Beyond the Next Level ... 
The Road to Nobel
Peers, Mentors, and Messaging: Broadening Participation in STEM

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NOBEL LAUREATES 1901 - 2015

28.5% 

2%
Foundations for Mentoring “Next Gen” STEM Leaders

- STEM Identity
- Sense of Community
- Strength-Based Approaches
- Institutional Culture Shift
STEM Identity

Performance
Competence
Recognition
INCLUSIVE EXCELLENCE: Simultaneously embraces the diversity of students and promotes academic excellence for all students.

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Sense of Community

Membership
Influence
Integration & Fulfillment of Needs
Shared Emotional Connection

McMillan & Chavis, 1986
Jean-Paul Badjo
UMES, Civil Eng.

Kavita Krishnaswamy
UMBC, LSAMP-BD, Computer Science

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Strength-Based Approaches

Academic and Social Integration
Knowledge and Skill Development
Support and Motivation
Monitoring and Advising

Bowman, 2006; Maton, et. al, 2012
The road to “Nobel” starts early

- **High School faculty training:** Research Opportunities, e.g., MSRI, NASA
- **Multi-tiered Mentoring:** Teachers meet mentors, who “grand-mentor” students
- **High School – University Collaborations:** Project Lead the Way – Training for HS teachers at universities, college credit for HS students in “engineering pathway” programs.

**Invoke & admonish students to be the next STEM laureates.**

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Institutional Culture Shift

1. Financial Scholarship
2. Recruitment Weekend
3. Summer Bridge
4. Study Groups
5. Program Values
6. Program Community
7. Staff Advising/Counseling
8. Summer/Ac. Year Research
9. Faculty Involvement
10. Administrative Involvement
11. Community Service
12. External Mentors
13. Family Involvement

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