

# Micromessaging to Reach and Teach Every Student<sup>TM</sup>

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National Alliance for Partnerships in Equity



#### Goal of the Program

Present a new model for educator engagement to achieve equity in the classroom and equality in student outcomes.



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#### Objectives

- Provide overview of the NAPE organization.
- Describe the core ingredients for NAPE's Micromessaging program.
- Understand how the Micromessaging program addresses micro-inequities and applies micro-affirmations to transform classrooms and achieve equity in education, including the most rigorous programs.



#### Who Is NAPE?

# National Alliance for Partnerships in Equity

# Professional Development

Provide tools and curricula for educators through conferences, presentations, webinars, and formal training

#### Research and Evaluation

Develop reports.
Identify researchbased promising
practices.
Provide input to
others' research.

# Technical Support

Develop tools and resources for LEAs. Provide consulting services.
Offer expertise on access, equity, and diversity issues.

# Public Policy and Advocacy

Work with federal agencies.
Educate legislators on equity and diversity issues.
Develop policy briefs.
Alert membership policy issues.



#### NAPE's Professional Development Suite of STEM Equity Programs

#### **STEM Equity Pipeline™**

#### PIPE-STEM<sup>™</sup> Project

Working with institutional leaders (administrators, dept heads, etc.) to improve enrollment, retention, and completion of girls and underrepresented populations in STEM courses

#### STEM Equity Teacher Training

Training
teachers to use
pedagogy that
improves
enrollment,
retention, and
completion of
girls and underrepresented
populations in
STEM courses

#### STEM Equity Counselor Training

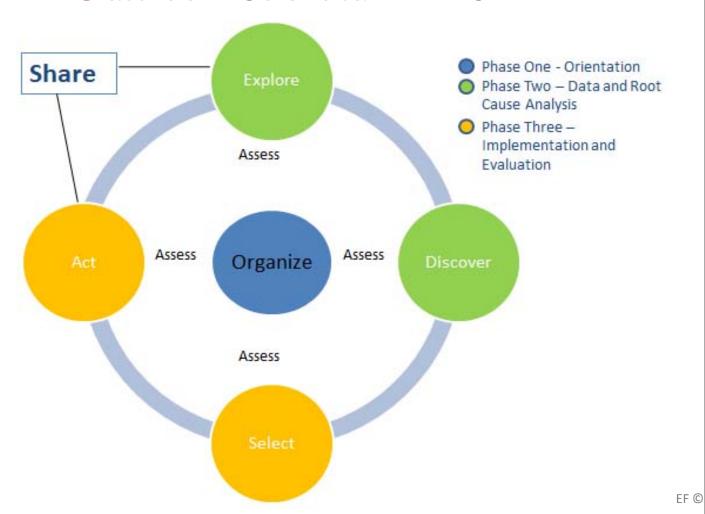
Coaching counselors to encourage girls and under-represented populations in STEM careers

# Tools & Resources

Tools to support teachers' and counselors' learning and assist their students, e.g., camps, partner orgs, books



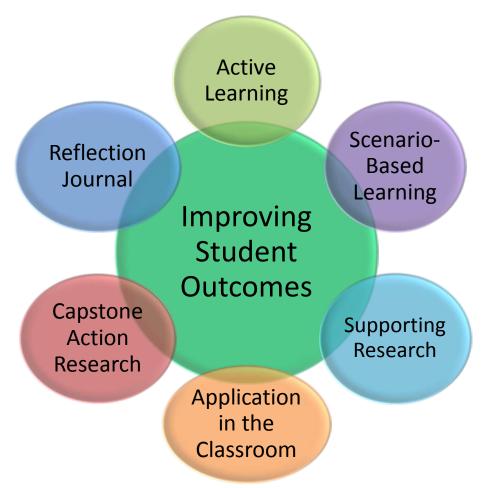
# Adapt a Recognized Model: The Educator as Classroom Scientist: PIPE-STEM<sup>TM</sup>







