

The Role of Evaluation within Nanoscale Science and Engineering Education Research: Differential Use, Application and Benefits of Evaluation

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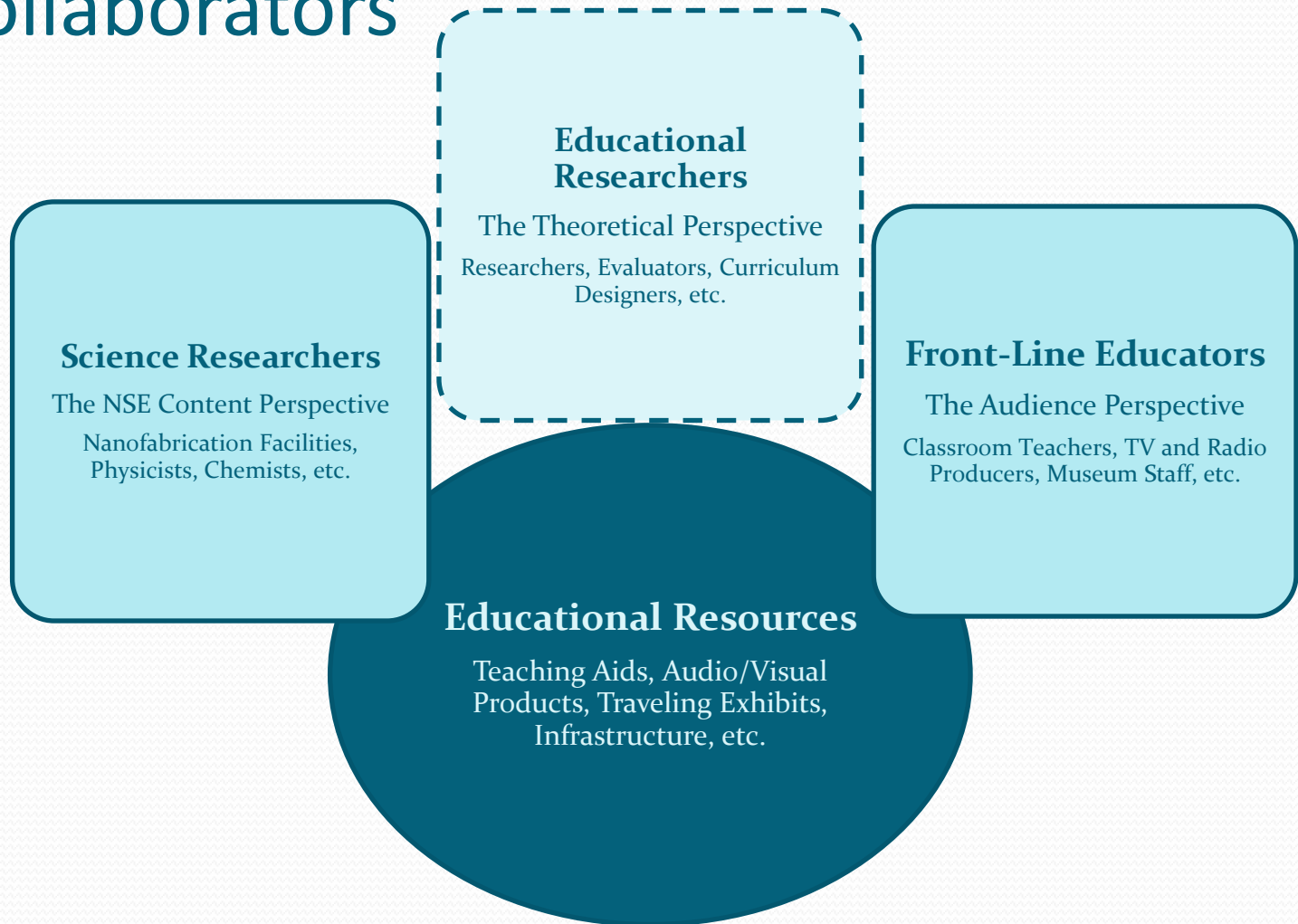
Nano: The Nanoscale, Nanotechnology, and Nanoeducation



The Projects

- Centers & Networks
 - 2 projects funded for 5 years
- Instructional Materials Development
 - 5 projects funded for between 1 and 5 years
- Informal Science Education
 - 4 projects funded for between 2 and 5 years

The Collaborators



Project Title	Number of Organizational Partners				Number of Senior Project Personnel			
	Total	SR	FL	ER	Total	SR	FL	ER
Centers & Networks (2 Projects)								
Centers & Networks A	30	15	13	2*	71	N/A	N/A	N/A*
Centers & Networks B	0	0	0	0	7	N/A	0	N/A
Instructional Materials Development (5 Projects)								
Instructional Materials Development A	N/A							
Instructional Materials Development B	4	2	0	2*	3	1	0	6*
Instructional Materials Development C	2	1	0	1*	7	0	0	5*
Instructional Materials Development D	12	2	6	4*	0	0	0	5*
Instructional Materials Development E	1	0	0	1	1	2	0	2
Informal Science Education (4 Projects)								
Informal Science Education A	3	0	2	1*	2	1	0	0
Informal Science Education B	6	3	2	1	2	0	1	0
Informal Science Education C	20	0	17	3*	2	0	1	0
Informal Science Education D	22	11	11	0	0	0	4	0

