

1. BRIEF DESCRIPTION OF THE PROJECT

The Summit sought to create support and effective action for strengthening science education in Florida at the state, Department of Education, and school district policy levels. The Summit gathered 135 leaders from Florida's business and education communities and state legislators to develop recommendations for concerted state-wide action to improve learning in mathematics and science of all Florida's students at all grade levels.

2. INDICATORS OF SUCCESS

The ultimate outcomes are policies and actions that support large-scale change of student learning. Outcomes cannot solely be ascribed to this project because the agenda of improving learning in mathematics and science is not unique. Some of the successes include:

- a. The Summit develops a master document of recommendations for the legislature, the Department of Education, and School District that lays the foundation for all actions since then (2005)
- b. Legislation passes to establish a STEM Council – vetoed by the Governor (2006)
- c. Florida Department of Education includes a STEM Research Center. Appropriation of \$1,500,000 a year approved and the Florida Research Center in STEM (FCR-STEM) established at Florida State University (2007)
- d. Florida's Department of Education creates a single 3-year, \$23,000,000 plan to provide professional development on reform methods in mathematics and science, using Title IIB funds (2007-2010)
- e. Florida revises its mathematics and science education standards: Next Generation Sunshine State Standards that emphasize content knowledge, depth, and understanding of the nature of science. Evolution is treated explicitly as a "big idea". Approved (over the objections of a strong Intelligent Design lobby) by the Board of Education by a vote of 4:3 (2008)
- f. State legislature approves a change from broad Comprehensive Assessment in high school to end-of-course exams, to be implemented in 2011 (2008)
- g. Workforce Florida provides \$450,000 to create and operate a Florida STEM Council of business representatives (2009); a series of 5 STEM Florida Business Roundtables will take place between January 19 and March 1, 2010 and is rejuvenating the statewide reform initiative

3. CHALLENGES AND HOW THEY WERE (OR WERE NOT) MET

Challenges and frustrations were typical of those encountered when working with high-level managers and legislators:

- a. Attracting top level business-industry leaders. Businesses approached identified lower level staff. It took endless hours of personal contacts to involve top level representatives (president and vice president of businesses)
- b. Summit speakers were unable to answer effectively some key questions:

"Can you prove that the models you advocate are more effective and their adoption cost effective (i.e., how much bang will we get for the bucks you request)?"
- c. Within one year of the Summit, all senior personnel in the Department of Education and some key legislators were replaced. Effectiveness requires mutual trust and confidence that take time to build, placing additional demands on volunteers at a time when belt-tightening everywhere reduced availability.
- d. Florida's state budget crisis led to severe curtailing of pro bono staff support provided by the University of South Florida and complete elimination of state funding for FCR-STEM at Florida State University in 2008 to 2009. The Workforce Florida initiative (described under 2.g.) is providing a fresh start.

4. WHAT WE WOULD LIKE TO LEARN FROM OTHER PROJECTS

Policymakers prefer simple answers to complex questions. While experts usually think this is naïve because education is indeed a very complex matter, it is the policymakers that decide on overarching policies and hold the purse strings and thus the key to large-scale action.

- a. What have been the outcomes of similar summits in other states?
- b. What studies have shown statistically significant increases in student performance using experimental or quasi-experimental designs that demonstrate increased student learning with reform teaching methods?
- c. What studies have explicitly analyzed the start-up (development) and long-term implementation costs of alternate and effective teaching strategies?