

# Evidence

## Case Study of Rose Blossom ABC Club

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### Special Note

This skill building activity builds upon the Theory of Change module's definitions of theory of change and the three necessary elements (Community Problem/Need, Outcome, and Intervention) with a special emphasis on the evidence concepts provided in this module. It can be used to apply the concepts and principles to real world situations.

### Introduction

This exercise allows learners to critique a sample grant application narrative for an afterschool program to assess how well the applicant identified the theory of change and each of the necessary elements with a focus on the evidence provided for the choice of intervention and the data documenting the need.

### Key Points and Definitions

A **theory of change** defines a cause-and-effect relationship between a specific intervention, or service activity, and an intended outcome.

**Community problem** is the specific need in the community you have chosen to address through your program/project.

**Data documenting the need** are statistics that document the prevalence and severity of the community problem or need your program/project will address. The best data come from reputable primary sources, (such as government agencies, institutes, foundations, and universities that have conducted their own research), are as current (up to date) as possible, and are as locally relevant, as possible. News reports are NOT primary sources. Data from multiple (reputable) sources increases reliability.

An **Intervention** is a set of activities that you have chosen to address the need based on evidence that a similar approach has worked in the past or elsewhere.

**Evidence** is information or facts that are systematically obtained in a manner that is replicable, observable, credible and verifiable for use in making judgments or decisions. Evidence enables us to determine whether or not a program intervention is achieving its intended outcomes.

Evidence should be:

- **Similar:** Cites comparable intervention with similar beneficiaries and results
- **Significant:** Findings show that the program had a positive and statistically significant effect on beneficiaries

## Evidence

### Skill Building Activity #1 – Case Study of Rose Blossom ABC Club

- **Up-to-date:** Recently published or most recent available
- **High Quality:** Use well-implemented and appropriate research methodologies given the research questions of interest
- **Reputable:** Source with no stake in outcome and published in a peer reviewed journal or by credible organization

**Outcome** is the change in attitude, knowledge, behavior, or condition that the intervention generates.

## Sticking Points and Common Issues

The following are a few of the common issues that learners may encounter as they work with theories of change and evidence.

### Community Problem/Need Issues:

- Explains the intervention activities instead of presenting data demonstrating the specific problem/issue in the community the intervention will address.
- The community need and intended outcome are not closely related.

### Data Documenting the Need Issues:

- Uses state or national data instead of local data describing the need in the specific communities where the service will occur.
- Turns into a data dump with too many indirect or unrelated statistics provided.
- Doesn't use data from reputable sources that is current.
- Doesn't show the causes or consequences of the identified problem.
- Doesn't identify sources of the data

### Intervention Issues:

- Description of the design and dosage (frequency, intensity, and duration) is incomplete or unclear.

### Evidence Issues:

- Is not significant, up-to-date, high quality or reputable
- Doesn't come from data on program similar to the one proposed (based on design and dosage)
- Doesn't identify sources of the evidence
- Doesn't identify type of evidence (performance measurements, evaluation findings, or research results)
- Doesn't make a strong case for the choice of intervention

### Outcome Issues:

- Isn't likely to occur based on the specific intervention.
- Doesn't directly relate to the community need.

## Exercise

The following is a case study using Rose Blossom ABC Club’s Rationale and Approach narrative from an AmeriCorps grant application describing the program’s theory of change.

Learners read the case study and then answer ten questions on how well Rose Blossom ABC Club presented:

- the Theory of Change
  - Community problem/need
    - the data documenting the problem
  - Intervention design and dosage
    - the evidence supporting the choice of the proposed intervention
  - Intended outcome

## Case Study Rose Blossom ABC Club

### Instructions:

The following case study presents Rose Blossom ABC Club's Rationale and Approach narrative from an AmeriCorps grant application describing the program's theory of change. Read the narrative and then answer the ten attached questions.

### RATIONALE AND APPROACH (ABRIDGED)

According to a report from Education Week (March 2008), every 29 seconds a young person drops out of high school in America. Nearly one-third (31 percent) of all public high school students fail to graduate with their class. In addition, low-income children, on average, tend to do worse academically than their more privileged contemporaries. Not only do high school dropouts earn about \$9,200 less per year and about \$1 million less over a lifetime than high school graduates, but dropouts are more than three times more likely than college graduates to be unemployed, twice as likely as high school graduates to slip into poverty and 3.5 times more likely than graduates to be incarcerated. Clearly the statistics compel us to act on behalf of our young people. Intervention in the lives of these young people is sometimes necessary to help them achieve academic success. Activities such as individualized remediation and help with homework can make the difference between success and failure.

