Institute for Higher Education Leadership & Policy

Career Technical Education and the College Completion Agenda

Nancy Shulock
IHELP
Sacramento State University

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Key Topics

- CTE in the national discourse - some disconnects
- Findings from our CA research - CTE not realizing its potential
- Promising policy directions from across the country
- Implications for state legislators

What is Career Technical Education (CTE)?

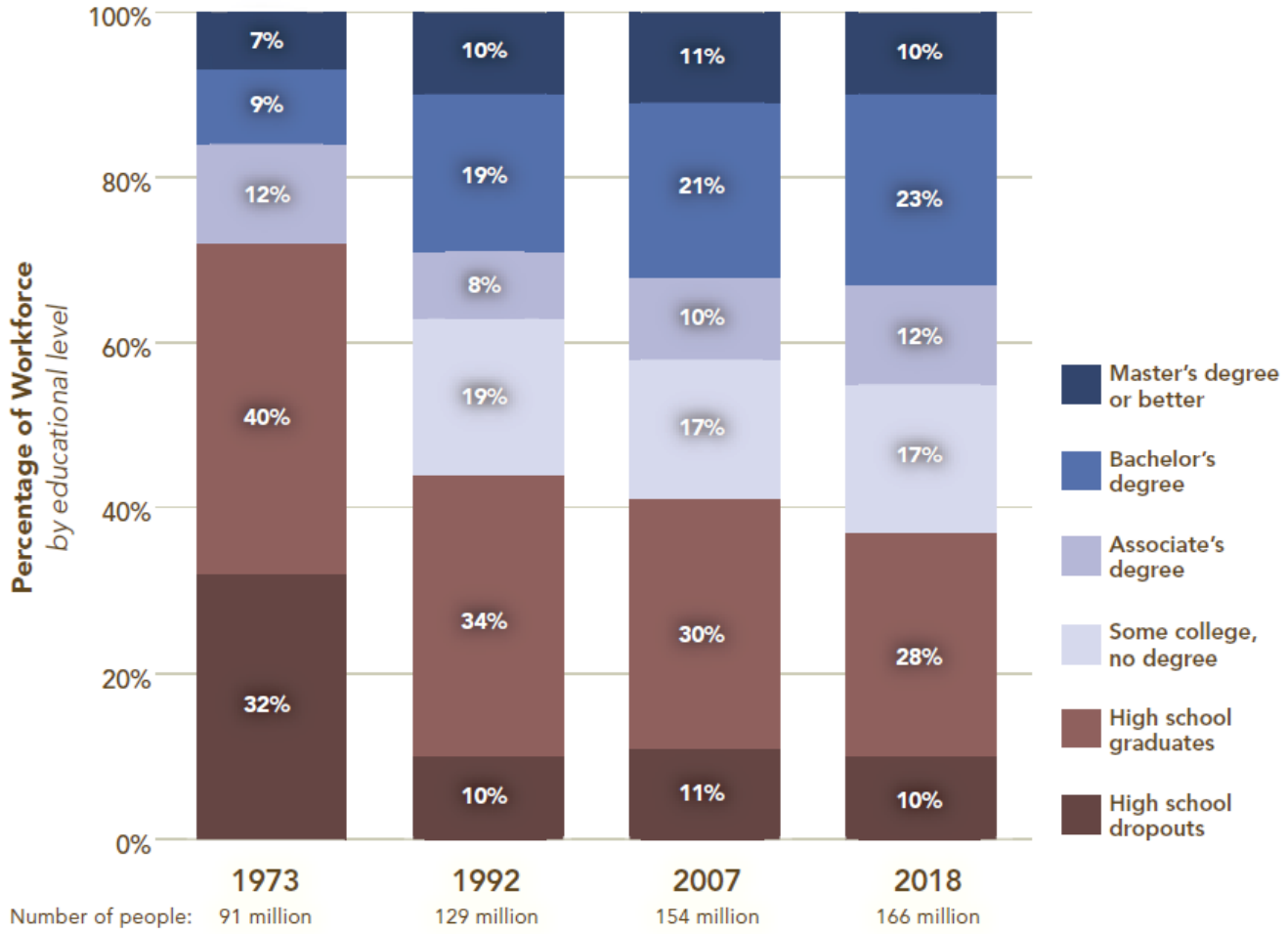
- Formerly “vocational education”
  - CTE intended to be more rigorous/academic
- One of three core community college missions
  - Developmental , “academic” transfer, CTE
- Federal role to support states via Carl Perkins Act
  - Divided between K-12 and community colleges
  - Support enhancements (not core programs) including curriculum development, support services, partnerships, leadership
  - Formula allocations and competitive grants
- Reauthorization goals: strengthen accountability for outcomes and program of study pathways

