

BEST PRACTICES EVALUATIONS PREM UPR-HUMACAO, 2005-2010

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Presentation Aims



- Briefly outline our experience working as external evaluator and highlight some strategies that have proved been efficient and effective
- Sharing our experience will invigorate other program to strengthen their evaluation practices

Program Evaluation

- *“the systematic collection of information about the activities, characteristics, & outcomes to make judgments about the program, improve effectiveness, and/or inform decisions about future program development.”¹*

¹Patton, M. Q. (1997). *Utilization-focused evaluation: The new century text (3rd edition)*. Thousand Oaks, CA: Sage Publications.

Best Practices

- *“the most **efficient** (least amount of effort) and **effective** (best results) way of accomplishing a task, based on repeatable procedures that have proven themselves over time for large numbers of people.”¹*

¹http://en.wikipedia.org/wiki/Best_practices

PREM UPR-Humacao

External Evaluation Highlights

- External Evaluators recruited on August 2005
- **1st grant cycle – 5 years**
 - April 1, 2004 to June 30, 2009
 - 11 evaluation interventions
- **2nd grant cycle – 5 years**
 - November 2009 to October 2014
 - 2 evaluation interventions
- **13 evaluation interventions**

Evaluation Designs

- Mixed-Method Approaches
 - ▣ Qualitative & Quantitative
- Integration of Diverse Perspectives
 - ▣ Trainees, Faculty & Staff
- Literature Review
 - ▣ Joint Committee on Standards for Educational Evaluation
 - ▣ NSF Evaluation Manual
 - ▣ Other sources: CDC Evaluation Toolkit, Kellogg Foundation Evaluation Handbook
 - ▣ Evaluation Theorists
 - Fink, A., Taylor, Quinn Patton, et. Al.

Evaluation Approaches



□ Mixed-Methods Strategies

- Surveys (paper & electronic)
- Pre & Post tests (e.g. questionnaires, drawings, posters)
- Focus groups
- Formal & informal interviews
- Observational assessments
- Documentation reviews
- Use of other independent evaluator perspectives
- Prompt verbal findings' feedback
- On-going follow-up of intervention findings

Data Collection: Surveys



- Trainee & Faculty's Baseline Surveys
 - ▣ General demographics information
 - ▣ Needs assessment
 - ▣ Research productivity & scope
- Seminars & Activities Survey
 - ▣ Satisfaction level
 - ▣ Participants' gained knowledge
 - ▣ Gather recommendations
- Former trainee's follow-up survey

Paper Survey's Examples

PENN-UPR Partnership for Research and Education Material (PREM) Program
University of Puerto Rico, Humacao Campus



This is an evaluation survey. Please provide the following information:

- Gender: Male Female
- University/Campus that you belong:

- Your position:
 Professor
 Researcher
 Program Director/Administrator
 Graduate student
 Undergraduate student
 High School student
 Other (please specify): _____
- Your role in PREM program
 Participant student
 Participant faculty
 Administrative personnel
 Other (Specify): _____
 None
- For what reason(s) are you interested in participating in this activity?

Please tell us how satisfied or dissatisfied you were with the following.

- How satisfied were you with the registration process?
 a. Very Dissatisfied
 b. Dissatisfied
 c. Satisfied
 d. Very Satisfied
- How satisfied were you with the conference materials provided?
 a. Very Dissatisfied
 b. Dissatisfied
 c. Satisfied
 d. Very Satisfied



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EXPERIMENTA CON PREM, UPR HUMACAO
Fecha de las actividades: 22 / 25 / 29 de septiembre de 2010

Favor contestar las siguientes preguntas. La información provista se mantendrá confidencial.

- Municipio dónde está tu escuela: _____
- ¿En cuál grado estás?
 a. Décimo grado (10^{mo})
 b. 3^{er} año escuela superior (11^{mo})
 c. 4^{to} año de escuela superior (12^{mo})
- Género:
 a. Femenino
 b. Masculino

Marque con una (X) la opción que mejor represente su opinión sobre la conferencia y/o el taller. Por favor, marque una respuesta para cada línea.