Project Title	Planning			Implementation			Dissemination		
	SR	FL	ER	SR	FL	ER	SR	FL	ER
Centers & Networks (2 Projects)									
CENTERS & NETWORKS A	Y	Y	Y	Y	Y	Y	Y	Y	Y
Centers & Networks B	Y	Y	N	Y	Y	N	Y	Y	N
Instructional Materials Development (5 Projects)									
INSTRUCTIONAL MATERIALS DEVELOPMENT A	Y	Y	Y	Y	Y	Y	Y	Y	Y
INSTRUCTIONAL MATERIALS DEVELOPMENT B	Y	Y	Y	Y	Y	Y	N/A	N/A	N/A
INSTRUCTIONAL MATERIALS DEVELOPMENT C	Y	Y	Y	Y	Y	Y	Y	Y	Y
INSTRUCTIONAL MATERIALS DEVELOPMENT D	Y	Y	Y	Y	Y	Y	Y	Y	Y
Instructional Materials Development E	Y	Y	N	Y	Y	N	Y	Y	N
Informal Science Education (4 Projects)									
INFORMAL SCIENCE EDUCATION A	Y	Y	Y	Y	Y	Y	Y	Y	Y
Informal Science Education B	Y	Y	N	Y	Y	N	Y	Y	N
INFORMAL SCIENCE EDUCATION C	Y	Y	Y	Y	Y	Y	Y	Y	Y
Informal Science Education D	Y	Y	N	Y	Y	N	Y	Y	Y

The Evaluator's Perspective

- “Who” matters - Inclusion
- Contribution matters – Use
- Management/Leadership matters – Application
- The role of evaluation is critical:
 - “The science side says let’s teach Kindergartners about nano. The education side says that is going to be a challenge and gasps. The role of the evaluator is to focus on the learner and to make the scientists to cry uncle and the educators to stretch. We help the best ideas get to the learners in ways that are understandable to them.”
 - “The role of evaluator was facilitator. We got the partners talk to each other. To give and take.”

Project Title	Definition			Leverage		MR	DP	SCS
	Goal	Obj	TP	LG/BI	# of NSEE			
Centers & Networks (2 Projects)								
CENTERS & NETWORKS A	1	1	1	0	5	1	1	10
Centers & Networks B	0	0	1	1	2	1	1	6
Instructional Materials Development (5 Projects)								
INSTRUCTIONAL MATERIALS DEVELOPMENT A	1	1	0	1	1	1	0	5
INSTRUCTIONAL MATERIALS DEVELOPMENT B	1	1	1	1	3	1	1	9
INSTRUCTIONAL MATERIALS DEVELOPMENT C	1	1	1	1	4	1	1	10
INSTRUCTIONAL MATERIALS DEVELOPMENT D	1	1	1	1	1	1	1	7
Instructional Materials Development E	1	1						
Informal Science Education (4 Projects)								
INFORMAL SCIENCE EDUCATION A	1	1	1	0	2	1	1	7
Informal Science Education B	1	1	1	0	2	1	0	6
INFORMAL SCIENCE EDUCATION C	1	1	1	0	2	1	1	7
Informal Science Education D	1	1	1	1	3	1	1	9

Project Title	Purpose	Incl	Use	App	Score
Centers & Networks A	Foster public awareness, engagement, and understanding of nanoscale science, engineering, and technology through informal educational resources, networks, and tools	1	1	1	10
Centers & Networks B	Develop infrastructure, educational leaders, and resources designed to further nanoscience learning and education	0	0	0	6
Instructional Materials Development A	Develop unit on understanding of nano to supplement high school science program	0	0	1	5
Instructional Materials Development B	Move nanoscale science and technology (NST) into HS courses; test an innovative synchronous online video technology for use in professional development with cutting-edge NST content	1	1	1	9
Instructional Materials Development C	Create two 4-week curriculum modules, one high school, one middle school, dealing with nano	1	1	1	10
Instructional Materials Development D	Create, test, and disseminate 12-15 learning activities related to nano	1	1	1	7
Instructional Materials Development E	Hold workshop to bring national experts together to address the challenges of bringing emerging science information to the classroom; create a document to inform educators, researchers, and the field	0	0	0	6
Informal Science Education A	Create an informal science exhibit targeted at the general public and kids age 7-12	1	0	1	7
Informal Science Education B	Produce 72 radio episodes/spots on nano-related topics	0	0	0	6
Informal Science Education C	Increase the quantity and quality of community-based discourse about key social and ethical issues associated with nanotechnology	1	0	1	7
Informal Science Education D	Produce six new episodes of an existing science TV series related to nanoscience	0	0	0	9

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