records, lesson plans, schedules of activities, and meeting minutes.

Outcomes

Outcomes are the anticipated results once you implement the program. They can be divided into three types: short-term, mid-term, and long-term outcomes.

Short-term outcomes are the most immediate and measurable results for participants that can be attributed to program activities. They are typically changes in knowledge or skills resulting from the implementation of the program. They can be expected within a short period after implementation.

Ask the following questions when determining short-term outcomes:

- What difference will the program make in directly changing participants' knowledge or skills?
- What changes will we see first as a result of the program?

AMMP! examples: Community awareness of the program, increased tutor knowledge of effective techniques, student awareness of the program, teacher promotion of the program, and increased teacher support for the program.

Mid-term outcomes are the more distant, though anticipated, results of participation in program activities. They are typically changes in attitudes, behaviors, and practices. These types of changes require a longer period to fully take place.

Ask the following question when determining mid-term outcomes:

- What difference will the program lead to in terms of attitudes, behaviors, and practices?

AMMP! examples: Increased student participation in the program, increased homework completion rates, increased readiness for high school math, increased engagement in math classes, and increased community and business participation in the program.

Long-term outcomes are the ultimately desired outcomes of implementation of program activities. They are the impacts of the program that are dependent on conditions beyond the scope of the program. They are typically systemic changes or changes in student outcomes. They may not be the sole result of the program, but they are associated with it and may manifest themselves after the program concludes.

Ask the following question when determining long-term outcomes:

- To what extent will the difference in attitudes, behaviors, and practices ultimately lead to change at the individual and institutional (e.g., school, district, regional service unit) levels?

AMMP! examples: Increased graduation rates, decreased number of issues in the community, increased enrollment in advanced math courses in high school, improved performance on state math assessments, and improved school–community relationships.

Additional considerations

Additional considerations are important details or ideas that do not fit into the other components of the logic model. They may include assumptions about the program, external factors not covered in the problem statement, and factors that may influence program implementation but are beyond your control.

AMMP! examples: External factors—availability of tutors and school facilities. Assumptions—supervised after-school time results in fewer community issues; including recreational activities will improve attendance.

Note. Adapted from *Logic Models to Support Program Design, Implementation and Evaluation*, by K. Shakman, 2014, REL Northeast and Islands (https://iqa.airprojects.org/events/webinars/LogicModel_Workbook_2014.pdf).

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