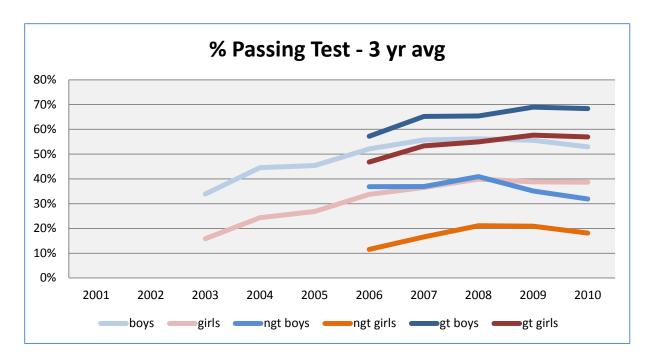
# Making It Happen



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# Effective Pilot Program DISD Gender Equity Training



Both boys and girls of teachers who had Gender Equity training are passing at rates 20-30% points higher than students of teachers without the training.

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#### DFW: Professional Development

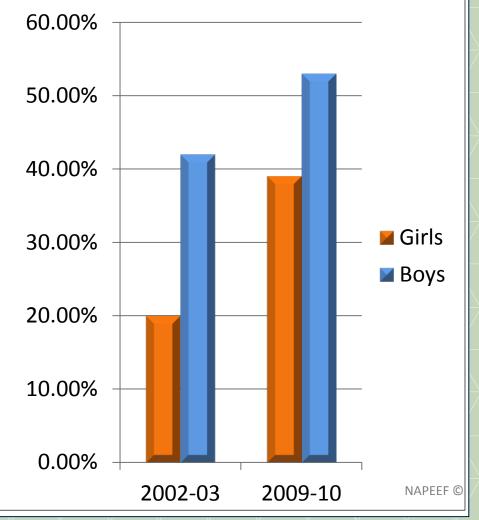
NAPE

Since implementation in 2003,

AP Physics test pass rates improved for both girls and boys:

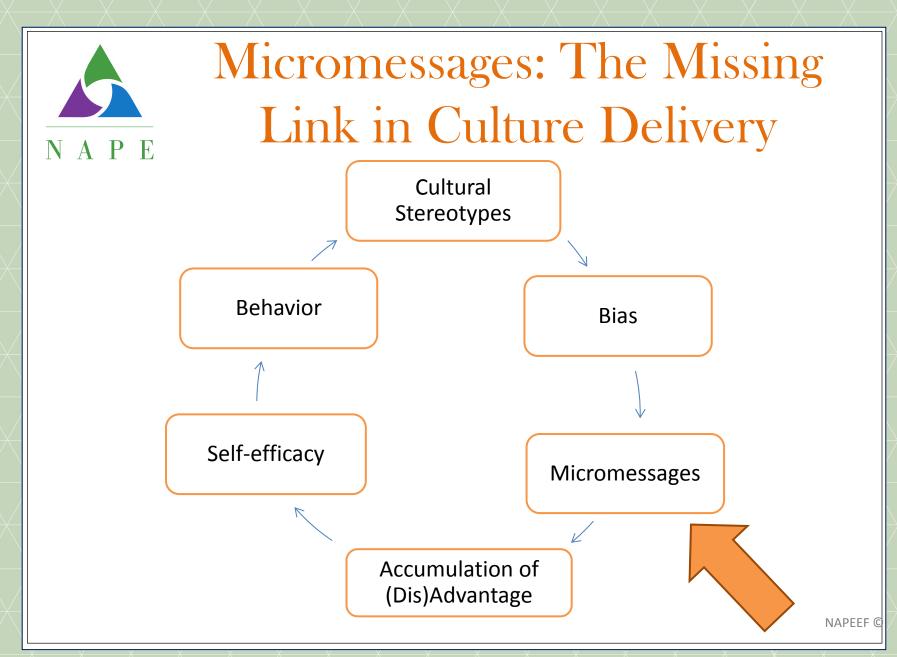
- -4x tests passed by girls
- -4x tests by African Americans
- —6x tests passed by Hispanics







