Institute for Higher Education Leadership & Policy

California Community College Career Technical Education and the Student Success Agenda

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California Community College Association for Occupational Education
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A Quiz

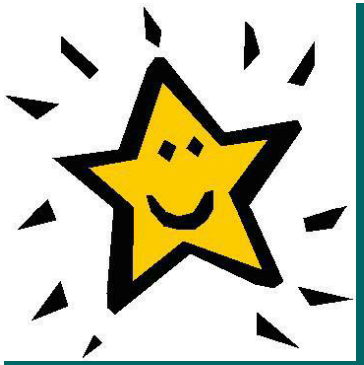
1. What is a college education?

A. Something for snobs
B. A bachelors degree
C. A certificate or associate degree
D. All of the above
E. Only B and C

A Quiz

2. Who can benefit from career-oriented certificates and associate degrees?

A. Unemployed politicians
B. Adults who need retraining to restart or advance their careers?
C. High school graduates who want a job with a family-supporting wage – without or before earning a bachelors degree
D. All of the above



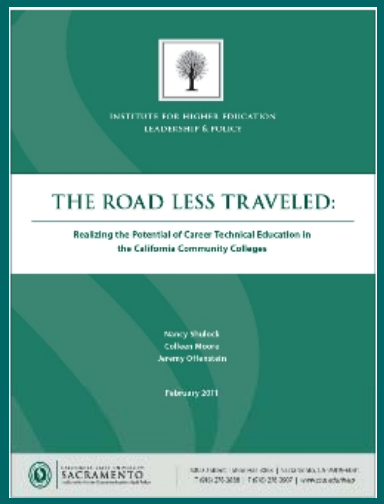
A Quiz

3. A community college student who chooses to pursue a career-oriented program is…

A. Misinformed about better alternatives
B. Destined for a low-end, blue collar job
C. An anti-intellectual
D. All of the above
E. None of the above

Why Why Why?

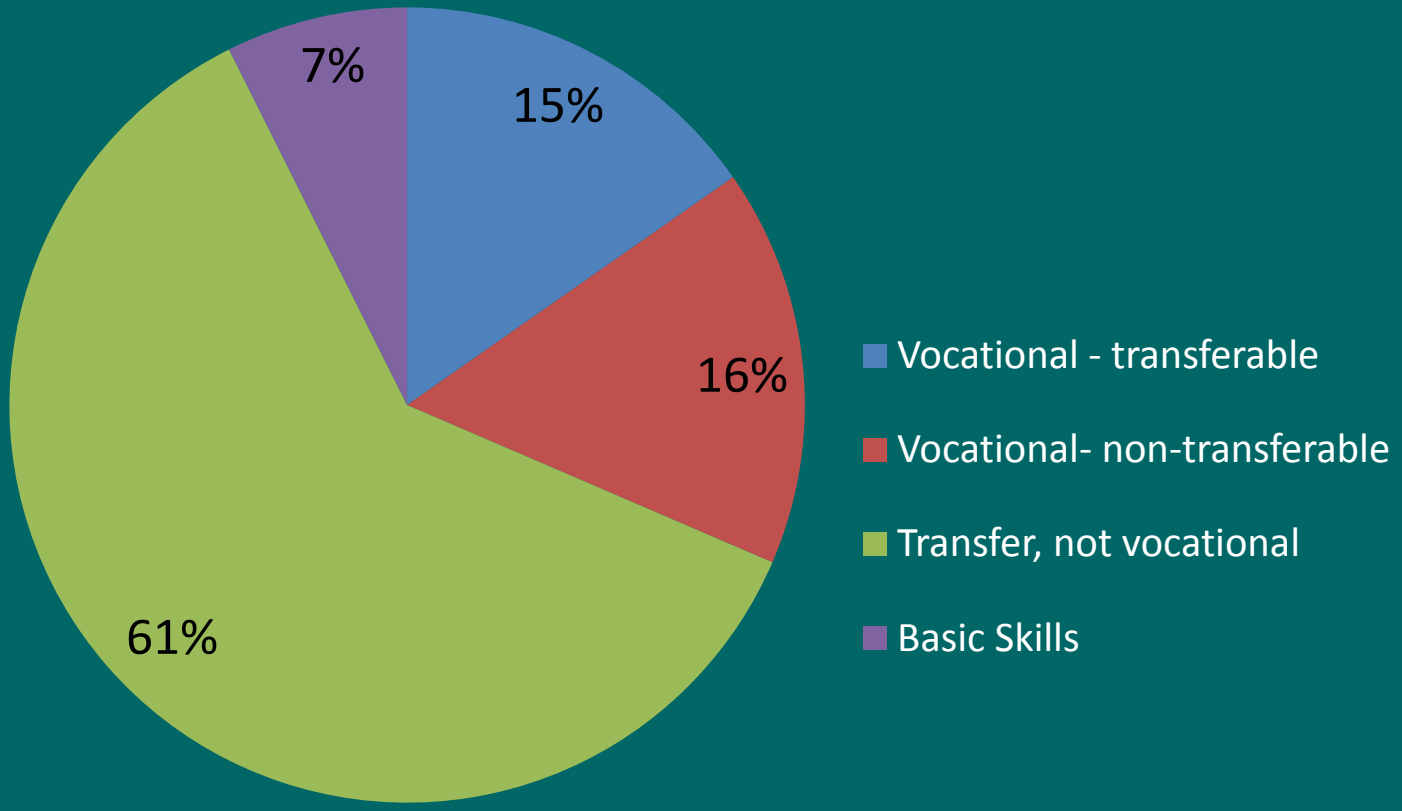
- Why are career programs so dependent on outside $$?
- Why do legislators ask only about the transfer rate?
- Why do we not openly celebrate the CTE jobs focus?
- Why do so few students earn valuable vocational credentials?
- Why do parents tell their kids to get a BA but be sure the major is practical so they can get a job?
- Why did my head spin whenever I asked someone about career programs and workforce development?



