

# Panel Presentation

National Academy of Engineers

Committee on Educator Capacity Building in  
PreK-12 Engineering Education

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WHEELOCK  
COLLEGE

# My Students

- Commitment
- Socio-economic background
- Science and engineering background
- Attitudes towards science and engineering

# Needs

- Inquiry and engineering design
- Content
- PCK
- Curriculum
- Integration

# Challenges

- Intellectual and knowledge demands
- Realities of the field
- Integration
- Curriculum
- Professional development

# My Work: Three Components

## I. Introduction

- Inquiry
- Design
- Naïve conceptions
- Progressions

# My Work (cont.)

## II. Instructional Strategies in Context

- Questioning
- Literacy
- Assessment
- Connections
- Compromise

# My Work (cont.)

## III. The Unit

- Unit design
- Lesson planning
- Implementation and reflection
- Assessment and analysis

# Final Thoughts

- Integration
- High quality curriculum
- Classroom models
- High school and higher education