Advancing What Works in STEM Education

The goal:

Every undergraduate experiences learning science and mathematics as discovery and empowerment!

PKAL Workshop April 2012
Do we have excellent undergraduate science and math education in place?

Not exactly!

We have:

- Excellent examples of timely curriculum, engaged pedagogy, and broadening participation.
- Models for effective dissemination of what works.
- Varied depth of evidence for what works by field.

and

- Large numbers of faculty who are unaware of new approaches or resistant to using them
- Institutional barriers to change.
Do we have excellent undergraduate science and math education in place?

We DON’T have:

• Discipline-wide frameworks for learning goals,
• Widely accepted measures of learning across the disciplines,
• Well established strategies for promoting change within the disciplines or in individual colleges and universities,
• Realistic cost analyses based on student success.
What would a commitment to student success in STEM look like at the institutional level?

- Robust student support services
- Clear learning goals
- Effective pedagogy
- Credible assessments of learning
- Faculty incentives aligned for student success.