

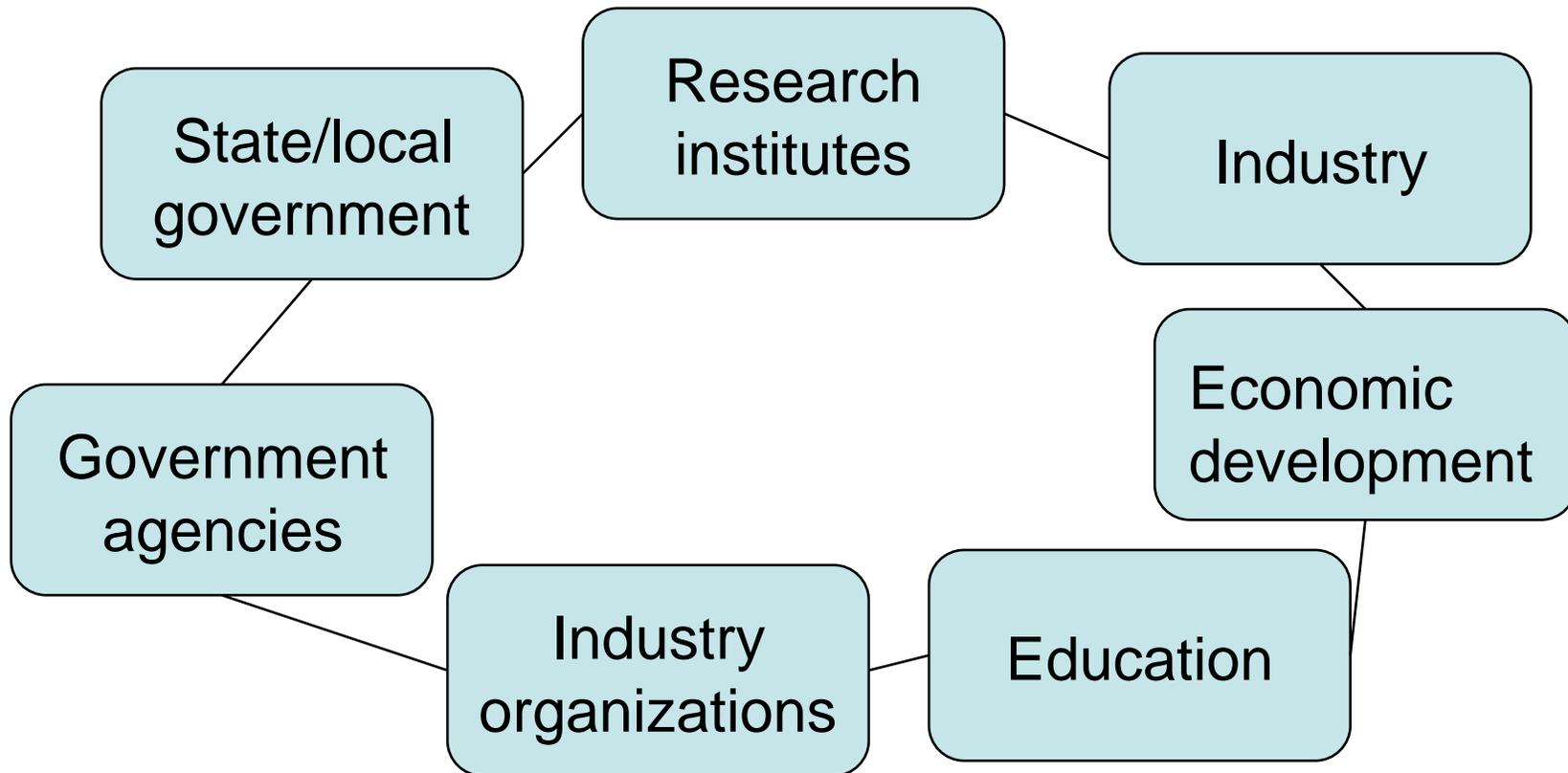
# National Symposium of 21st Century Community Colleges