Middle Skills Jobs - a Vital Part of Economy

FIGURE 2

Between 1973 and 2018, our projections show that jobs available for workers with postsecondary education are projected to increase from 28 percent to 63 percent of all occupations.

Source: Authors' analysis of March CPS data, various years; Center on Education and the Workforce forecast of educational demand to 2018



Source: Georgetown Center on Education and the Workforce

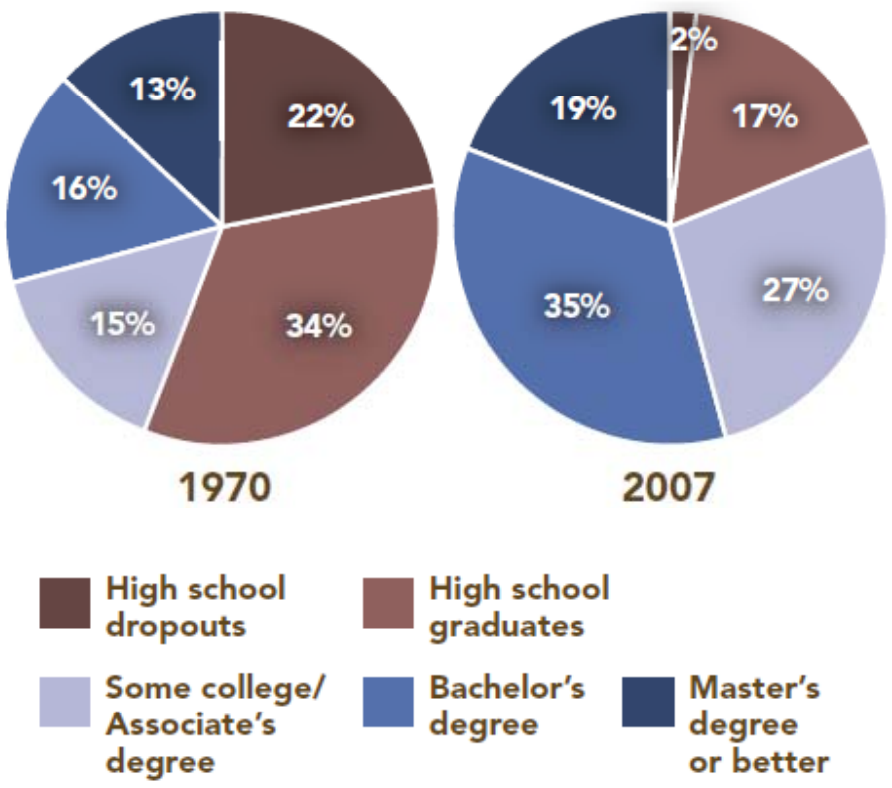
Middle Skills Jobs Can Yield High Income

FIGURE 5

Increasingly, the upper class is composed of workers with postsecondary education and training.

In 1970, only 44% of the upper class had postsecondary education. Today, 81% have postsecondary education.

Source: Authors' analysis of March CPS data, various years; Center on Education and the Workforce forecast of educational demand to 2018



Source: Georgetown Center on Education and the Workforce

Value of Certificates and Associate Degrees in Career-oriented Fields

- There will be plentiful job openings
- In the right occupations, credentials can pay well
- Market value of associate degrees in occupational fields generally greater than other associate degrees
- Transferability is important issue but CTE success does not depend on transfer

Some Unfortunate Misconceptions about Career Technical Education (CTE)