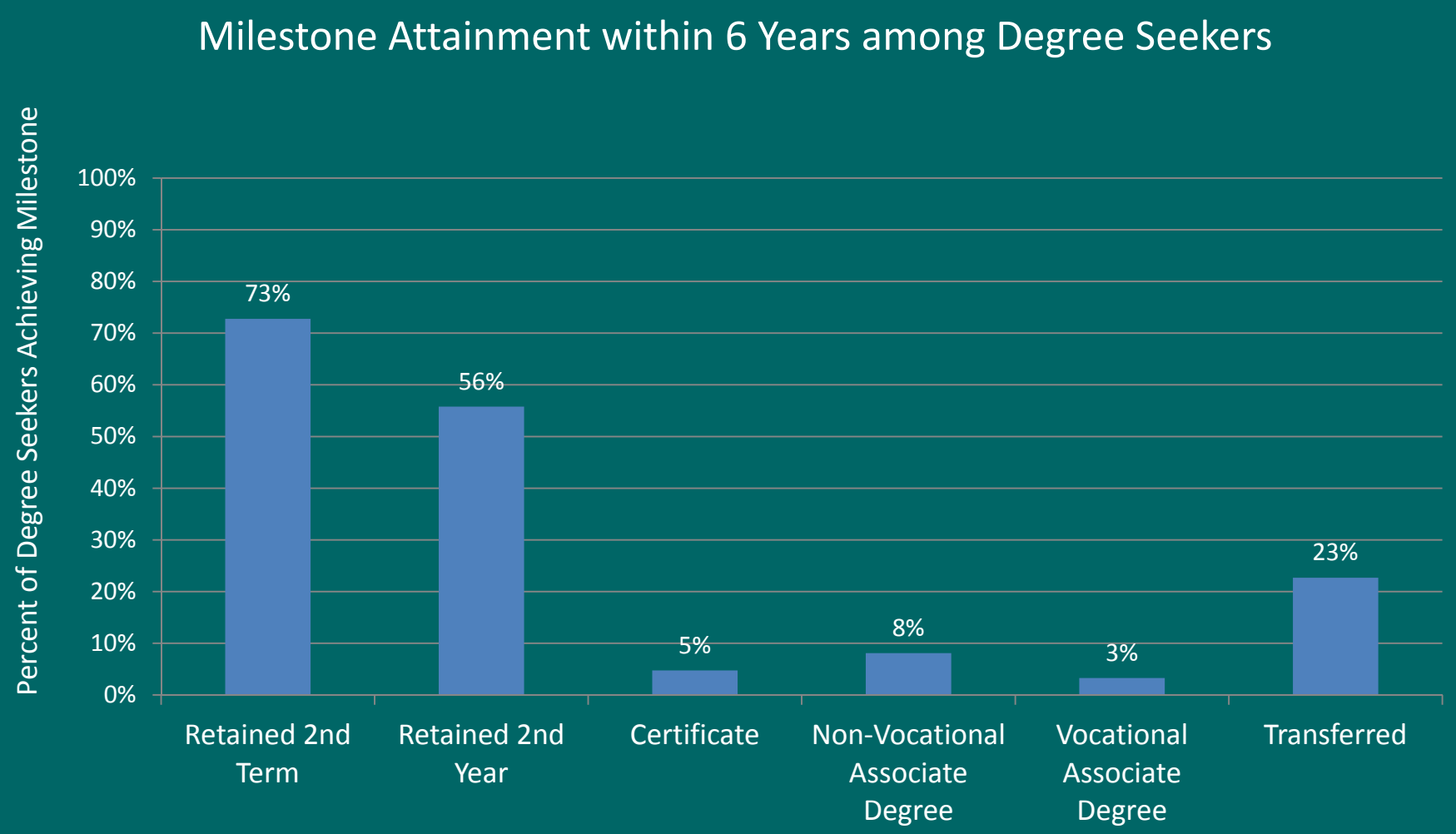
Findings – from Exploratory Research in Four Fields