En términos generales,	Muy Bueno	Bueno	Promedio	Pobre	Muy Pobre
1. el contenido de las actividades fue:					
2. el tiempo asignado a las actividades fue:					
3. Las Horas contacto con los Profesores: Análisis de resultados y preparación de informes					
Las experiencias de Laboratorio con...					
5. Profa. Idalia Ramos					
6. Prof. Nicholas Pinto					
7. Prof. Pablo Negrón					
8. Prof. José Sotero					
Tu participación en...					
9. Redacción de Informes					
10. Creación de presentaciones					
11. Presentación en Equipo					
Comentarios adicionales:					

¡Gracias por completar el cuestionario!



Online Surveys

[SURVEY PREVIEW MODE] Post.Evaluación: Experimenta con PREM -UPR Humacao Survey

http://www.surveymonkey.com/s.aspx?PREVIEW_MODE=DO_NOT_USE_THIS_LINK_FOR_COLLECTION&sm=6

[Exit this survey](#)



Post.Evaluación: Experimenta con PREM -UPR Humacao

GRACIAS POR SER PARTE DE EXPERIMENTA CON PREM 2009!

El propósito de este cuestionario es conocer mejor a todos los participantes del campamento de verano: EXPERIMENTA CON PREM de la Universidad de Puerto Rico, Recinto de Humacao.

Completar este cuestionario le tomará aproximadamente 15-20 minutos. La participación es voluntaria y no requiere que identifique su nombre en ninguna de las secciones. Usted es libre de no contestar cualquier pregunta y puede terminar en cualquier momento sin consecuencia ninguna.

El cuestionario tiene preguntas de auto-percepción y reflexión por lo que no hay respuestas correctas o incorrecta. Además, incluye una sección de preguntas de conocimiento general de los participantes. Toda la información provista se mantendrá confidencial y todos los resultados serán informados de forma agregada.

Agradecemos su participación en esta importante iniciativa que va dirigida a ofrecer información que facilite el desarrollo de estrategias efectivas que permita fortalecer aún más este programa de verano.

Atentamente,
La Administración del Programa PREM

* 1. Entiendo el propósito del cuestionario y estoy interesado(a) en participar:

Si

No

Done

Strange Matter Exhibition Assessment Pre & Post Children Drawings

- Kids draw the smallest item that they could think of in a large white pad at the entrance of the museum with colored markers.
- After the exhibition tour, children draw again the smallest thing.



Strange Matter Exhibition Assessment



- Drawing data from the pre-post exercise were analyzed to determine:
 - if children could recognize the difference of things that could be seen by the eye
 - things that only be seen using a microscope

Dibuja la cosa (materia) más pequeña que tú conoces

 garrapatea
(music note)

 hormiga

PRE

11/NOV 4:00 pm

Dibuja la cosa (materia) más pequeña que tú conoces



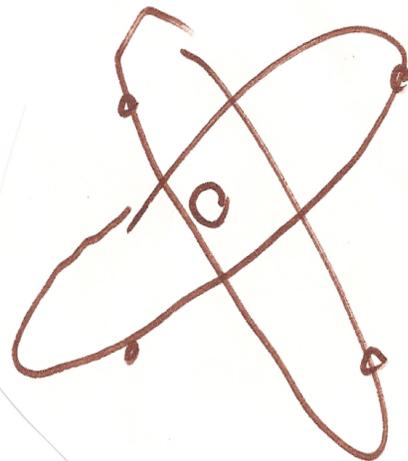
hormiga



PRE

Dibuja la cosa (materia) más pequeña que tú conoces

• un punto



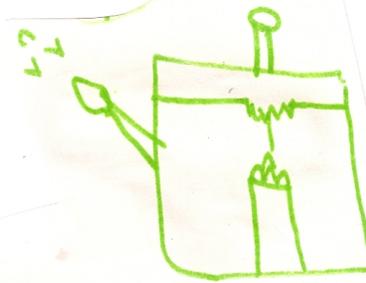
POST

11/NOV 4:00 pm

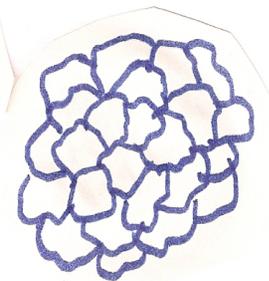
*El propósito de este ejercicio es recoger datos relacionados al aprendizaje (molécula, átomo) de los niños a través del dibujo.



