

My Environmental Education Evaluation Resource Assistant or "MEERA"-A Web-Based Resource for Increasing Environmental Educators' Evaluation Capacity

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Outline

- **▶** What is environmental education?
- > Why a web-based evaluation "clearinghouse"?
- > How did we develop MEERA?
- > Review of MEERA's features
- > "Successes" to date
- > What's next?

Question/Answer



What is environmental education?

Outcomes: Knowledge, Attitude, Skills, Behavior

Impacts: Environment, Education, Health

Settings include: In, out /after school

Professional development

Free choice learning



Why MEERA?

Are environmental education (EE) programs making a difference? What are the characteristics of successful EE programs?

Environmental educators do not have necessary knowledge/resources

→ Many relevant resources are available

Google (6/08) search:

"evaluation" 208 million

"environmental education evaluation" 5,680



What makes MEERA unique?

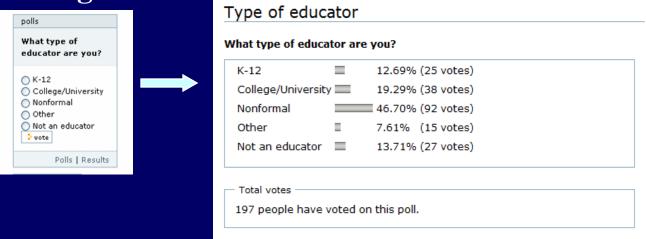
Principles

- Build on existing resources
- Be selective rather than comprehensive
- Meet the needs of educators with range of evaluation experience
- Focus on program evaluation with emphasis on measuring outcomes
- Provide enhanced usability



How did we develop MEERA?

- Existing resources and relevant research
- >Project partners
- >Steering committee members
- >MEERA visitor monitoring



> Formative evaluations with EE professionals

Sample formative evaluation

Feature: "Plan and implement EE program evaluation"

Convenience sample of 13 reviewers:

- government 46%, university 31%, NGO 15%, other 8%
- 11 years experience with environmental education
- Evaluation experience: none to more than one

Questionnaire with closed and open-ended questions



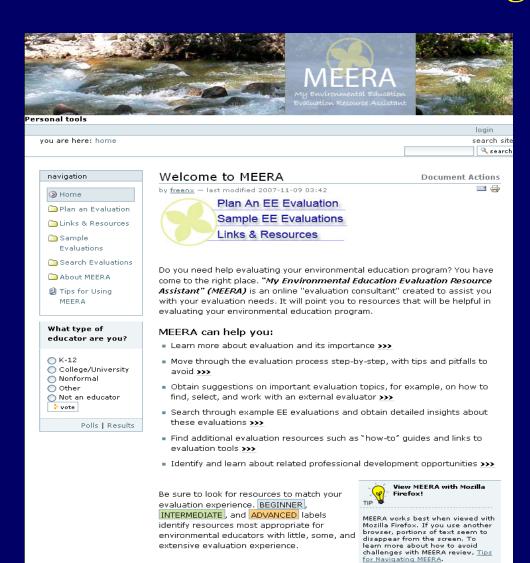
MEERA's Features www.meera.snre.umich.edu

- Learn about evaluation and its importance
- Move through the evaluation process step-by-step
- Obtain suggestions on related evaluation topics
- Search through sample EE evaluations
- Review additional evaluation resources



Home Page

Click here for a free download of



For notification of updates to MEERA content.

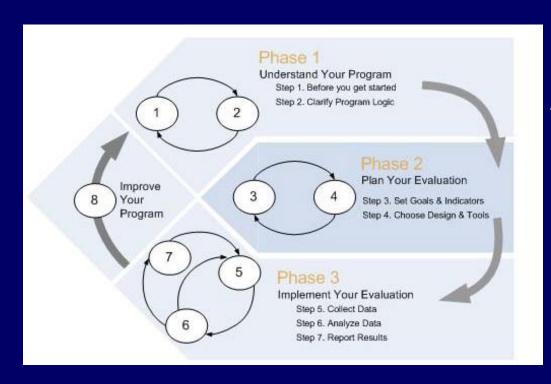
For more information on features currently available and in development, see

join the MEERA mailing list.

the About MEERA page.

Welcome to MEERA!





Move through evaluation process step by step

Learn about related topics:

- >Finding an external evaluator
- ➤ Obtaining approval for evaluation
- > Conducting participatory evaluations



Step 8: Improve Program

Document Actions



Planning and Implementing an EE Evaluation

Step 8: Improve Program



Evaluation does not end with the writing of a report. To benefit from the evaluation, it is important that its findings are put to use! This section provides suggestions for how you can use evaluation results and provides advice for how to encourage others to help implement desired program changes.

