

HRD Programs to Broaden Participation in the STEM Workforce

NSF Center Program Managers Forum

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Strategies to Broaden Participation in STEM

Enhancement of:

- Institutional Education Capacity
- Institutional Research Capacity

HRD Programs

- Historically Black Colleges & Universities Undergraduate Program (**HBCU-UP**)
- Louis Stokes Alliances for Minority Participation (**LSAMP**)
- Alliances for Graduate Education & the Professoriate (**AGEP**)
- Centers of Research Excellence in Science & Technology (**CREST**)

AWARDS

- Large-Scale Implementation
- Managed Thru Cooperative Agreements
- Five-year Duration
- \$2.5 - \$5 million
- PI – Chief Academic Officer

LSAMP

Objective:

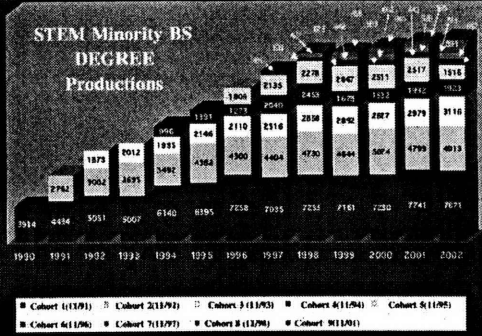
Increase the number and quality of underrepresented minority students that graduate with a BS degree in STEM.

LSAMP Strategies

- Summer Bridge Programs
- Research Experience
- Mentoring
- Drop-In Centers
- Caring Staff
- Alliance Structure

Westat Report. 2000 (NSF 01-31)

The Louis Stokes Alliances for Minority Participation Program



LSAMP

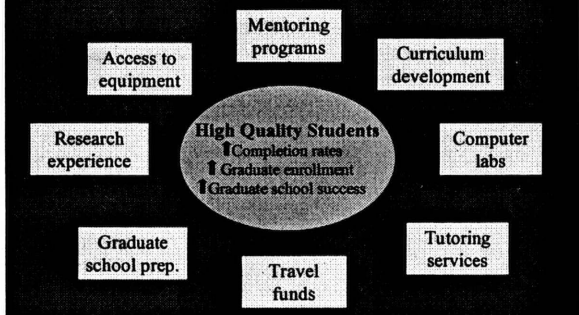
- 30 Alliances with 420 Majority & Minority institutions
- Graduated 21,704 students with STEM BS degrees in 2001
- Currently enrolls 201,615 undergraduate students in STEM.



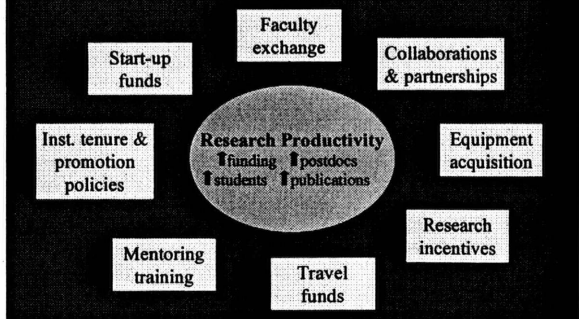
LSAMP Lead Institutions

U.C.- Irvine	Cal State Northridge
Colorado State	Clark Atlanta
Drexel U.	U. Houston
Chicago State	Purdue U
Southern U A&M	New Mexico State
U Mass – Amherst	Stony Brook
Texas A&M	Howard U
Arizona State	U Md-Baltimore Co
U. Texas El Paso	U. South Carolina
North Carolina A&T	Jackson State U

HBCU-UP STEM Program Quality



HBCU-UP Faculty Strengthening



HBCU-Undergraduate Program

31 HBCU-UP grantee institutions

~ 2,000 STEM faculty:

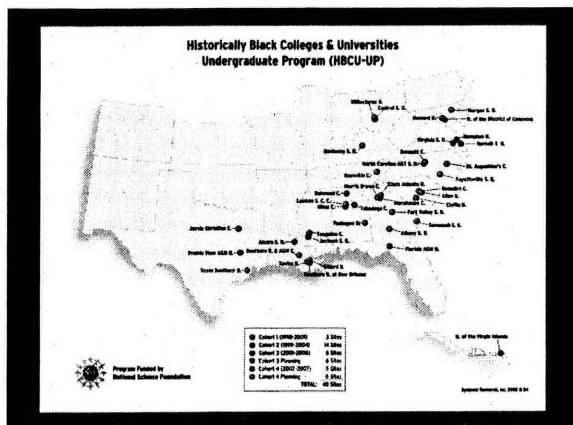
- 50% Black
- 25% female
- Expertise in all STEM fields & increasing research productivity

~ 20,000 STEM undergraduate enrollment:

- 94% Black student enrollment

~ 2,000 STEM graduates annually:

- 25% with research experience



Alliances for Graduate Education and the Professoriate (AGEP)

Objective:

Increase the number of minority students pursuing advanced study, obtaining doctoral degrees, and entering the professoriate in STEM fields.

**Centers of Research Excellence in
Science & Technology (CREST)**

Enhance Research Capabilities at Minority
Serving Institutions

- Faculty Research
- Links with centers of research
- Faculty hires / Visiting Faculty
- Graduate Student Research
- Equipment

Current CREST Awardees

North Carolina A&T State

Tennessee State U. CUNY

Texas A&M Kingsville Howard U.

Cal State L.A. Florida International

Norfolk State U. Tuskegee U.

Jackson State U. U. Puerto Rico

Potential Interactions....

- Partnerships Between Institutions
- Faculty Exchange
- Visiting Faculty
- Faculty / Student Internships
- Collaborative Research
- Research Assistantships
- Post Docs
- Graduate Student Recruitment
- Sharing Effective Retention Practices

Program Managers

LSAMP – A. James Hicks
HBCU-UP – Victor A. Santiago
AGEP – Roosevelt Johnson
CREST – Victor A. Santiago