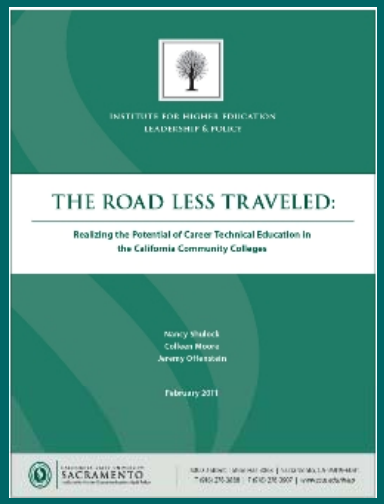
1. "College for all" means a four-year degree
2. CTE is primarily for
   - Working adults to upgrade skills
   - Younger adults who aren't suited for college
3. CTE tracks students into "dead end" or "low end" jobs

Attitudes about CTE Lead to Questionable Assumptions for State Policy

1. State general funds need not cover the costs of CTE programs as they do for “academic” programs
2. CTE is a local mission and regional labor markets vary; hence programs should be developed locally
3. Policies designed for “academic transfer” mission are generally suitable for CTE

Consequences of Misconceptions and Questionable State Policy Approaches

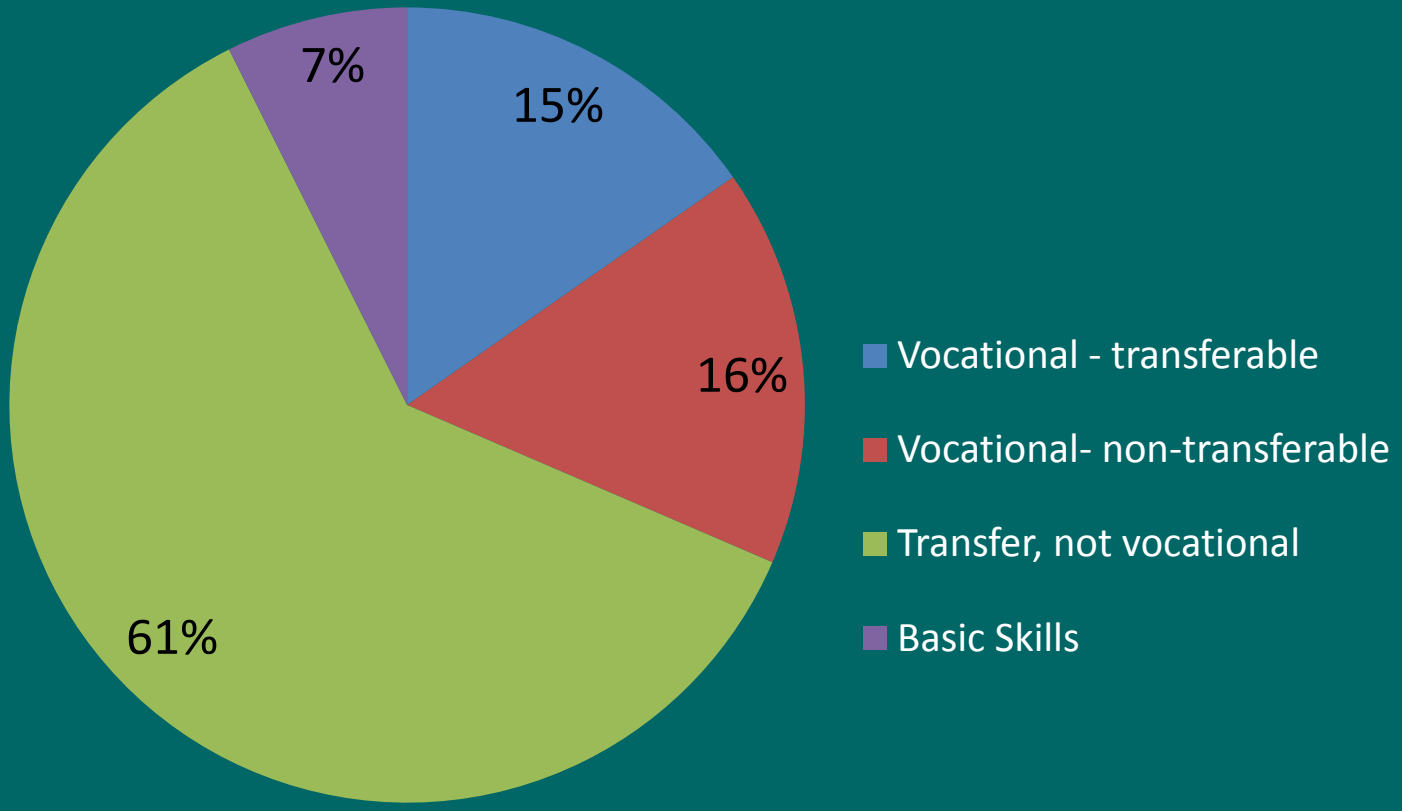
- Failure to help students learn about and get on career pathways
- Foreclosure of successful pathways and inadvertent increase in college failure rates
- Inequity across colleges from dependence on grant writers and external funders' priorities
- Costly inefficiencies from lack of vitality, duplication, and low completion
- Lost economic opportunity for students and communities