The needs and problems to be addressed by our statewide service program are supported by KIDS COUNT 2008, a publication of the Annie E. Casey Foundation, and the Rose Blossom Department of Education in which it was reported that in Rose Blossom: (1) 216,000 youth live in households where the head of household is a high school dropout; (2) 66% of 4th grade students scored below proficient reading level; and (3) 58% of 4th grade students scored below proficient math level.

After school programs do have academic impact, as reported in an October 2007 report from University of California-Irvine, University of Wisconsin-Madison and Policy Study Associates. The outcomes in the report include that "for disadvantaged elementary and middle school students, regular participation in high quality afterschool programs is linked to significant gains in standardized test scores and work habits." Gains included: (1) Significant increases in standardized math scores and (2) Stronger work and study habits, as reported by teachers.

Between 2006 & 2010, National ABC completed pre-tests, utilizing 3 sub-tests of the Woodcock Johnson Tests of Achievement (a research based assessment tool), on 14,102 children in reading and math. Results indicated (1) 63% of children scored below grade level, 4% scored at grade level and 33% scored

## Evidence

### Skill Building Activity #1 – Case Study of Rose Blossom ABC Club

above grade level in reading and (2) 66% of children scored below grade level, 3% scored at grade level and 31% scored above grade level in math.

When we post-tested the Rose Blossom ABC Club children after 30 high-quality homework sessions, results included a 68% increase in reading and a 67% increase in math. Rose Blossom ABC BGC are poised and ready to assist in narrowing the achievement gap through educational support and enhancement that can be offered to Indiana youth through our Corps project.

Research studies confirm that homework completion does make a difference in helping children and teens become more confident, happy and successful in school.

A recent study of afterschool homework assistance programs across the country revealed the following statistics about participating students and parents: (1) 85% said that, as a result of homework assistance programs, their children enjoyed school more and improved their attendance and (2) Students participating in after-school programs were less likely to start drinking, and were more likely to handle their anger in socially appropriate ways.

Based on these findings, Corps members will be engaged in assisting Rose Blossom ABC Club youth in completing their homework and in developing their education skills and knowledge through the AIM HIGH program. AIM HIGH is a comprehensive homework help and individualized remediation program for ABC Club youth aged 6 to 18 years, AIM HIGH: Making Minutes Count provides youth with the support, resources and guidance necessary to complete their homework -- and start the school day with a sense of confidence and ability. As youth complete homework assignments and bonus activities, they accumulate AIM Points, which may be used to obtain AIM Rewards -- prizes, activities and incentives. In addition, AIM HIGH offers academic remediation help for youth who need additional work in special areas. AIM HIGH offers a structured time and place for Club staff and volunteers to help youth with an important aspect of the educational process -- homework. Youth emerge from the program better prepared for classes and proud of their hard work and accomplishments. The philosophy underlying the AIM HIGH program is that the benefits of homework are threefold -- academic, behavioral and social. By working on homework after school, youth reinforce skills and concepts learned that day. Young people who consistently complete their homework develop a deeper understanding of the work, and are ready to move on to more challenging concepts. In addition, homework completion leads to long-term improvements in youth grades and test scores.

## Rose Blossom Case Study Questions

Please answer the following questions:

1. **Community problem.** What negative condition (problem) exists in the community? What rationale is given for why this problem exists?

2. **Intervention.** Describe the design and dosage of the applicant's proposed intervention.

### INTENDED OUTCOME

3. What are the intended outcomes they will measure?

**4a. What data are provided to document the prevalence and severity of the problem? What data are provided to support the rationale for why this problem exists?**

**4b. Are these data reputable, current and local?**

**4c. What additional data could be included to demonstrate the prevalence and severity of the problem?**

**5a. Evidence. What evidence does the applicant provide to demonstrate that the intervention will solve the problem?**

Evidence

Skill Building Activity #1 – Case Study of Rose Blossom ABC Club

**5b. How well does the evidence identified in Question 5a address the considerations we discussed (similar, significant, up-to-date, high quality, reputable)?**

**5c. What evidence is missing?**



## Answer Key and Points to Consider

### Evidence Case Study Rose Blossom ABC Club

The following is a case study using Rose Blossom ABC Club's Rational and Approach narrative from an AmeriCorps grant application describing the program's theory of change.

Read the narrative and then answer the questions on how well they presented:

- the theory of change,
- community problem/need
- the data documenting the problem,
- the intervention design and dosage, and
- the evidence supporting the choice of the proposed intervention.

#### **RATIONALE AND APPROACH (ABRIDGED)**

Each of the paragraphs in the case study has been labeled below to help you understand what Rose Blossom ABC Club was trying to do with that section of their narrative. The color coding for the elements of the Theory of Change is as follows: Blue is Community Need; Green is Evidence, Black is Intervention; and Orange is Outcome.