Table of Contents

How can I use my evaluation results to benefit my program?

How can I ensure the evaluation is used to improve my program?

In what other ways can I get the most from the evaluation?

Related Topics: Participatory Evaluation

How can I use my evaluation results to benefit my program?

Improve your program's visibility and outreach

- Advertise the program's successful results to demonstrate the impact it has
 on your target audience or the community. This strategy can help you gain
 additional support from funders and partnering organizations as well as
 recruit new participants.
- Improve outreach to your target audience. You may have learned from the
 evaluation that your program is not reaching as many individuals as intended
 or a particular group. Use what you learned from the evaluation to identify
 ways to increase awareness of your program's offerings.

Example From the Foellinger-Freimann Botanical Conservatory:

Overview

Q&A Format

EE Examples



Where do I find external evaluators?

While there are many ways to find external evaluators, the process typically involves either advertising a request for proposals or identifying and approaching specific evaluators. In addition to local, national, and online sources of potential evaluators, you may want to browse the sample_MEERA evaluations and contact authors of evaluations that are similar to what you are looking for.



WANTED Sample Requests for Proposals

Please contact Opr. Michaela Zint with your sample requests for proposals.

The Program Manager's Guide to Evaluation, Chapter 4: How do you Hire and Manage an Outside Evaluator?

US Department of Health and Human Services, Administration for Children and Families

Beginner Intermediate

This document outlines the basic steps for finding an evaluator and lists resources for finding evaluators.

Evaluator Directories

Several organizations maintain online, searchable directories of evaluators. Please note that MEERA does not endorse any specific evaluator; it is your responsibility to contact the consultants or firms to decide whether or not they will meet your needs.

The Registry of Outcome Evaluators

U.S. Department of Education, What Works Clearinghouse

Search by geographic region, individual/organization, target populations, or content area (including EE).

Find an Evaluator

American Evaluation Association

Browse all listings or search by name, keyword, or geographic area.



Contact Evaluators at Local Universities

Many universities have faculty members who specialize in program evaluation and/or an extension office with an evaluation specialist on staff. These experts may be available for contract work or may be able to recommend other evaluators in the area. Alternatively, if the time frame for completing your evaluation is flexible, you might consider hiring a graduate student to conduct your evaluation as his or her thesis project. This option is typically less expensive than hiring a professional. If you go this route, be sure to ask about

Links to additional select quality evaluation information and resources for those with different levels of evaluation experience



What does an IRB application include?

A typical IRB application includes:

- Basic information, such as who is involved in the study, dates, and the type and purpose of the research
- Description of the study design
- Description of costs and risks to subjects
- A conflict of interest statement
- Information on how data will be stored
- Confidentiality agreement (which may instead be included in consent forms or on questionnaires)
- Availability of research results
- Informed consent documents, parental consent form, and assent form if minors are involved
- Final drafts of data collection instruments such as questionnaires and interview guides

Unique Resource

Are you working for a federal agency? If so, you are likely to need approval for your evaluation from the Office of Management and Budget (OMB).

Check out these two approved applications to get a sense of what may be required:

<u>Evaluation of NOAA's Bay Watershed Education and Training</u>
(B-WET) Programs (.pdf)

Evaluation of the NOAA Coastal Services Center's Coastal Services Magazine and the Coastal Connections Newsletter (.pdf)

Courtesy of Anita Kraemer, eeEvaluations and the U.S. National Oceanic and Atmospheric Administration (NOAA)

While applying for IRB approval may be an inconvenience, remember that it is often required by law and is critical in protecting the rights of both yourself and evaluation participants.

Is IRB approval always required?

You may not need IRB approval if your evaluation poses minimal or no risk to participants. By federal law, you may seek exemption status if:

 Your evaluation is conducted in a commonly accepted educational setting and assesses regular educational practices, such as:



Only IRB can determine if your evaluation is exempt!

Even if you suspect your evaluation meets the criteria for an exemption contact your IRB to confirm that your evaluation qualifies.