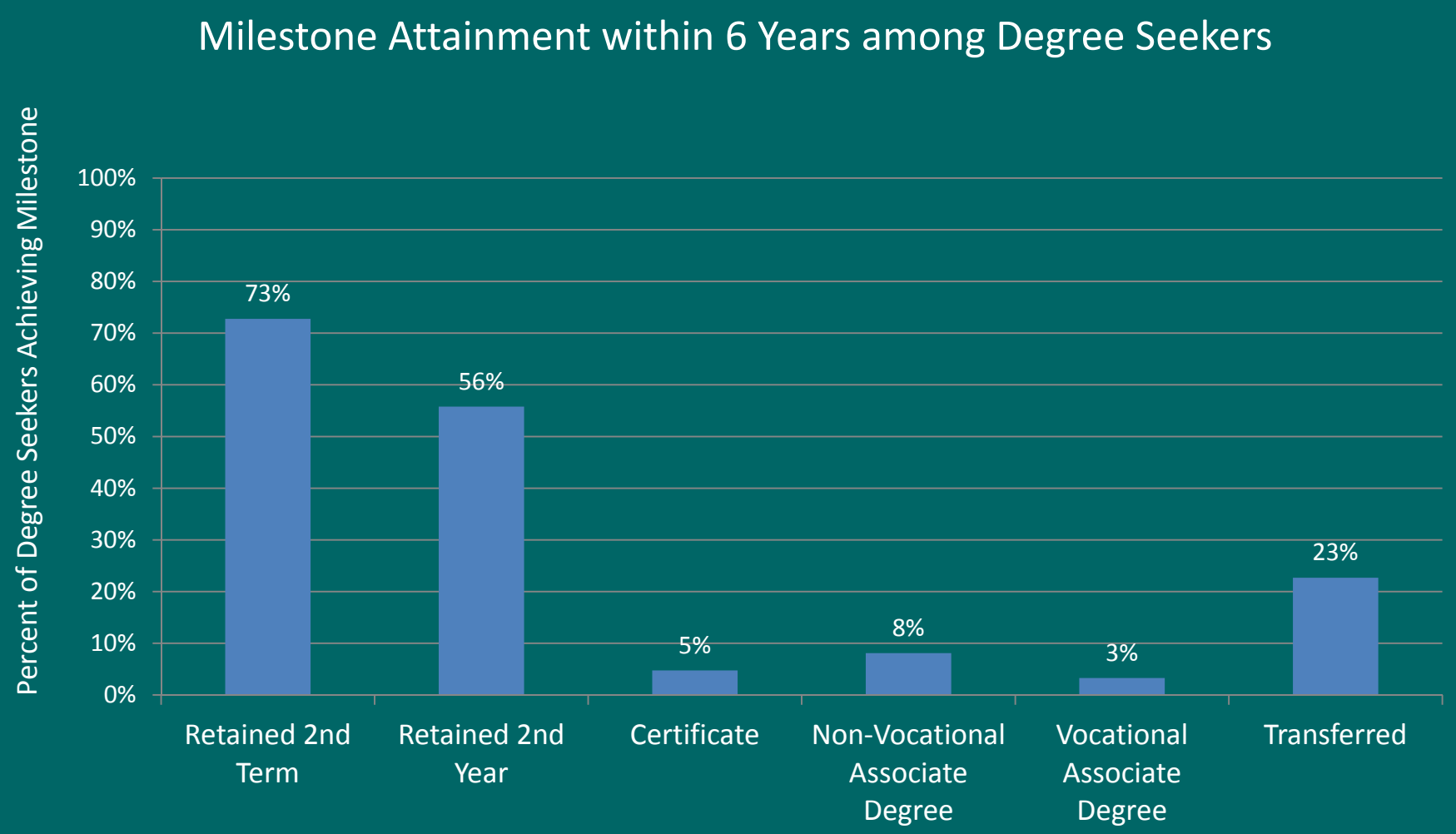
Findings – from Exploratory Research in Four Fields