- 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. Document CCC structure and funding for CTE and economic and workforce development
2. Inventory and analysis of programs offered
3. Leading states – what can we learn?
4. Analysis of CCC policy environment – help or hinder the CTE mission?

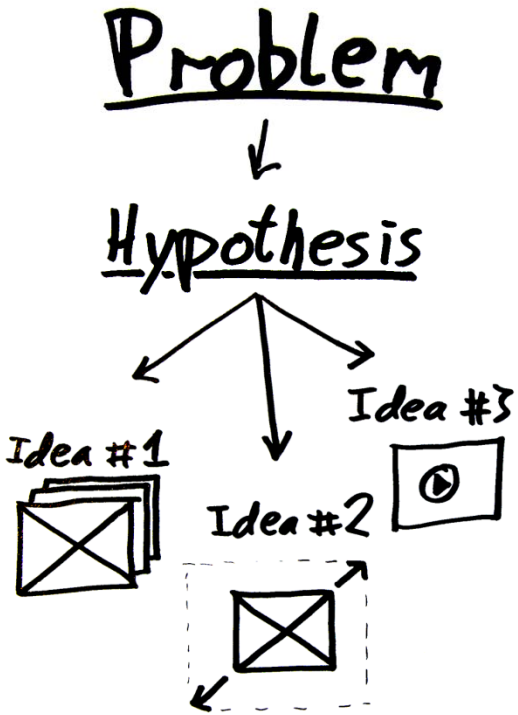
the James Irvine foundation
Expanding Opportunity for the People of California

Why this Matters – Window of Opportunity

- National CC agenda and jobs issue
- Intense focus on the CCC
- Build on SSTF
  - Program of study emphasis
  - Education plans
  - College scorecards
  - Basic skills - alternative approaches
- Legislative interest – but lack of understanding
- EWD sunset
- It matters to California and its students!