# Micromessages





### Micromessaging

#### Micromessages

 Small, subtle, semiconscious messages we send and receive when we interact with others

# Micro-inequities

 Negative micromessages we send other people that cause them to feel devalued, slighted, discouraged, or excluded

#### Microaffirmations

 Positive micromessages that cause people to feel valued, included, or encouraged

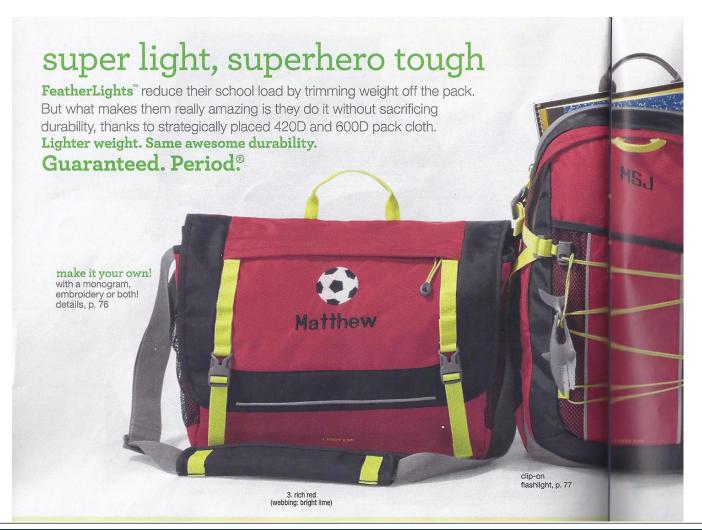








### Lands End Catalog 2012





#### Lands End Catalog 2012





# Educator's Equity in STEM

- NSF-funded program three years.
- Recruit 13 CCBC faculty for pilot year.
- Recruit 25 faculty and 25 teachers each for Year 2 from Baltimore County, MD.
- Provide a 5-day, rigorous, research-based program for participants.
- Implement the Program Improvement Process for Equity<sup>™</sup> for continuous classroom improvement.
- Assign participants to a Professional Learning Community.



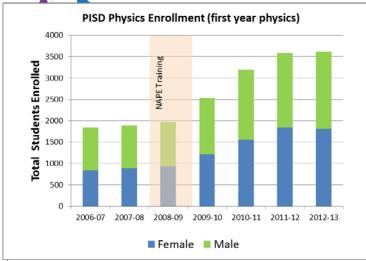
#### Indicator of Impact

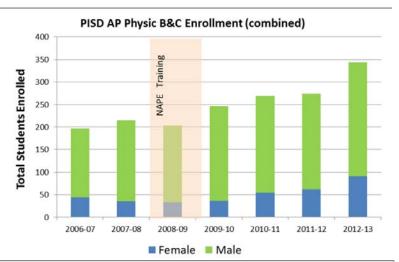
Pre-Academy, Post Academy, Post Capstone Perception Ratings – Cohort 1 and 2

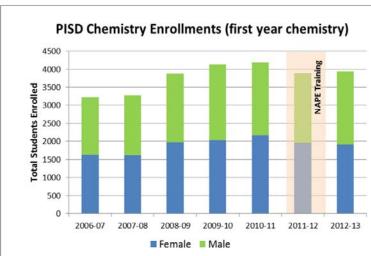
N= 57	Over all P- Value	Pre Acade my (1)	Post Acade my (2)	Post Capsto ne (3)	Post hoc comparison s
I am knowledgeable of ways in which I contribute to an environment that encourages all students in my classroom.	<.000 1	1.94	1.98	1.27	1 ≠ 3, 2 ≠ 3
I believe that all students can succeed in STEM disciplines.	.0353	2.02	1.73	1.71	1 ≠ 2*, 1 ≠ 3*
I would advise my students to take as many STEM courses as they can.	.0018	1.77	1.82	1.40	1 ≠ 3, 2 ≠ 3
I understand ways in which the classroom environment does or does not encourage all students.	<.000	2.02	1.94	1.34	1 ≠ 3, 2 ≠ 3