- Good student progress not translating into certificates and degrees
  - 30+ credits; math but no credential
- Pathways don't often lead to *technical* credentials
- Little evidence of sequential progression in field
- Credentials reportedly not valued

One Third of Course Enrollments are Vocational



Few Students Earn Vocational Credentials



Current Research Agenda:
Strengthening CTE through Policy Reform

1. Structure and funding for CTE
2. Inventory and analysis of programs offered
3. Leading states – what can California learn?
4. Analysis of policy environment – how can state policies better support the CTE mission?

the James Irvine foundation
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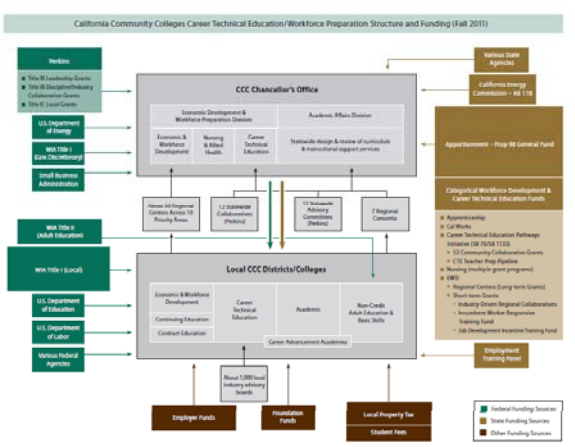

Findings: Structure and Finance

1. Complex and siloed structure marginalizes CTE and hinders program vitality
2. Reliance on competitive grants distorts resource allocation
3. Lack of system office capacity for strategic leadership leaves CTE too decentralized and inefficient
4. Accountability for outcomes is inadequate to inform policymakers and educators

Findings: Inventory of Programs

1. Far too many programs offered
   - average per college: 113 programs in 25 fields
   - enrollments & completions concentrated in a few fields
2. Many short-term certificates of questionable value
   - 2/3 of programs are certificates of less than 1 year
3. Variability within similar programs devalues the credentials

Seven Percent of Fields Enroll **Half** of all Students (FTE)

Field	Average Annual FTES, 2007-08 to 2009-10	Percentage of Systemwide FTES (CTE courses only)	Cumulative Percentage of CTE FTES
Administration of Justice	29,456	8%	8%
Nursing	26,575	8%	16%
Child Development/ Early Care and Education	22,909	7%	23%
Accounting	19,372	6%	29%
Fire Technology	17,764	5%	34%
Office Technology/ Office Computer Applications	13,328	4%	38%
Information Technology, General	11,541	3%	41%
Nutrition, Foods, and Culinary Arts	11,445	3%	44%
Cosmetology and Barbering	10,493	3%	47%
Automotive Technology	9,610	3%	50%

Six Percent of Fields Produce **Over Half** of all Completions

Field	Total Completions 2007-08 to 2009-10	Percentage of Total 2007-08 to 2009-10	Cumulative Percentage
Nursing	25,545	13%	13%
Child Development/ Early Care and Education	20,471	10%	23%
Administration of Justice	18,538	9%	32%
Fire Technology	8,921	5%	37%
Business Administration	8,801	4%	41%
Accounting	7,802	4%	45%
Automotive Technology	6,199	3%	48%
Business Management	5,229	3%	52%

Example of Variation across Programs

Associate Degree in Engineering Technology

Merced College	San Joaquin Delta College	Modesto Junior College
30 major credits, as follows: • General Chemistry (5) • Physics (4) • Engineering Materials (3) • FORTRAN Programming (3) • Elementary Mechanics (3) • Direct and Alternating Current Circuits (5) • Descriptive Geometry (3) • Calculus I (4)	18 major credits, selected from (all 3 credits): • Drafting (Engineering, Computer-aided, Civil, Machine) • Materials & Measurement • 3-dimensional Modeling • Machine Design •Mech. & Elec. Systems • Industrial Control Systems • Applied Surveying • Technical Statistics • Applied Statistics	31 major credits, as follows: • General Chemistry (5) • General Physics OR Mech. Heats & Waves (5) • Intro to Engineering & Architecture (1) • Engineering Graphics (4) • Elementary Statistics (5) • 6 credits from General Computer Lit (3), Machine Tool Tech (4), Arc & Gas Welding (3) • 5 elective credits from a list (mostly Drafting or Calculus)

