



THE GLOBE PROGRAM

Evaluation and Its Role in Shaping the Future of the GLOBE Program

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Overview of Today's Workshop

- I. Brief History of GLOBE Program Evaluation
- II. Current Practices in GLOBE Evaluation
- III. Future of GLOBE Evaluation
- IV. Your thoughts



Brief history of GLOBE evaluation

Annual evaluations of GLOBE program began in 1996

- Conducted by external evaluation team
 - SRI International, supported by NSF for 10 years
- Formative evaluation
 - Describe what the program is doing
- Reports targeted to GLOBE management and sponsors
 - Lots of government scrutiny of program given high profile nature

Various data sources were used in the evaluation

GLOBE evaluations were based on:

- regularly collected information from database:
 - Number of training workshops
 - Number of schools reporting data
 - Number of measurements entered by school
 - Annual partner survey
- specific information for evaluation
 - Interviews
 - Web-based student assessment
 - Case studies

The evaluations reviewed and offered recommendations on many issues

➤ Years 1-4

- GLOBE training and the franchise models
- Technology issues
- Fund raising for GLOBE implementation
- Investments in follow-up activities beyond training

➤ Years 5-10

- Reorganizational of international partner support
- Administrative oversight by UCAR
- Teacher use of online materials
- Technology issues

However, a number of important evaluation questions still remain

- What is the effect of GLOBE on student achievement?
- What are the significant outcomes of GLOBE related to student environmental practices?
- To what extent are teacher practices in other areas influenced by GLOBE trainings?
- How do GLOBE organizational changes influence outcomes?