1. research on existing or potentially new instructional strategies, or

Unique Resources

Tips and Pitfalls



MEERA's Searchable Database of EE Program Evaluations



Browse or search evaluations by text –or- advanced <u>program</u> and <u>evaluation</u> search terms



MEERA's Searchable Database of EE Program Evaluations

Evaluation of the Chesapeake Bay Foundation's Conservation **Education Programs**

The Chesapeake Bay Foundation (CBF) asked the authors to conduct an evaluation of five youth and two teacher education programs. The main goal of the evaluation was to determine to what extent these programs influence participants' level of environmentally responsible behaviors. In light of this goal, data were collected on variables that have been linked to environmentally responsible behaviors. These variables included participants' environmental sensitivity, perceived knowledge of ecology/issues/action strategies, personal responsibility, perceived skill, and intention to act. Information about teachers' perceived barriers to teaching about the Bay was also obtained. Based on the evaluation's results, CBF decided to adapt each program to target a smaller number of specific ERB characteristics instead of attempting to influence all ERB characteristics through each one of its programs. CBF also focused on encouraging teachers to use multiple activities and programs which build on one another. Last, more effort was put into helping teachers implement the curriculum as intended and reducing their barriers to teaching about the

Detailed Profile

Available.

The citation for this published evaluation is: Zint, M., Kraemer, A., Northway, H., & Lim, M. (2002). Evaluation of the Chesapeake Bay Foundation's conservation education programs. Conservation Biology, 16(3): 641-649.

Ouestions used to collect evaluation data are described in the article

Program Search Terms		Evaluation Search Terms	
Setting:	Formal Nonformal	Туре:	Process/Implementation Outcome
Туре:	Lesson/Unit/Curriculum	Evaluator:	External
	Issue Investigation/Service Learning Field Trip/Guided Tour Workshop/Course	Outputs:	Activity Implementation Satisfaction
		Outcomes:	Knowledge Attitudes/Values
Topic:	Animals/Plants/Wildlife Biodiversity		Skills Behaviors
	Ecology/Ecosystems Earth Sciences	Imp acts:	
	Pollution	Approach:	Quantitative
Audience:	Secondary School Teachers	Data Collection	: Logs/Journals/Student Work Questionnaires/Surveys
		Design:	Pretest Posttest Retrospective Pretest
			Retention/Follow-up Test Comparison/Control Group
		Analysis:	Descriptive Statistics Inferential Statistics

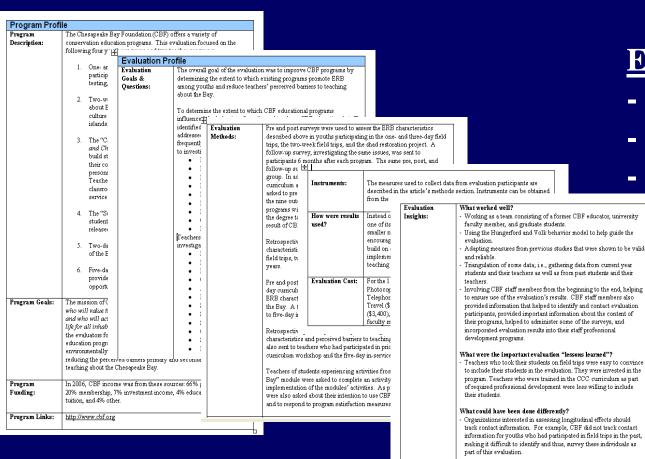
Summary

Choose relevant evaluation based on an overview



MEERA's Searchable Database of EE Program Evaluations

Profile



Program

- What was evaluated?

Evaluation

- How were results used?
- What did it cost?
- What were evaluation

"lessons learned"?

MEERA's Links and Resources

EE Specific Evaluation Guides (4)

Evaluating EE in Schools: A Practical Guide for Teachers.
 Bennett, D.B. (1984). UNESCO-UNEP.

Beginner Intermediate

Available at:

http://unesdoc.unesco.org/images/0006/000661/066120eo.pdf

One of the first guides written on EE evaluation, this resource provides timeless advice for planning your evaluation, implementing it, and making the most of your data. Particularly useful are Bennett's "action verbs" for developing measures of knowledge and understanding, thinking skills, and action skills. The guide also provides easy to understand explanations of different evaluation designs (e.g. posttest only vs. pretest and posttest), instrument types, and research methods. Step-by-step instructions for collecting and analyzing data help readers avoid common mistakes.

 Does your project make a difference? A guide to evaluating environmental education projects and programs.

Department of Environment and Conservation, Sydney, Australia. (2004).

Beginner

Available at: http://www.epa.nsw.gov.au/community/projecteval.htm

Information in this guide is laid out in an easy to digest manner, making it very user-friendly for evaluation newcomers. In addition to describing important considerations in each step of evaluation, "Does your project make a difference?" uses hypothetical case studies to help readers think through the logic of their programs, the types of questions they might ask about their program's impact, and how those questions can be measured using indicators. The guide also provides an "Outcomes Hierarchy Framework Template" for planning evaluations, which some readers may find easier to complete than traditional logic models.

