

Summative Assessment of VT EPSCoR RII CSYS Phase

June 2, 2011



Goals of VT EPSCoR:

- Improve PI Competitiveness for funding through human, physical, and cyber- infrastructure building
- Increase Workforce Development and Diversity:
 - Successful graduate student and postdoctoral research and career development
 - Inspire Undergraduate and high school students to enter STEM careers:
- Engage the public in science and engineering:
- Innovate and sustain through pilot projects and private sector research and development:
- Impact the Economy of the state through technology:
- Reach state and region-wide for partners in all of the above activities

Methodology:

- Our annual on-line survey was conducted with graduate students and faculty level investigators (including private sector) who participated in VT EPSCoR programs
- We assessed the impact of the VT EPSCoR programs on participants' career and research goals and activities from surveys conducted in 2009-2011.
- Surveys each had a 80-98% response rate.

Other surveys were specific for undergraduates and the Streams Project. A summary of these surveys is underway but will not be ready for this conference report.

Most graduate students and faculty members rated their experiences as valuable:


Table 2: Overall Ratings of EPSCoR Experiences

Rating	2009 Survey		2010 Survey		2011 Survey	
	Grads (n=18)	Faculty (n=32)	Grads (n=18)	Faculty (n=25)	Grads (n=20)	Faculty (n=21)
Valuable	100%	82%	94%	88%	95%	95%
Not sure	0	9%	0	0	0	0
Not worthwhile	0	9%	6%	12%	5%	5%
Total	100%	100%	100%	100%	100%	100%

Most useful about VT EPSCoR Experiences:
The funding! Networking as well.

Table 3: Useful about EPSCoR Experiences: Most Frequent Responses

Most useful about EPSCoR	2009 Survey		2010 Survey		2011 Survey	
	Grads (n=18)	Faculty (n=32)	Grads (n=18)	Faculty (n=25)	Grads (n=20)	Faculty (n=21)
Funding	9	21	7	17	5	17
Networking & collaboration	5	10	5	8	8	10
Grant writing & workshops	0	0	4	0	3	0
Hands-on experience	0	0	5	0	5	0




The EPSCoR grant makes it possible to obtain the preliminary data for larger scale project and also to figure out whether the proof of concept is a good idea to move forward with

Flexible funding opportunities for small pilot projects with quick turnaround time is very valuable for developing new research directions

Through the years, VT EPSCoR has allowed me to transition from exploration of a research project to higher levels of external funding and success in publishing my research results.

The networking with other colleagues in EPSCoR programs in Vermont and other states/territories in ways that enabled us to help each other in a synergistic manner.

EPSCoR funding enabled me to both collaborate with and learn about research all over campus, which in turn made submission of interdisciplinary, environmentally focused proposals more competitive.



The opportunity to maintain a long and steady enough interaction with faculty from other colleges – such an interaction is necessary to establish truly interdisciplinary collaborations.

The program has allowed me to gain an applied knowledge of my field that simply wouldn't be possible on my own or in the classroom.

The amount of hands-on experience that the funding provides cannot be achieved in a normal classroom.



Suggestions for Improvement:

Faculty: Less reporting and attending meetings

Larger SBIR Phase (0) and IF awards

Graduate Students: More funding!

And fewer requirements about the funding.

Impact on Graduate Student Careers and Research Goals:

Table 4: Graduate Students Report Impact of Participating in EPSCoR

Participation in EPSCoR ...	2009 Survey		2010 Survey		2011 Survey	
	Freq	Percent	Freq	Percent	Freq	Percent
Increased likelihood of STEM career	9	50%	11	61%	10	50%
Helped achieve research goals	14	78%	15	83%	17	85%
Contributed to new research questions	16	89%	16	89%	17	85%
Provided new research methods	16	89%	17	94%	18	90%
Impacted research goals	15	83%	15	83%	17	85%

Impact on Faculty

Table 5: Faculty Report Impact of Participating in EPSCoR

Participation in EPSCoR ...	2009 Survey		2010 Survey		2011 Survey	
	Freq	Percent	Freq	Percent	Freq	Percent
Initiated new area of research	26	81%	18	72%	16	76%
Helped achieve research goal	21	66%	20	80%	17	81%
Contribute to new research questions	30	94%	24	96%	20	95%
Provided new research methods	28	88%	21	84%	16	76%
Impacted research goals	22	69%	21	84%	16	76%
Expect to continue research	24	75%	19	76%	14	67%



Increase connections between academia and the private sector:

Between 2009 and 2011 the number of faculty who felt that there was a connection between academia increased from 13% to 29% .

The number who felt that there was no connection fell from 25% to 10%.

Agreement that there is need for improvement here.

Summary

Vermont EPSCoR participants have found their experiences with the program valuable, particularly funding, networking and collaboration opportunities.

Participation has been important to achievement of research goals, as well as the introduction of new research questions and methods.

Graduate students were more likely to pursue STEM Career goals as a result of participation and faculty generally expect to continue research supported through VT EPSCoR



More data to come on:

Follow Careers for Graduate Students:

PI Competitiveness for funding:

Workforce Development and Diversity:

Effects of External Engagement:

Economic Impacts:

Impact on Faculty:

Initiated new areas of research

Achieved research goals

Gained new research direction or supported ideas in development

Learned new research methods or expanded existing knowledge

Affected areas of interest and research

Most expected to continue research supported through VT EPSCoR

Impact on Graduate Student Careers and Research Goals:

Most already interested in STEM Career

Nevertheless, half report that participation increased likelihood that they would pursue STEM career

Important in achievement of research goals

Led to or contributed to new research questions and directions

Introduced or contributed to existing knowledge about innovative research methods

Impacted future research goals