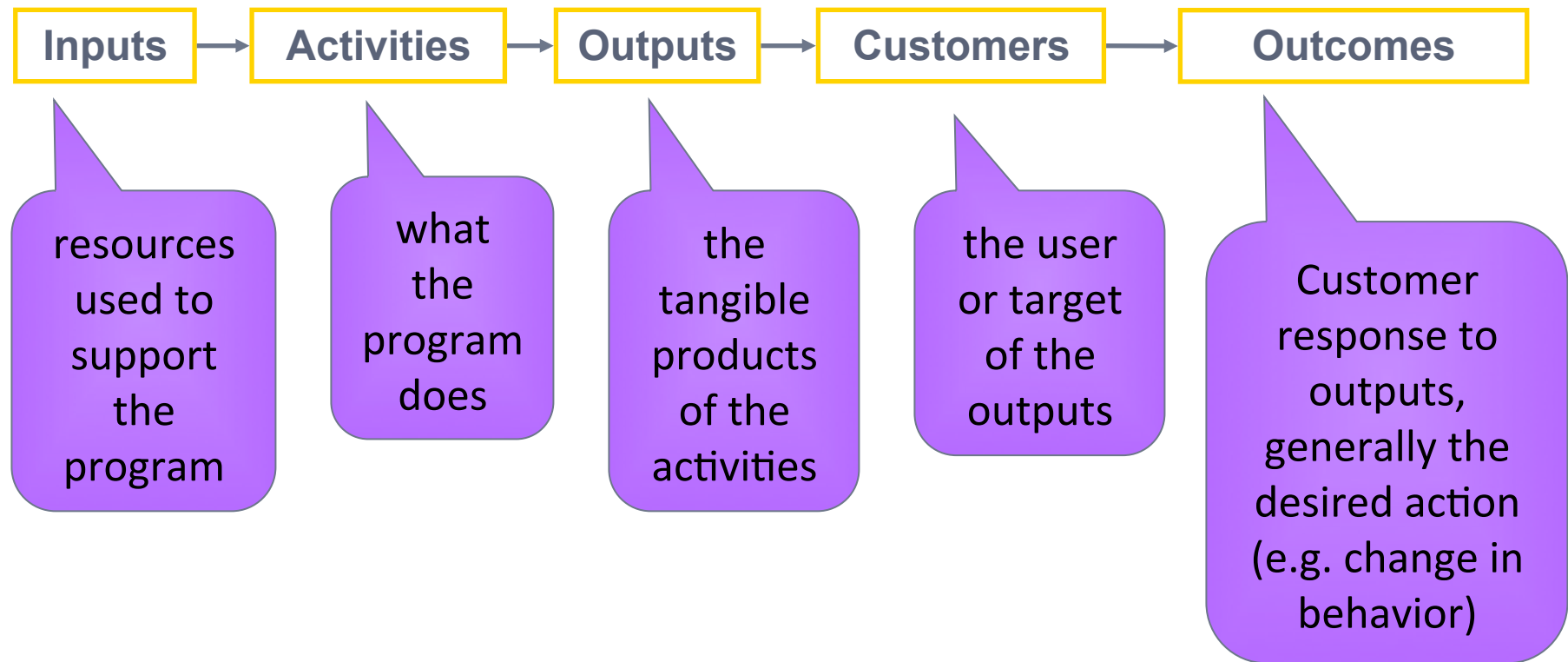


Current Evaluation Practices in the GLOBE program

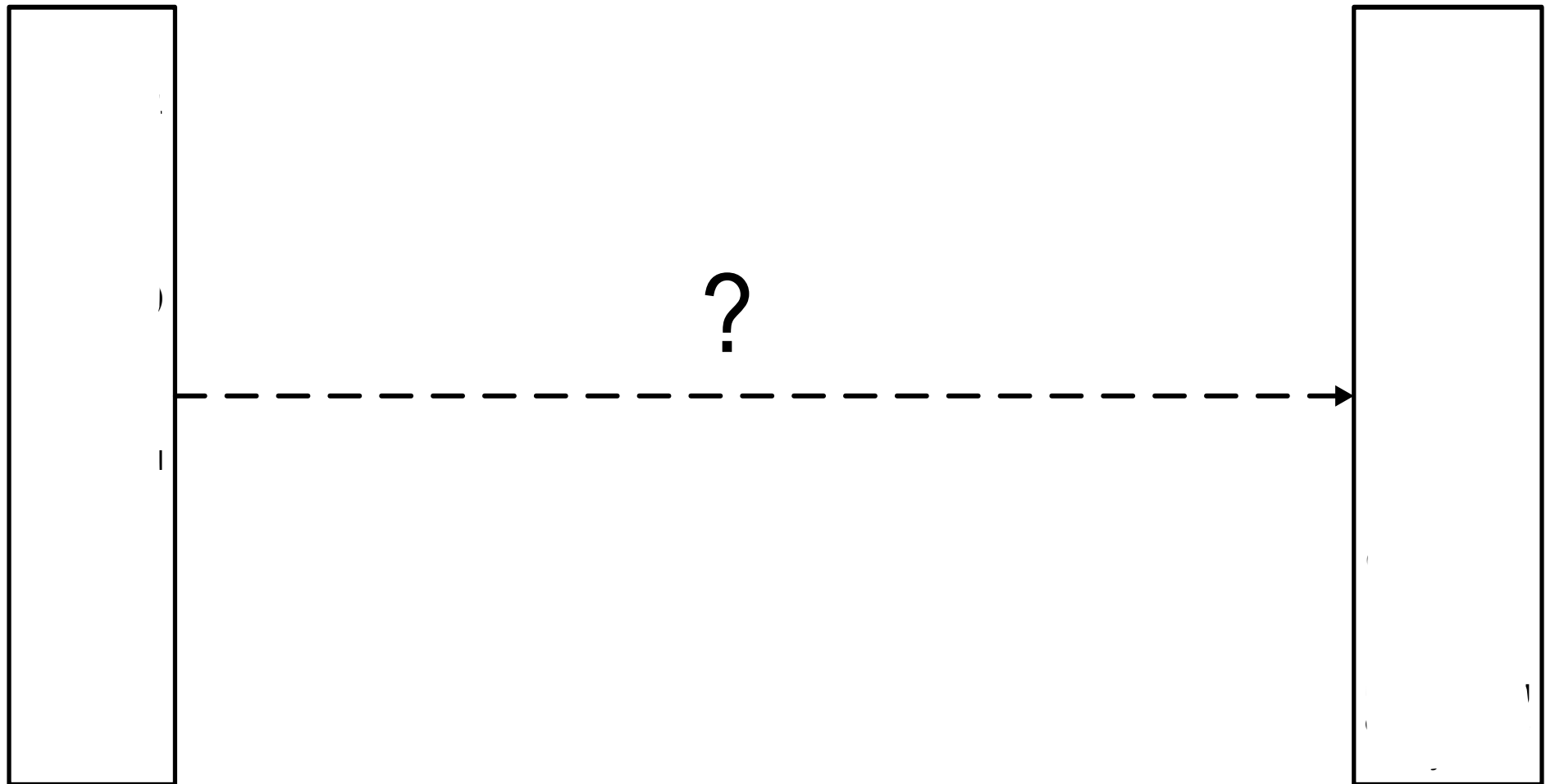
Answering fundamental questions about GLOBE program was critical

- How does the GLOBE program work?
- What is the GLOBE program trying to achieve?
- What is the relationship among the different stakeholders in the GLOBE community?
- What are the key challenges that the program faces?
- What additional type of data needs to be collected?