Designing Evaluation for Education Projects.
 NOAA Office of Education and Sustainable Development. (2004).
 Beginner

Available at:

http://wateroutreach.uwex.edu/use/documents/NOAAEvalmanual

Reviews of How-To Guides

- > For EE & other contexts
- Direct access to guides
- ➤ Recommended for different levels of evaluation expertise
- Descriptions of unique aspects of each



MEERA's Links and Resources

Environment Related Resources (3)

Digital Library for Earth System Education (DLESE)

Tools Guidance Searchable Database

This site features resources to assist educators and developers in providing quality Earth system science curricula and programs. The Evaluation and Assessment portion of the site features the Evaluation Toolkit, a searchable database of articles, reports, and resources related to planning and implementing Earth system science evaluations.

SEPA Public Involvement – Feedback and Evaluation

Environmental Protection Agency

This section of the EPA's Public Involvement site features questionnaires used in various public participation settings as well as a database of nearly forty evaluations conducted of EPA public involvement activities.

Place-based Education Evaluation Collaborative

Instruments Searchable Database

Searchable Database

Instruments

PEEC is a partnership between several nonprofit organizations concerned with place-based education. The Tools section of the site provides actual instruments used by the partners in their evaluations as well as links to resources on other websites. To see examples of actual evaluations, look at the Reports section.

Data Analysis Tools (3)

Using Excel for Analyzing Survey Questionnaires

Guidance

University of Wisconsin-Extension

This guide, provided by University of Wisconsin-Extension, is helpful for those unfamiliar with data analysis. It provides step-by-step instructions for using Microsoft Excel to: Create a database of responses, Code data, Display frequencies and percentages, Calculate average(mean), range, standard deviation, etc., and Create crosstabulations/pivot tables.

Open Stat

Tools

Open Stat is a free software package for performing statistical analyses. It is relatively simple to use and you can paste in data from Microsoft Excel. There are some quirks in the functionality, but it supports a variety of simple to complex analysis procedures (Frequencies, T-Test, ANOVA, Multiple Regression, Factor Analysis, etc).

Reviews of Additional Evaluation Resources

- **Evaluation tools**
- > Data collection instruments
- **Evaluation guidance**
- > Searchable databases of evaluation resources



MEERA's Home Page

Tips for

navigating and using MEERA





College/UniversityNonformalOther

Not an educator

Polls | Results

Welcome to MEERA

Document Actions

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by <u>freenx</u> — last modified 2007-11-09 03:42



Do you need help evaluating your environmental education program? You have come to the right place. "My Environmental Education Evaluation Resource Assistant" (MEERA) is an online "evaluation consultant" created to assist you with your evaluation needs. It will point you to resources that will be helpful in evaluating your environmental education program.

MEERA can help you:

- Learn more about evaluation and its importance >>>
- Move through the evaluation process step-by-step, with tips and pitfalls to avoid >>>
- Obtain suggestions on important evaluation topics, for example, on how to find, select, and work with an external evaluator >>>
- Search through example EE evaluations and obtain detailed insights about these evaluations >>>
- Find additional evaluation resources such as "how-to" guides and links to evaluation tools >>>
- Identify and learn about related professional development opportunities >>>

Be sure to look for resources to match your evaluation experience. BEGINNER, INTERMEDIATE, and ADVANCED labels identify resources most appropriate for environmental educators with little, some, and extensive evaluation experience.

For notification of updates to MEERA content, ioin the MEERA mailing list.



MEERA works best when viewed with Mozilla Firefox. If you use another browser, portions of text seem to disappear from the screen. To learn more about how to avoid challenges with MEERA review, Tips for Navigating MEERA.

Click here for a free download of Mozilla Firefox.

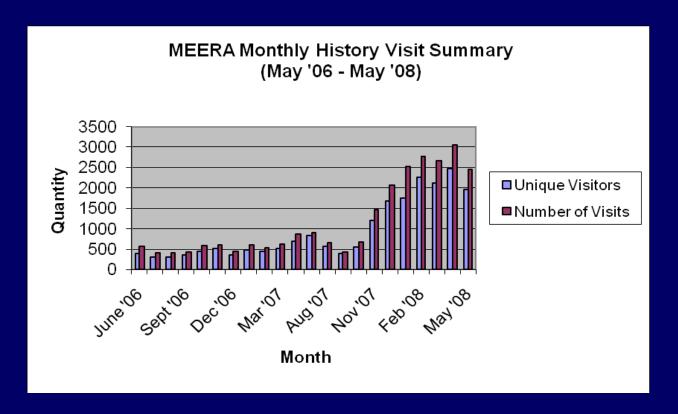
For more information on features currently available and in development, see the About MEERA page.