***The following paragraph aims to provide documentation of the problem/need:***

According to a report from Education Week (March 2008), every 29 seconds a young person drops out of high school in America. Nearly one-third (31 percent) of all public high school students fail to graduate high school with their class. In addition, low-income children, on average, tend to do worse academically than their more privileged contemporaries. Not only do high school dropouts earn about \$9,200 less per year and about \$1 million less over a lifetime than high school graduates, but dropouts are more than three times more likely than college graduates to be unemployed, twice as likely as high school graduates to slip into poverty and 3.5 times more likely than graduates to be incarcerated. Clearly the statistics compel us to act on behalf of our young people. Intervention in the lives of these young people is sometimes necessary to help them achieve academic success. Activities such as individualized remediation and help with homework can make the difference between success and failure.

***The following paragraph aims to provide documentation of the problem/need:***

The needs and problems to be addressed by our statewide service program are supported by KIDS COUNT 2008, a publication of the Annie E. Casey Foundation, and the Rose Blossom Department of Education in which it was reported that in Rose Blossom: (1) 216,000 youth live in households where the head of household is a high school dropout; (2) 66% of 4th grade students scored below proficient reading level; (3) 58% of 4th grade students scored below proficient math level.

***The following paragraph aims to provide evidence for the intervention from a university research report:***

After school programs do have academic impact, as reported in an October 2007 report from University of California-Irvine, University of Wisconsin-Madison and Policy Study Associates. The outcomes in the report include that "for disadvantaged elementary and middle school students, regular participation in high quality afterschool programs is linked to significant gains in standardized test scores and work habits." Gains included: (1) Significant increases in standardized math scores and (2) Stronger work and study habits, as reported by teachers.

***The following paragraph aims to provide evidence for the intervention from a program evaluation conducted by the national headquarters of the ABC program:***

Between 2006 & 2010, National ABC completed pre-tests, utilizing 3 sub-tests of the Woodcock Johnson Tests of Achievement (a research based assessment tool), on 14,102 children in reading and math. Results indicated (1) 63% of children scored below grade level, 4% scored at grade level and 33% scored above grade level in reading and (2) 66% of children scored below grade level, 3% scored at grade level and 31% scored above grade level in math.

***The following paragraph aims to provide evidence for the intervention using performance measurement results from the Rose Blossom ABC program:***

When we post tested the Rose Blossom ABC Club children after 30 high-quality homework sessions, results included a 68% increase in reading and a 67% increase in math. Rose Blossom ABC BGC are poised and ready to assist in narrowing the achievement gap through educational support and enhancement that can be offered to Indiana youth through our Corps project.

***The following paragraph aims to provide evidence for the intervention from research studies:***

Research studies confirm that homework completion does make a difference in helping children and teens become more confident, happy and successful in school.

***The following paragraph aims to provide evidence for the intervention from a university research report:***

A recent study of afterschool homework assistance programs across the country revealed the following statistics about participating students and parents: (1) 85% said that, as a result of homework assistance programs, their children enjoyed school more and improved their attendance and (2) Students participating in after-school programs were less likely to start drinking, and were more likely to handle their anger in socially appropriate ways.

***The following paragraph aims to describe the intervention design:***

Based on these findings, Corps members will be engaged in assisting Rose Blossom ABC Club youth in completing their homework and in developing their education skills and knowledge through the AIM HIGH program. AIM HIGH is a comprehensive homework help and individualized remediation program for ABC Club youth aged 6 to 18 years, AIM HIGH: Making Minutes Count provides youth with the support, resources and guidance necessary to complete their homework -- and start the school day with

Skill Building Activity #1 – Case Study of Rose Blossom ABC Club

a sense of confidence and ability. As youth complete homework assignments and bonus activities, they accumulate AIM Points, which may be used to obtain AIM Rewards -- prizes, activities and incentives. In addition, AIM HIGH offers academic remediation help for youth who need additional work in special areas. AIM HIGH offers a structured time and place for Club staff and volunteers to help youth with an important aspect of the educational process -- homework.

*The following paragraph aims to provide information on the cause and effect leading to the outcome of academic, behavioral, and social improvements:*

Youth emerge from the program better prepared for classes and proud of their hard work and accomplishments. The philosophy underlying the AIM HIGH program is that the benefits of homework are threefold -- academic, behavioral and social. By working on homework after school, youth reinforce skills and concepts learned that day. Young people who consistently complete their homework develop a deeper understanding of the work, and are ready to move on to more challenging concepts. In addition, homework completion leads to long-term improvements in youth grades and test scores.