átomo



ESPUMA

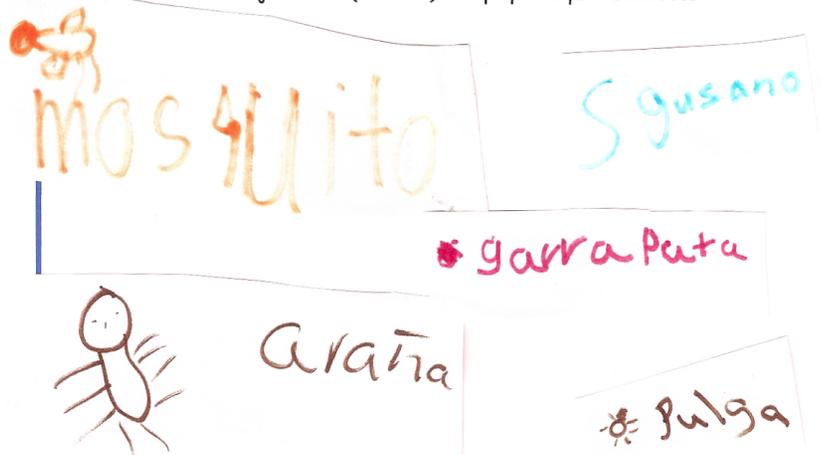


POST

*El propósito de este ejercicio es recoger datos relacionados al aprendizaje (molécula, átomo) de los niños a través del dibujo.

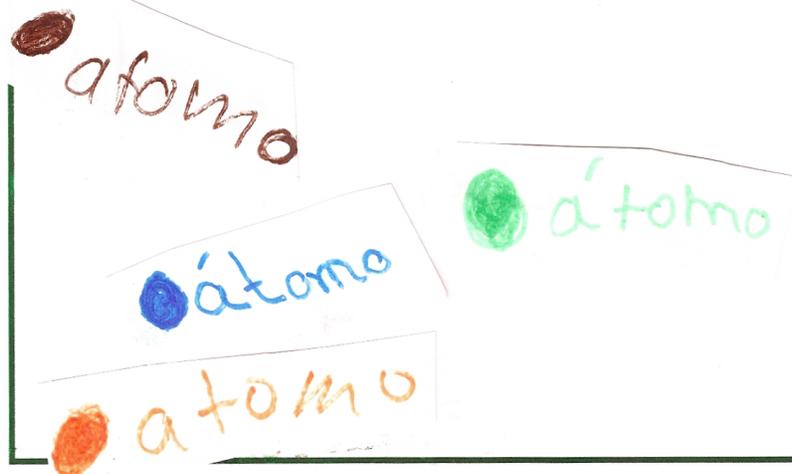
14-NOV-2007
9:40 am

Dibuja la cosa (materia) más pequeña que tú conoces



PRE

Dibuja la cosa (materia) más pequeña que tú conoces



POST

*El propósito de este ejercicio es recoger datos relacionados al aprendizaje (molécula, átomo) de los niños a través del dibujo.

24-NOV-2007
11:00 am

Dibuja la cosa (materia) más pequeña que tú conoces

• un grano de arena

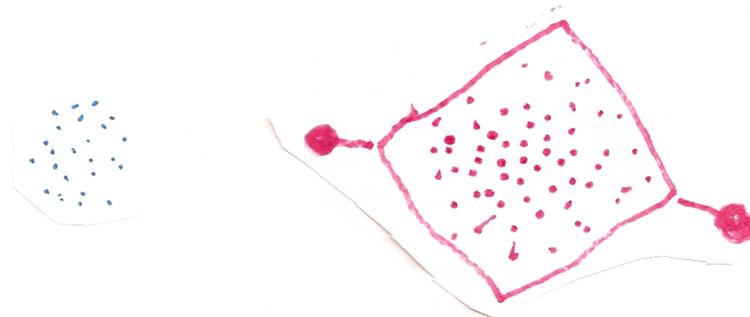


Granita de arroz

PRE

Dibuja la cosa (materia) más pequeña que tú conoces

una célula de un rancho



POST

*El propósito de este ejercicio es recoger datos relacionados al aprendizaje (molécula, átomo) de los niños a través del dibujo.