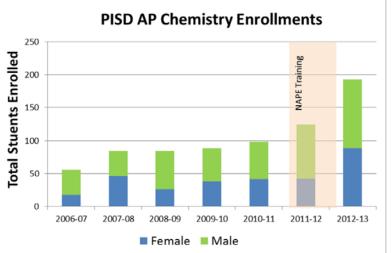
#### Pre-Academy, Post Academy, Post Capstone Perception Ratings – Cohort 1 and 2 I am aware that I am responsible <.000 1.81 1.76 1.18 $1 \neq 3, 2 \neq 3$ for creating an equitable classroom. 1 I am knowledgeable about methods to decrease micro-inequities in the <.000 $1 \neq 2, 1 \neq 3,$ 1.44 2.38 2.04 classroom. $2 \neq 3$ I am knowledgeable about strategies to evaluate the $1 \neq 2, 1 \neq 3,$ <.000 1.37 2.21 1.90 effectiveness of classroom 2 ≠ 3\* interventions. I feel confident in my ability to identify and address micro-<.000 $1 \neq 2, 1 \neq 3,$ 1.55 2.30 2.02 inequities in my classroom. 1 2 ≠ 3 I am comfortable with evaluating $1 \neq 2, 1 \neq 3,$ the effectiveness of my classroom <.000 2.23 1.92 1.47 interventions. $2 \neq 3$

### NAPE Teacher Training in Plano ISD- Enrollments All physics teachers were trained in 2008-09; all chemistry teachers were trained in 2011-12









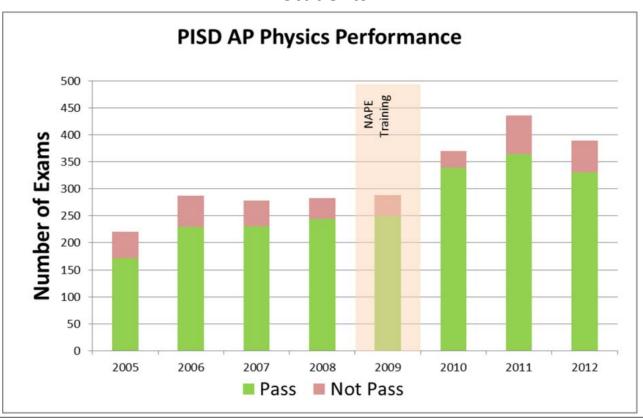
Starting with freshmen in 2007-08, a chemistry credit was required not just recommended, and this most likely explains the jump in 2008-09, their sophomore year.



#### NAPE Teacher Training in Plano ISD- AP Performance

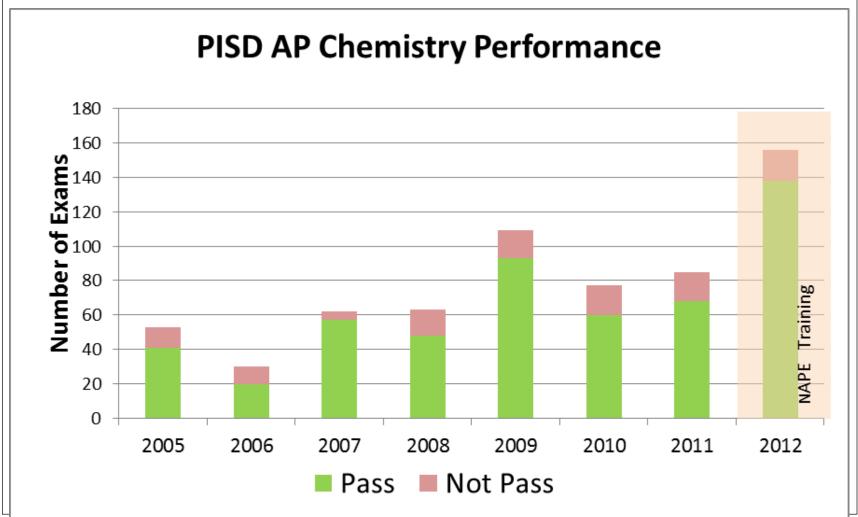
The number of students taking and passing AP Physics courses and AP Chemistry courses has increased dramatically following NAPE training.