Two Related CCC Missions – Common Goal: Strengthen California Workforce

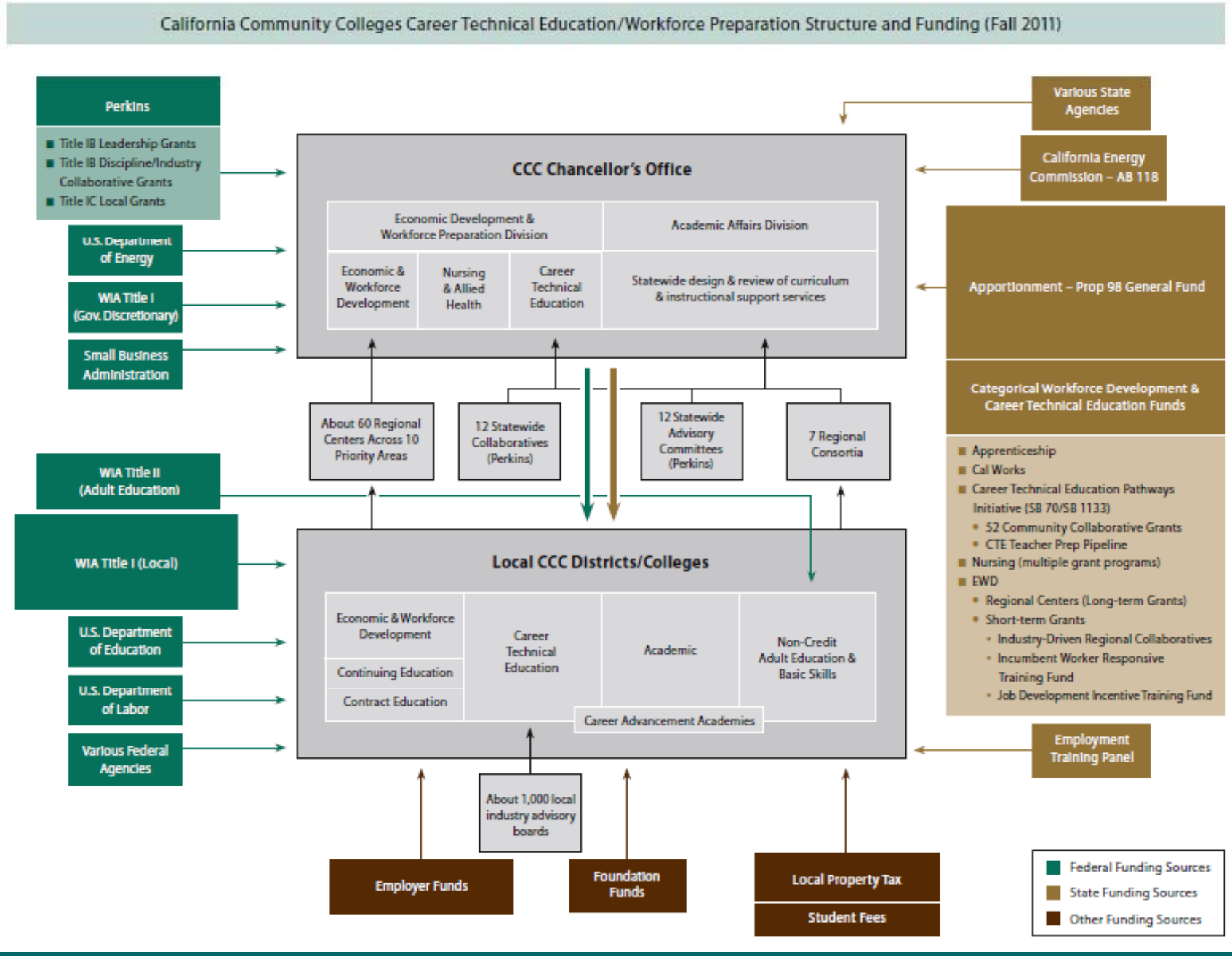
- Career Technical Education (CTE)
  - Serve primarily *students* (college credentials)
  - K-12 articulation
- Economic and Workforce Development (EWD)
  - Serve primarily *employers* (customized training)
  - Work with other state agencies, e.g. Labor & Workforce, WIBs, HHS, Corrections and Rehabilitation
- Scope of our research
  - CTE; EWD as it influences CTE program/curriculum
  - Beyond our scope: entire state workforce system



Hypotheses

1. Policies are geared more toward academic transfer mission – may not be ideal for CTE mission
2. Policies and programs established *specifically* for CTE/workforce development reflect serial legislative priorities – not coherent or efficient today