## Strengthening Workforce Development in India for the Global Economy



A case study of Montgomery College  
Lori Kelman, MBA, Ph.D.  
March 15, 2011

## Building a workforce by building bridges



## Partnerships

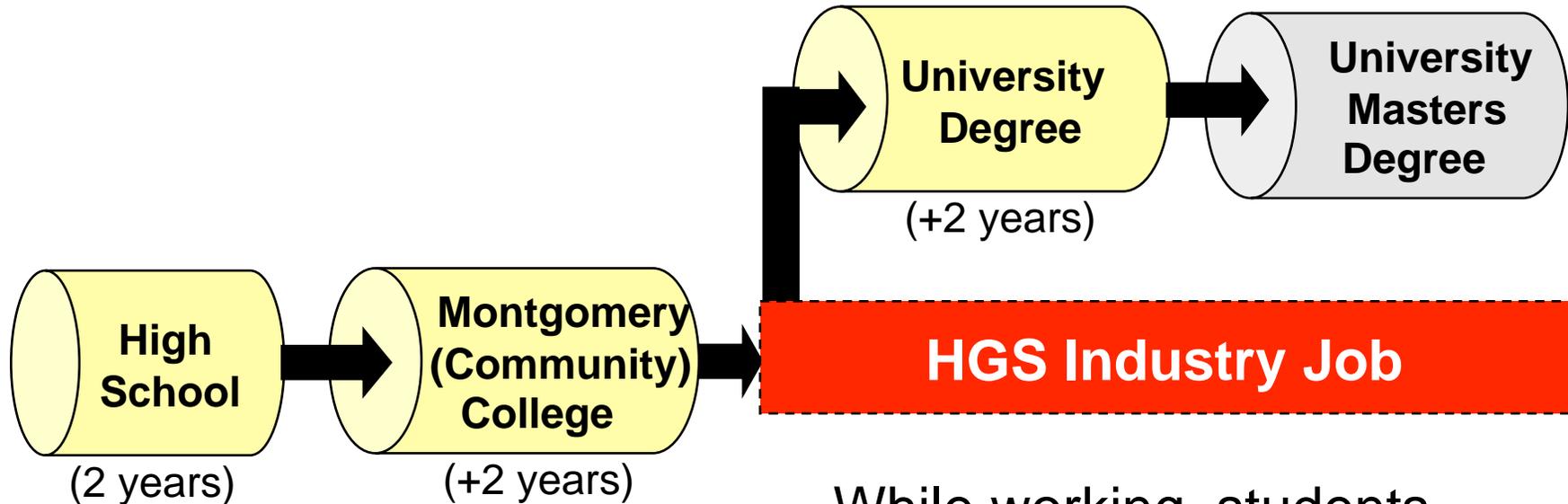
- Education
- Industry
- Government
- Economic development
- Industry organizations



## Industry partners

- Define skill set needed
- Develop internship opportunities
- Ask for program support
  - Equipment
  - Reagents
  - Consumables
  - People
  - Scholarships

## Education Feeder System: 2 + 2 + 2



While working, students continue their education (and their company pays for it!)

## Why is the Program in Biotechnology a “case study”?

- Open admissions policy
- Diverse students
  - High School students and graduates
  - 4-year degree holders
  - Masters degree holders
  - Career changers



## Mission of the Program in Biotechnology

- Two purposes
  - Train for the workforce
  - Prepare for transfer to a university
- Three options
  - AAS degree in Biotechnology
  - Certificate in Biotechnology
  - Certificate in Biomanufacturing



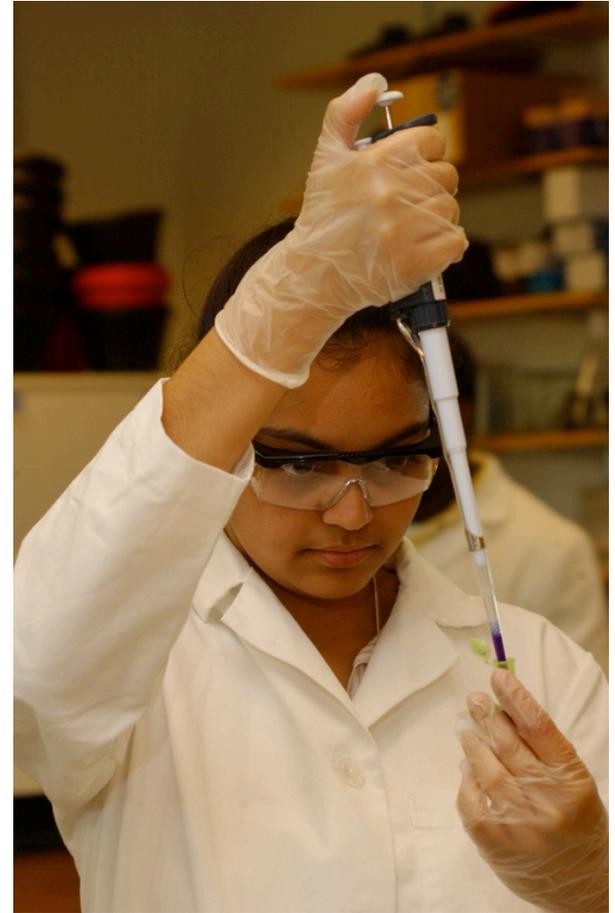
## Curriculum

- Developed with input from industry
- Includes theoretical knowledge, of course
- *Also* includes skills specific to our partner's needs
- Entry-level bench skills
  - Lab math
  - Solution making
  - Liquid handling/transfer
  - Aseptic technique
- “Soft skills”
  - Teamwork
  - Communication
  - Ethics
  - Professional behavior



## Hands-on training is our specialty

- Explanation
- Demonstration
- Allow students to practice skill
- Repetition – do it several times



## We assume no previous knowledge

- We explain virtually everything about performing a method or procedure
- We demonstrate everything
- Students then DO everything



## Ability to work independently

- Follow a protocol or SOP (Standard Operating Procedure) from start to finish
- Organize time efficiently
- Prepare reagents properly
- Organize work space
- Document their work
- Present their work



## Ability to work as a part of a team



Students seats are switched

Reagents are sometimes shared

Rewards/penalties given to groups

- One glove in the non-lab trash results in a point deduction for the whole class

We observe group dynamics

- Does one person “hold back” and let others do the work?
- Does one person “dominate” and take over?

## A “win-win” situation

- Employers need employees
- Students need education
- Students need jobs
- Colleges need students



## The personal touch

- We assess each student's skills
- We give honest assessments
- We “make introductions” (NOT job-placement)
- NO ONE is guaranteed a job



**Dhanyavad!**



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