All Students





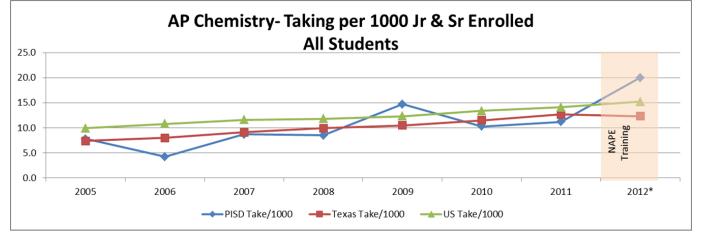
# NAPE Teacher Training in Plano ISD- AP Performance

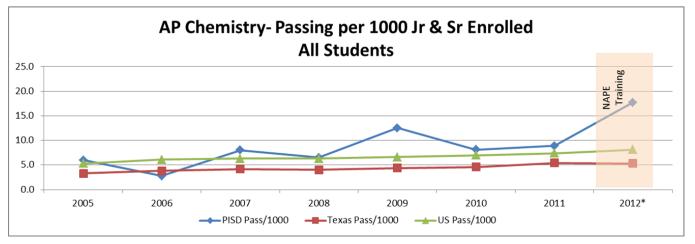




#### NAPE Teacher Training in Plano ISD-







Placement of chemistry students into advanced chemistry courses has been a serious issue in Plano. Plano is NOT representative of either Texas nor the US, and the number of advanced chemistry students should have been much higher in earlier years. After NAPE training the number of students enrolled and passing in AP chemistry is more realistic.

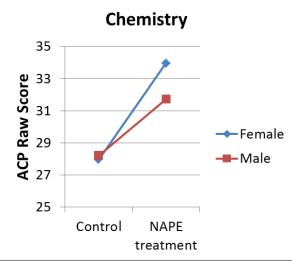


#### NAPE Teacher Training in Dallas ISD

In this analysis, students of NAPE trained teachers were matched by other students at the same schools, having the same range of 8th grade math, science and reading scores, taking the same high school courses, and having similar teachers in terms of value-added effectiveness. ACP is the district-wise local end of course assessment.



#### NAPE Teacher Training in Dallas ISD



Physics

22

20

20

20

Female

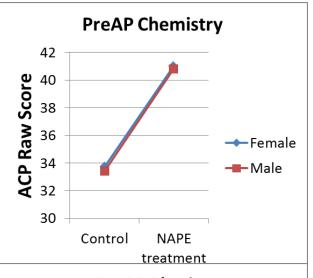
Male

Control NAPE

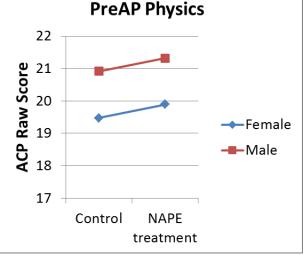
treatment

Significant
differences by
treatment
favoring
NAPE, by
gender and
"treatment by
gender"
favoring girls
of NAPE
trained
teachers

Significant differences by treatment favoring NAPE



Significant difference s by treatment favoring NAPE



NAPE treatment scored higher, difference not significant



Next Steps and Questions



#### Brainstorming Next Steps

- Develop and fund additional research on outcomes.
- Expand the pilot in a systematic way throughout all general academic programs, G&T, CTE, ESL, Special Education, and other areas for middle and high school teachers.
- Partner for identifying funding of strategy.
- Expand the program through elementary schools and for counselors.
- Develop and pilot a plan for certification of trainers and licensing of the program for long term, low cost sustainability.



"I am only one, but still I am one. I cannot do everything, but still I can do something; and because I cannot do everything, I will not refuse to do something I can do."

#### -Edward Everett Hale