25-NOV-2007
1:00 pm

NanoDays Exhibition Evaluation

- Volunteer's staff at tables & laboratory exhibitions:
 - UPR-H students & faculty, Petra Mercado High School students & industrial companies collaborators
- 11 instruments developed:
 - Evaluators observational assessment
 - Structured interviews with participants volunteers & staff
 - Surveys: volunteers teachers & participants
 - Color-coding surveys



Example 1: Girls -13 years old Pre Exhibition- I Pod Drawing

347

Favor de completar la siguiente información:

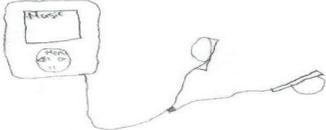
Edad: 13

Soy: niña niño

¿Qué entiendes por la palabra "nano"?

algo muy pequeño.

Dibuja una cosa que sea "nano".



PRE

Instrumento para ser administrados a estudiantes desde 4^{to} grado hasta Escuela Superior

Mirza Rivera Lugo, MS, MT & Gladys Colón Rivera
Evaluadoras Externas del programa PREM (marzo, 2008)

Post Exhibition- Fiber/Hair

9

Favor de completar la siguiente información:

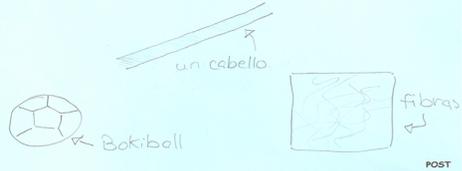
Edad: 13

Soy: niña niño

¿Qué entiendes por la palabra "nano"?

Es algo super super pequeño y muchas veces se puede ver a través de microscopios.

Dibuja una cosa que sea "nano".



POST

Instrumento para ser administrados a estudiantes desde 4^{to} grado hasta Escuela Superior

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Evaluadoras Externas del programa PREM (marzo, 2008)

Example 3: Boy - 13 years old

Pre Exhibition – Small Animals

30

Favor de completar la siguiente información:

Edad: 13/13 años

Soy: niña niño

¿Qué entiendes por la palabra "nano"?

algo pequeño.

Dibuja una cosa que sea "nano".



PRE

Instrumento para ser administrados a estudiantes desde 4^{to} grado hasta Escuela Superior

Mirza Rivera Lugo, MS, MT & Gladys Colón Rivera
Evaluadoras Externas del programa PREM (marzo, 2008)

Post Exhibition – Hair/Fiber

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Favor de completar la siguiente información:

Edad: 13 años

Soy: niña niño

¿Qué entiendes por la palabra "nano"?

La palabra nano es un millón de veces más pequeño que un centímetro.

Dibuja una cosa que sea "nano".



POST

Instrumento para ser administrados a estudiantes desde 4^{to} grado hasta Escuela Superior

Mirza Rivera Lugo, MS, MT & Gladys Colón Rivera
Evaluadoras Externas del programa PREM (marzo, 2008)

GENDER	RESPONSES	PRE		POST	
 Boy	iPod, computer chips	5	9.0%	0	0
	Small things	30	50.0%	16	27.0%
	Small technology	3	5.0%	5	6.0%
	Microscopic things	8	1.4%	3	6.0%
	A rare things	2	4.0%	3	6.0%
	Something that cannot see with your eyes	9	1.5%	3	6.0%
	10 ⁻⁹ measurement	1	2.0%	17	3.1%
	10,000 times smaller than a hair	0	0	5	9.0%
	10 million times smaller than a centimeter	0	0	4	8.0%
	I don't know	2	4.0%	0	0
	Sub total: 116, (116/318*100= 36.5%)		60	100.0%	56
 girl	iPod, computer chips	6	5.9%	0	0
	Small things	57	56.4%	6	5.9%
	Small technology	7	6.9%	1	.9%
	Microscopic things	16	1.6%	8	7.9%
	A rare things	0	0	0	0
	Something that cannot see with your eyes	4	4.0%	9	8.9%
	10 ⁻⁹ measurement	10	9.9%	61	60.3%
	10,000 times smaller than a hair	0	0	7	7.0%
	10 million times smaller than a centimeter	0	0	9	8.9%
	I don't know	1	.9%	0	0
	Sub total: 202, (202/318*100= 63.5%)		101	100.0%	101
Total: Boy (36.5%, n = 116) & Girl (63.5%, n = 202): 318 (100%)					

