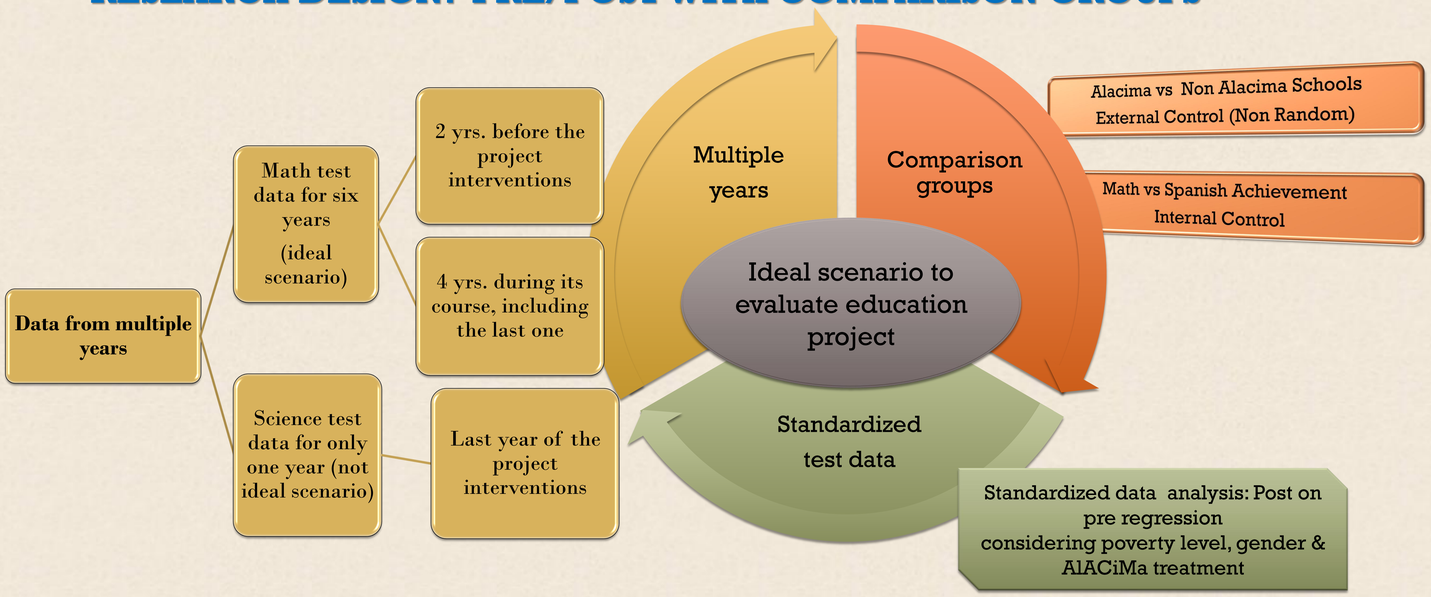
PUERTO RICO MATH AND SCIENCE PARTNERSHIP(ALACIMA)

UNIVERSITY OF PUERTO RICO. RIO PIEDRAS

PI: JOSEFINA ARCE

RESEARCH DESIGN: PRE/POST WITH COMPARISON GROUPS



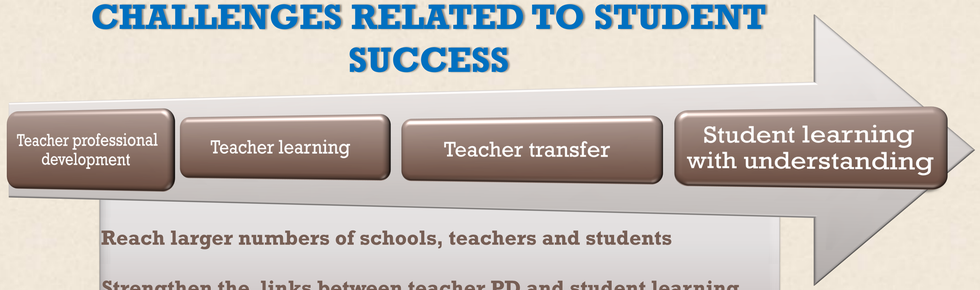
OUR DEFINITION OF STUDENT SUCCESS

Increased K-12 mathematics & science learning:

Annual increases in achievement attributable to project's' interventions

Measured by standardized tests: Pruebas Puertorriqueñas de Aprovechamiento Academico (PPAA)

CHALLENGES RELATED TO STUDENT SUCCESS



PARTNER ROLES

STEM Faculty

Project leaders
PD trainers
Content specialists on PD lesson design
Pre-service practicum supervisors
Pre-service research mentors
Science & math educational researchers
6-12 student summer camps mentors

Education Faculty

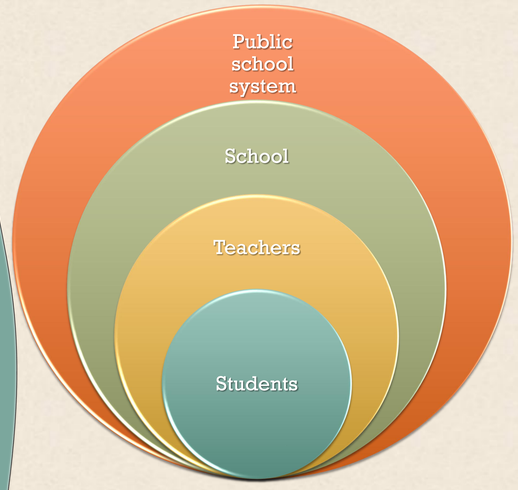
Project leaders
PD trainers
Education specialists on PD lesson design
Pre-service practicum supervisors
Pre-service research mentors
Assessment specialists
Educational research specialists

K-12 Public School System (one integrated system)

Schools/teachers as voluntary participants
Exemplary teachers as PD trainers
Collaborator in establishment of resource centers
Participant in project planning and implementation
Developer of curricular framework, content standards & grade expectations
Assess student achievements
Institutionalization of project reforms

Evaluators

Plan the assessment/ evaluation of student achievement
Collect formative student assessment data
Retrieve student assessment data for summative evaluation
Analyze student data for project evaluation
Provide feedback to project stakeholders
Report results through various venues



STRATEGIES TO OVERCOME CHALLENGES

School level

Increase number of schools served
Strengthen existing professional resource centers
Create new centers
Equip centers with curricular materials/ technology for active learning
Promote supportive school leadership

Teacher level

Increase number of teachers served
Strengthen teacher math/science PD attuned to content standards and grade expectations
Equip teacher with materials to implement active learning
Train teachers to become teacher trainers and disciplinary leaders
Involve teachers in collaborative empowerment evaluation

Student level

Increase number of students taught using best educational practices and active learning curricular materials
Increase number of students taught according to content standards & grade expectations in which standardized achievement tests are based

New projects to implement these strategies

PRMSP/AlACiMa Follow On MSP Program
8 Resources Centers, 16 resources teachers, 160 teachers

AlACiMa 2 - Phases I & II
Titles II-A - US Dept. of Education
17 Resources Centers, 34 Resources Teachers, 112 schools, 129 principals, 1500 teachers

Math & Science Master Teachers
Robert Noyce Teacher Scholarship Program
8 Science and 10 math secondary teachers