Findings: Policy Barriers and Useful Policy Approaches

Several states have made notable attempts at reforming their system of CTE delivery, including:

- Arkansas
- Florida
- Kentucky
- North Carolina
- Ohio
- Oklahoma
- Oregon
- Tennessee
- Washington
- Wisconsin

Some Key Policy Issues

- Focusing resources on CTE programs with workplace value
- Providing adequate and stable funding
- Creating career pathways
- Establishing effective accountability

Focus Resources on Programs with Workplace Value

- Applied Degrees (associate and baccalaureate)
- Nimble program review/approval processes
- State/regional-level provision of local labor market information
- Statewide skill and competency standards for programs aligned to industry needs
- Statewide curriculum frameworks
- Curriculum sharing across colleges
- Required skill assessments for completion

Provide Adequate and Stable Funding

- Differential funding to accommodate high costs
- Incentives to offer high-need programs
- Performance funding to reward certificate and degree completion
- Differential tuition - by program cost
- Scholarships and financial aid better targeted to adult learners, alternative schedules, and high-need CTE programs

Create Pathways for Students:
High School/Adults – College – Workplace

- Career exploration in high school
- College credit in high school – focused on pathways
- Program of study emphasis (not just courses)
- Active employer engagement – workplace learning
- Partnerships with workforce entities to help students move from short-term training to career pathways
- Full career pathway model

Effective Accountability for CTE Outcomes

- From inputs/activities to outcomes
  - Certificates and degree completion
  - Licensure
  - Employment
- From volume to rates of success
- Better understanding of student goals
- Better data on return to certificates and methods for tracking valuable short-term certificates
- Link with labor market data – employment rates and earnings

Some Dos and Don’ts for Legislators

- Honor the CTE mission and support it via policy
- Find ways to address high costs/high-need programs
- Create incentives for efficient resource use for programs of value in the workplace
- Encourage statewide standards for program *outcomes*

- Don’t ask only about transfer rates
- Don’t assume that CTE involves deleterious tracking
- Don’t forget high school students
- Don’t consign CTE to the margins

Reform Agenda for Perkins (Obama Administration)

Current Act	Reform Principle	Proposed Reforms
No requirements for states to work with workforce and economic development agencies to identify focus for CTE programs	**ALIGNMENT** between CTE and labor market needs – 21st Century skills and high-growth industry sectors	• Better guidance to states on establishing high-quality programs • Empower states to focus on specific occupations and industry sectors of need
Separate funding for secondary and postsecondary; no clear way for employers and industry to engage in program design	**COLLABORATION** among partners to improve quality of CTE programs	• Establish consortia among secondary and postsecondary institutions • Use private-sector match contributions to strengthen employer engagement

Reform Agenda for Perkins – cont.

Current Act	Reform Principle	Proposed Reforms
States distribute funds by formula without mechanism to reward high performers; accountability measures differ across states	Meaningful **ACCOUNTABILITY** for improving academic outcomes and building skills for employment, based on common definitions and performance metrics	• More autonomy to states to choose and fund high-quality programs in response to labor market needs • Common definitions to strengthen data systems and address equity gaps • Incentives for high performance
No clear mission for state role to create conditions for high-quality programs to thrive; formula funding that supports too many purposes	Emphasis on **INNOVATION** supported by systemic reform of state policies	• Ensure that states have effective policies to support CTE • A competitive CTE innovation and transformation fund – to support local models *and* systemic reforms at state level

IHELP Contact Information

Reports and presentations: www.csus.edu/ihelp

(916) 278-3888; ihelp@csus.edu

Reports on community college CTE:

The Road Less Traveled, February 2011

Sense of Direction, August 2011

Career Opportunities Series:

- *Part I: Structure and Funding ,* January *2012*
- *Part II: Program Inventory*, February 2012
- *Policy Brief,* March 2012
- *Part III: Lessons from Other States (forthcoming)*
- *Part IV: Policy Recommendations for California (forthcoming)*