

Evaluating Collaboration between Science, Technology, Engineering and Mathematics (STEM) Programs in the **National Girls Collaborative Project**

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Overview

- Background Information
- Defining Collaboration
- Measuring Collaboration
 - Data Collection Tools
 - Methodology
 - Analysis
- Project Example
- Discussion



Defining Collaboration

- “Mutual relationships and goals; a jointly developed structure and shared responsibility; mutual authority and accountability for success; and sharing of resources and rewards” (Mattesich & Monsey, 1992, p. 7).
- “The process of achieving a goal that could not be attained efficiently by an individual or organization acting alone” (Wang, Haertel, and Walberg, 1997, p.7).



Benefits and Challenges of Collaboration

Benefits

- Effective use of resources and funds
- Integration and alignment
- Synergy
- Sharing promising practices

Challenges

- Resources
- Commitment
- Turf
- Conflict
- Diversity
- Communication



Benefits of Evaluating Collaboration

- Relationships influence program outcomes
- Increase likelihood of collaboration benefits
- Help partners overcome challenges to collaborating
- Increase partners' awareness and reflection
- Effects of collaborating
- Sustainability of relationship
- Others?

"More than 200 federal education programs exist to promote STEM careers, but evaluation and coordination are lacking."



Challenges of Evaluating Collaboration

- Defining collaboration
- Multiple perspectives
- Evolving relationships
- Recognizing collaboration indicators
- Identifying data sources
- Gathering evidence
- Analyzing data



Strategies to Evaluating Collaboration

- Conduct a need assessment
- Create a shared definition of collaboration
- Set goals and indicators
- Decide partner roles
- Establish communication and decision-making process
- Involve multiple stakeholders
- Gather multiple data sources
- Use pre-post measures
- Investigate benefits and challenges
- Examine outcomes and outputs
- Consider sustainability



Methods to Evaluating Collaboration

- Self reports
 - Surveys
 - Interviews
 - Group interviews
- External sources
- Observations of meetings
- Document review
- Project outcomes
- Other examples?



National Girls Collaborative Project Goals



- Maximize access to shared resources within projects, organizations, and institutions interested in expanding girls' participation in STEM.
- Strengthen capacity of projects by sharing promising practice research and program models, outcomes and products.
- Use the leverage of a network or collaboration of individual girl-serving STEM programs to create the tipping point for gender equity in STEM.



Measuring Collaboration in the NGCP

Annual Survey

- Level to which you collaborate with different STEM individuals/programs/organizations
- Extent to which NGCP impacted levels of collaboration

Mini-grant Reports

- Most effective and least effective aspects of collaboration
- Division of labor and shared tasks



Annual Survey Results

- 224 respondents
- Most commonly use the Program Directory to find resources (36.6%) to find programs to collaborate with (33%)
- 74.3% followed up with a contact met at an NGCP event



Collaboration Rubric

Networking (1)

- *Aware of organization*
- *Loosely defined roles*
- *Little communication*
- *All decisions are made independently*

Cooperation (2)

- *Provide information to each other*
- *Somewhat defined roles*
- *Formal communication*
- *All decisions are made independently*

Coordination (3)

- *Share information*
- *Share resources*
- *Defined roles*
- *Frequent communication*
- *Some shared decision making*

Coalition (4)

- *Share ideas*
- *Share resources*
- *Frequent and prioritized communication*
- *All members have a vote in decision making*

Collaboration (5)

- *Members belong to one system*
- *Frequent communication characterized by mutual trust*
- *Consensus is reached on all decisions*