**DEBRIEF GUIDE**

The debrief follows the sequencing found in the questions on the theory of change. First, discuss what learners believe is the two key elements of the theory of change – intervention and outcome. Second, discuss each element of the theory of change. Third, discuss the community problem or need and the data documenting the need. Fourth, discuss the intended outcomes and then last, the intervention and evidence provided to support it.

**1. What negative condition (problem) exists in the community? What rationale is given for why this problem exists?**

- Children are below proficient in reading and math (Immediate Problem)
- Drop-out rates and other long term problems seem to be the consequences of the problem, which are fine to include for “big picture,” but they don’t actually tell us anything about the prevalence and severity of the immediate problem.
- Why does the problem exist? Could be any number of things: learning disabilities; poor nutrition/health; frequent absences; high student-teacher ratios; behavioral issues, etc.
- The statistic on heads of household who are dropouts might be trying to make a point, but it’s not clear what point.
- Poverty is identified—low-income children do worse than more privileged children—but it’s just one sentence.

**2. Describe the design and dosage of the applicant’s proposed intervention.**

- Homework help and academic remediation—broad categories of interventions like “tutoring.”
- Population is identified—youth ages 6-18.
- Rewards are given to youth for completing certain tasks.
- Don’t know much about design and dosage (frequency, intensity, duration).

**3. What is the intended outcome they will measure?**

- Outcomes — States that youth will improve academically, behaviorally and socially.
- PM data presented are on reading and math proficiency of some kind. Most of the evidence provided is about attitude, attendance and behavior, but they don't document problems in these areas, and they don't seem to be measuring this.
- Not clear what the applicant will measure.

**4a. What data are provided to document the prevalence and severity of this problem? What data are provided to support the rationale for why this problem exists?**

- % of students below proficient in reading and math.
- No data for why the problem exists.

**4b. Are these data reputable, current and local?**

- Percentages re: students below proficient are for the school district, but also providing comparative data (state, national) would be more useful.
- Some of the data cited is from 2007 and 2008. Is there more current data, and if not, the applicant may want to note that this is the most current data.
- Note: there is a lot of irrelevant data re: the long-term consequences of the problem (high school dropout rates, etc.), and most of the data are presented without citation.

**4c. What additional data could be included to demonstrate the prevalence and severity of the problem?**

- Comparison of reading/math proficiency rates with state or national rates
- Data re: why the problem exists
- If they are making the case that poverty is the cause of the problem, there should be data documenting poverty rates and whether youth served are economically disadvantaged
- Data re: attitude, attendance, behavior if that is part of the change they expect to see in beneficiaries (theory of change outcomes)

**INTERVENTION**

**5a. What evidence does the applicant provide to demonstrate that this intervention will solve the problem?**

- Some evidence re: attitude, attendance, behavior. Not relevant if the problem and outcomes are reading and math proficiency.
- Study re "high quality" after school programs leading to standardized test scores.
  - For math but not for reading.

Skill Building Activity #1 – Case Study of Rose Blossom ABC Club

- Is “after school program” intervention the same as “homework help” intervention?
- Does this program’s design match that of “high quality” after school programs in the study?
- PM data are provided, but there are problems.
  - Pre-test was on a national population; post-test was on a local population.
  - Percent increases are murky—What does a 68% increase mean? Is it an increase in the number of children scoring at or above grade level? Is it the percent that students’ test scores increased? Are the increases significant?
- Citations—“Research studies confirm that homework completion makes a difference in...” “A recent study of afterschool homework assistance programs” What were these studies? Are they from reputable sources?

**5b. How well does the evidence identified in Question 5a address the considerations we discussed (similar, significant, up-to-date, high quality, reputable)?**

- Similar:
  - evidence is for outcomes that don’t appear to be part of the program design
  - “high quality” is not linked to program design
- Reputable:
  - citations are not included—we don’t know the sources.
- High Quality:
  - PM data collection (pre/post) is so flawed as to be unusable
  - Information about methodologies for studies cited is not provided
- Significant
  - Information about strength of findings for studies cited is not provided
  - Percent differences for pre/post test are flawed because they are calculated on two different populations
- Up-to-date:
  - Are more recent studies available?

**5c. What evidence is missing?**

- Research data that links homework help (and academic remediation?) to improved academic achievement in reading and math
- A more clearly defined intervention - design and dosage (frequency, intensity, duration) with evidence that supports the chosen design and dosage
- Performance data that is more clearly presented.

**FOLLOW-UP DISCUSSION**

*What ideas do you now have for how to strengthen evidence for your intervention?*

*What insights did you gain about your theory of change from doing the exercise?*