Qualitative Methods



- Focus groups
 - ▣ Trainee' students
 - ▣ Participant faculty
- Formal & Informal Interviews
 - ▣ Program administration
 - ▣ Activities participants: symposiums, exhibitions, seminars annual meetings, etc.
- Other independent evaluators' observational assessment
 - ▣ Posters exhibition & activities

Integration of Evaluation Findings for PREM Program Improvement

Significant Findings/Recommendations	Action Improvements
New topics in seminars & videoconferences (electronics, Biology and Chemistry fields, among others)	New topics were added also to symposium conferences & annual meetings
Increase PREM Program visibility	PI's report of current PREM achievements at symposium and annual meetings; invitations to faculty of other local & national universities, institutional officials, industrial officials & parents; Web page, Facebook; press & radio releases
Increase collaborations with public and private schools	High School teachers & students have been integrated into major program activities
Develop a student poster & oral presentation activities	A poster session is included in all symposium & annual scientific meetings
Offer workshops in proposal writing, posters design and presentation	Increase of faculty mentoring in these areas
Develop social activities for PREM students (current & former) participants in order to strength their relationship & networking	Lunch sessions at symposium conferences & annual meetings; participation of parents at some students activities

Our Evaluation Design

- On-going communication with program administration
- Integration of program staff during the planning, implementation, interpretation, and use of evaluation findings
 - ▣ Brainstorming & discussion of activities main goals & objectives
 - ▣ Literature review
- Using Mixed-Methods Strategies at different stages of the evaluation
 - ▣ Development of evaluation design: tools, templates and metrics
- Concurrent Triangulation Design
 - ▣ Data collection & Analysis
 - ▣ Prompt feedback, briefing sessions
- Dissemination of findings
 - ▣ Reporting: A detailed evaluation report (paper, CD format, PDF)

Evaluation is a process that should not end with the report! Build in steps and allocate resources to implement the findings to improve future grantmaking and to share the lessons learned!

Melissa Conley-Tyler

Thanks!



Evaluation Reports



- Executive Summary
- Introduction
- Methodology
 - ▣ Instruments & metrics
- Data Analysis
 - ▣ Descriptive tables
 - ▣ Graphics
- Conclusions & Recommendations

Planning for Program Evaluation

Developing a roadmap or plan for the evaluation is an important step that will help ensure that evaluation efforts are efficiently implemented, properly managed, and useful for program improvement.

WHY IS IT IMPORTANT TO EVALUATE PROGRAMS?

- Most agencies requires funded programs to evaluate their programs.
- Program evaluation allows to monitor progress toward program goals.
- Evaluation process helps identify opportunities for program improvement.
- Evaluation process helps identify problem areas before significant resources are wasted.
- Eevaluation process helps identify what is working well so can celebrate success.
- Evaluation findings can help justify the need for further funding & support.

IDENTIFYING AN EVALUATOR

- Be sure to review evaluator candidates' levels of professional training and experience, as well as their references. It is important to work with evaluators whose principles, training, and experience align with the Program's funded agencies approaches.



Visit the American Evaluation Association online for an evaluator search tool: <http://www.eval.org>

Evaluator's Team Profile

□ Mirza Rivera, MS

- Master in Sciences in Research and Health Program Evaluation
- Medical Technologist
- Work at Public Health Graduate School University of Puerto Rico
- Project experiences: NSF-PREM, SAMHSA-Synar, Food Safety-UNE-FDA, MARC-UPRH, community based projects, PU54 MD Anderson/UPR, Medical Residency Program
- Member of AEA, ACEI & PRMTC

□ Gladys Colón, MS

- Master in Sciences in Research and Health Program Evaluation
- Medical Residency Evaluator & Administrator
- Work at School of Medicine University of Puerto Rico
- Project experiences: NSF-PREM, NSF-EESE, MARC-UPRH, US Dpt. of Education Medical Residency Program, community-based projects
- Member of AEA, ACEI & APDIM