Firefox browser works best





MEERA's "Successes" so far: Visitors



- ➤ Number of visitors:
 Initial "word of mouth" ~ 300-800/month
 After U.S. EPA RFP ~ 1,700-2,500/month
- ➤ Many visit site more than once per month: mean=1.3



MEERA's "Successes" so far: Visitors

- ➤ Many bookmark MEERA: 28% before, 50% after RFP
- ➤ Many international visitors: mean=46/month between June '06 and May '08

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Google (6/08):

"evaluation of environmental education"= #1

"MEERA"= #2
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MEERA's "Successes" so far: Formative Evaluation Results

Of 13 recent reviewers of the planning and implementing pages:

- > all will recommend MEERA to other educators
- > most rated MEERA as very helpful with mean=6.23 on 7 point scale

"MEERA is an exceptional resource. You have created an excellent primer for planning and implementing environmental education evaluations with the value added of links to relevant, reviewed, summarized, easily accessible resources to provide the appropriate level of additional information needed for a given step and the expertise of the user. It is an incredible undertaking to provide useful and digestible information without resorting to an exhaustive laundry list of anything tangentially relevant. You also avoided the impulse to rely heavily on the same suite of comprehensive references. I expect to use MEERA and recommend it often."



What's Next: More Evaluation

Objectives:

- Determine MEERA's ability to enhance evaluation capacity
- Improve MEERA
- (Assess MEERA's potential value as a model)

- > 5 FS environmental educators will use MEERA to evaluate one their programs by following MEERA's evaluation "steps"
- ➤ Each will develop a series of evaluation outputs and respond to questions related to developing /completing this output/step
- > If needed, each will be provided with additional assistance



What you can do ...

- > Visit MEERA at <u>www.meera.snre.umich.edu</u>
- > Let others know about MEERA, link to site
- ➤ Share evaluations of EE programs for database, other evaluation resources (see wanted)
- > Share your ideas on:
 - how MEERA can be improved
 - MEERA' next evaluation



European Approach to Building Environmental Evaluation Capacity

EASY-ECO SevAluation of SustainabilitY

European COnferences & Training Courses





Welcome to EASY-ECO!

You are here: Home > Welcome

EASY-ECO is a training and conference programme on evaluations in the specific context of sustainable development.

EASY-ECO ("Evaluation of Sustainability: European Conferences and Training Courses") was launched by the Research Institute for Managing Sustainability at the Vienna University of Economics and Business Administration. Twelve European top-class research institutions are collaborating to organise five conferences associated with ten EASY-ECO Trainings on sustainability evaluations within the EASY-ECO programme. All events are aimed at building sustainability evaluation capacity and facilitating the exchange of relevant experiences.

WHAT'S NEW AT EASY-ECO?

Apply now! Click here for current deadlines and open applications

2008-05-26: Pre-registration for the upcoming EASY-ECO Trainings in Lund (April 2009) and Bilbao (June 2009) is open now!

2008-04-02: Application for the EASY-ECO Saarland Training is open until 23 June 2008!

2008-03-26: The next EASY-ECO Training, the EASY-ECO Saarland Training, will be held from 20-24 October 2008 in Saarbrücken (Germany). Application for this event will start soon!

2008-03-20: The proceedings of the EASY-ECO Vienna Conference (featuring papers, presentations, podcasts and videos) are available for download!

Only the latest entries are displayed. Click here to see all entries

The EASY-ECO series is organized by:

























Ausgezeichnet als offizielles Proiekt der Weltdekade 2005 / 2006





Thank You!

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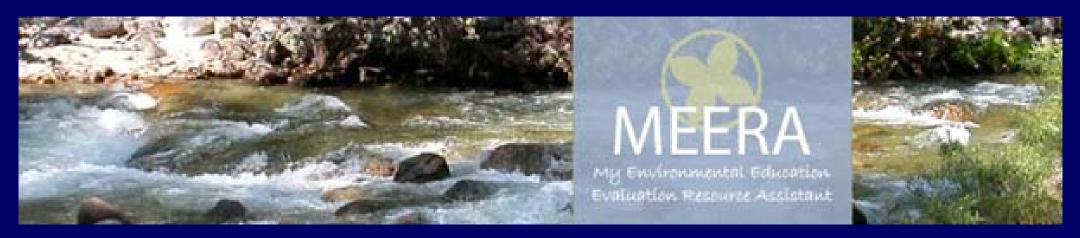
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