Collaboration Rubric Analysis

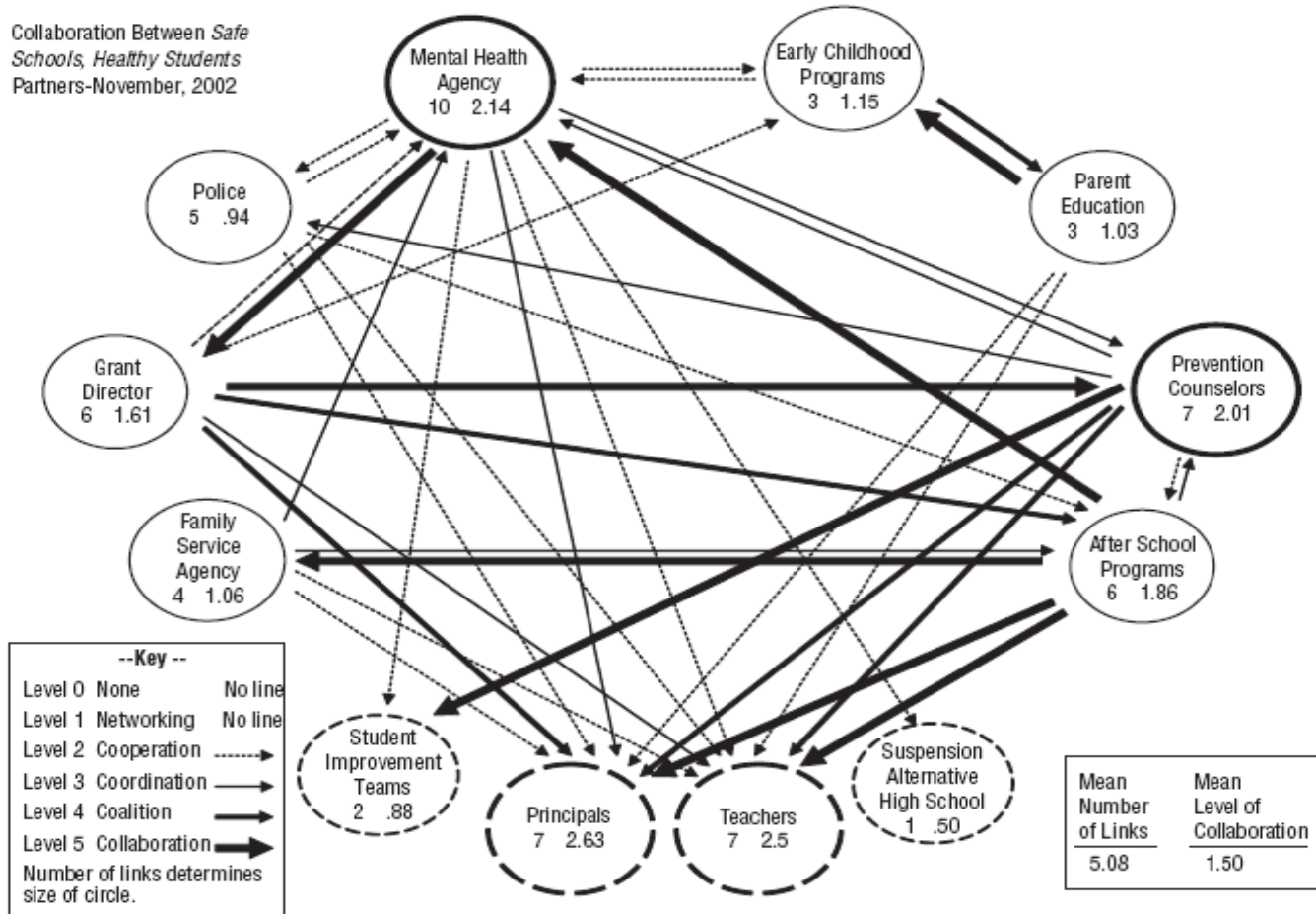
Year one results:

- Respondents' mean level of collaboration = 1.80
- Highest means = Higher ed STEM faculty (2.24) and non-profit organizations (2.22)
- Lowest means = K-12 counselors (1.06) and higher ed academic counselors (1.12)
- 23% indicate moderate or high impact of NGCP on their collaboration levels



Analyzing Collaboration Data

Collaboration Between Safe Schools, Healthy Students Partners-November, 2002



Mini-grant Reports

"These are exceptionally positive and helpful in creating collaboration between local and regional entities. They really create a 'grass roots' commitment and opportunity for the parties involved in STEM and girls initiatives."

- Shared tasks and responsibilities
- All indicated highest rating of success of collaboration(5 on a 5-point scale)
- 6/9 indicated collaboration with partner has extended to other activities
- 8/9 indicated project would continue



Discussion Questions

- How does the evaluation of collaboration impact relationships and partnerships?
- What are other collaboration data that could be collected and how could you analyze data on collaboration?
- What are some effective strategies for presenting the data to stakeholders?



Questions?

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