A model based on simple concepts helped to describe how GLOBE works



This model shows how resources are expected to lead to outcomes



...and describes all the activities in the middle



PRODUCTION:

Funding;
Bilateral
agreements;
GLOBE
Program
Office (GPO)
staff

PLANNING:

GLOBE
International
Advisory
Committee;
GLOBE
Program
Board;
Regional
Offices

Improve
student
understanding
of
environment
and earth
system
science

Improve local
and global
communities

Increase
student
scientific
collaborations

Increase
scientific
understanding
of the Earth as
a system

Focus group discussions identified key issues for GLOBE community

- Aspects of GLOBE program that attracted and motivated participation
- Data and training issues were the most frequently mentioned GLOBE challenges
- However, networking, management and relevancy were also discussed
- Key areas of improvement focus on greater involvement of GLOBE community

Opportunity for global collaboration and the focus on data attracted many to GLOBE

➤ GLOBE was collaborative

- Partnering educators with scientists was unique and attractive
- Connecting the global community was appealing
- Getting scientists engaged in the classroom
- Teachers and students sharing data with others around the world

➤ GLOBE focused on science data

- Kids going outside and doing research
- Applying science and having the tools to do the work
- GLOBE was on the cutting edge with data visualization and remote sensing

➤ GLOBE was visionary

- GLOBE was wide in scope and trying to take the big picture
- Each student could do something to make a difference in their portion of the world

Data and training issues were the most frequently mentioned GLOBE challenges

- Many different aspects related to data were frustrating
 - Difficulties entering data
 - Ambiguity surrounding use of data
 - Inaccessibility of data
 - Inability to upload data
 - Time consuming nature of data entry
- Quality of training and the need for more training were also of concern
 - Trainers need more training and help with implementation
 - Lack of quality control for the trainings hurt the reputation of the program
 - Sporadic training means teachers get trained but no implementation

However, networking, management and relevancy were also discussed

- Networking with others is difficult
 - Finding out what partners are doing and how they use GLOBE materials is not easy
 - Despite GLOBE's international status, not enough collaboration through GLOBE
 - Difficult to facilitate sense of community through website
- Management appears disconnected
 - Limited knowledge of GLOBE program
 - GPO does not view partners as resources
- GLOBE viewed as losing relevancy for different reasons
 - Difficulty getting the support to integrate GLOBE into the curriculum
 - Ensuring relevancy of GLOBE materials to science standards
 - Some protocols and assessments no longer useful
 - Materials not relevant for younger, primary level students

Key areas of improvement focus on greater involvement of GLOBE community

- Create more venues for sharing information among the GLOBE community
 - Create a GLOBE journal to share best practices and recognize the accomplishments of partners
 - Use more social networking tools
 - Create an e-mail newsletter which includes materials directly relevant to students
 - Create a forum so students and teachers can see how GLOBE protocols have been modified
- Facilitate greater involvement of GLOBE community
 - Develop partner-based committees
 - Make the partner survey data searchable so partners can find out about other partners



Future of GLOBE Program Evaluation

Identifying new priorities for the GLOBE program are important

Previous Evaluation Area	Performance Measure	New Evaluation Areas	Performance Measures
Program growth	Number of schools joining GLOBE on an annual basis	Quality of GLOBE programs?	?
Student participation	Number of measurements entered in GLOBE data base	Student learning?	?
Teachers trained	Number of workshops held	Teacher outcomes?	?
Environmental awareness	Student surveys	Environmental stewardship?	?

Future evaluation will also need to be targeted to community needs

Evaluation component	Previous Evaluation Model	Future Evaluation Model
Evaluation Questions	Is the program working?	For whom is the program working, and under what conditions?
Target Audience	GPO management and GLOBE sponsors	GLOBE stakeholders
Products	Annual report	Multiple types of reports, brochures, 1-pagers, etc.
Evaluation data collection	External evaluator	Internal evaluator and GLOBE community
Data collection instruments	Developed by external evaluator and used for annual evaluation	Standardized assessment tools that have been developed and/or adapted from the community used for multiple purposes



Your thoughts?

Your responses to these questions are a first step in the evaluation model

1. What type of evaluation data would be useful for you? How would you use this information?
2. What type of evaluation resources do you currently have? How do you use them?
3. What type of evaluation resource would be most useful to you?
4. Which aspects of the GLOBE program are most important to measure?