Findings –
Structure and Finance


California Community Colleges Career Technical Education/Workforce Preparation Structure and Funding (Fall 2011)
Perkins
Title IB Leadership Grants
Title IB Discipline/Industry Collaborative Grants
Title IC Local Grants
U.S. Department of Energy
WIA Title I (Gov. Discretionary)
Small Business Administration
WIA Title II (Adult Education)
WIA Title I (Local)
U.S. Department of Education
U.S. Department of Labor
Various Federal Agencies
CCC Chancellor's Office
Economic Development & Workforce Preparation Division
Academic Affairs Division
Economic & Workforce Development
Nursing & Allied Health
Career Technical Education
Statewide design & review of curriculum & instructional support services
About 60 Regional Centers Across 10 Priority Areas
12 Statewide Collaboratives (Perkins)
12 Statewide Advisory Committees (Perkins)
7 Regional Consortia
Local CCC Districts/Colleges
Economic & Workforce Development
Continuing Education
Contract Education
Career Technical Education
Academic
Non-Credit Adult Education & Basic Skills
Career Advancement Academies
About 1,000 local industry advisory boards
Employer Funds
Foundation Funds
Local Property Tax
Student Fees
Various State Agencies
California Energy Commission – AB 118
Apportionment – Prop 98 General Fund
Categorical Workforce Development & Career Technical Education Funds
Apprenticeship
Cal Works
Career Technical Education Pathways Initiative (SB 70/SB 1133)
52 Community Collaborative Grants
CTE Teacher Prep Pipeline
Nursing (multiple grant programs)
EWD
Regional Centers (Long-term Grants)
Short-term Grants
Industry-Driven Regional Collaboratives
Incumbent Worker Responsive Training Fund
Job Development Incentive Training Fund
Employment Training Panel
Federal Funding Sources
State Funding Sources
Other Funding Sources

Issue 1
Structure is Fragmented and Overly Complex

- EWD - 10 strategic priorities
  - mix of industry and capacity building
- CTE - 12 statewide collaboratives
  - ≠ 12 statewide advisory committees
  - don't map to strategic priorities
  - don't coordinate with local advisory committees
- Statewide advisory committees ≠ 15 industry sectors
  - No systematic linkages to local advisory committees

Issue 2
Silos Marginalize CTE and Hinder Program Vitality

- CTE/EWD separate from Academic Affairs
  - CTE seen as not academic
  - Basic skills for CTE have not been a priority
- CTE separate from EWD
  - Hinders responsiveness to industry needs
- Silos at system and college levels

Issue 3
Reliance on Competitive Grants Distorts Resource Allocation

- General fund allocations don't accommodate higher costs of CTE programs
  - Disincentive for high cost/high need programs
- Huge array of competitive grants
  - Uneven capacity to win grants
  - Money chase can shape the mission
  - Competition rather than regional cooperation

Issue 4
Chancellor's Office Lacks Capacity for Strategic Leadership

- Largely compliance and grant administration
- Strategic leadership lacking to:
  - Promote common vision
  - Leverage and maximize available grant funding
  - Establish skill and competency standards
  - Ensure access to quality labor market data
  - Expedite program approval; minimize program duplication
  - Lead transition from course-based to program-based CTE
  - Develop robust accountability
- Reliance on lead campuses
  - Responsibility exceeds authority
  - Potential conflict of interest

Issue 5
Accountability for Outcomes is Inadequate

- No *program* data
  - Students do not enroll *in programs* (a few exceptions)
  - Course outcomes ≠ program outcomes
- No systematic link to labor market outcomes
- State accountability reporting (ARCC)
  - Annual counts of activities and enrollments
- Ineffective program review and discontinuation policies

Analysis of Program Inventory

Methods

- CCC's inventory of approved programs (associate degrees, certificates of 18+ credits)
- College catalogs for college-approved certificates
- Definitions:
  - Field: 4-digit TOP code level, e.g.,
    - 0514 = Office Technology
    - 1306 = Nutrition, Foods, & Culinary Arts
  - Program: A certificate or degree program at a college
- Only CTE fields (TOP codes) in credit programs

Issue 1
Program Offerings Appear Too Extensive

- About 8,000 certificate programs and 4,500 associate degree programs in 142 fields
- Average per college: 113 programs in 25 fields
- Range of programs at a single college: 28 - 275
- Average per region: 959 programs in 91 fields
- Enrollments and completions highly concentrated in a few fields

Figure 4
Number of Programs Offered is Related to College Size (FTES)

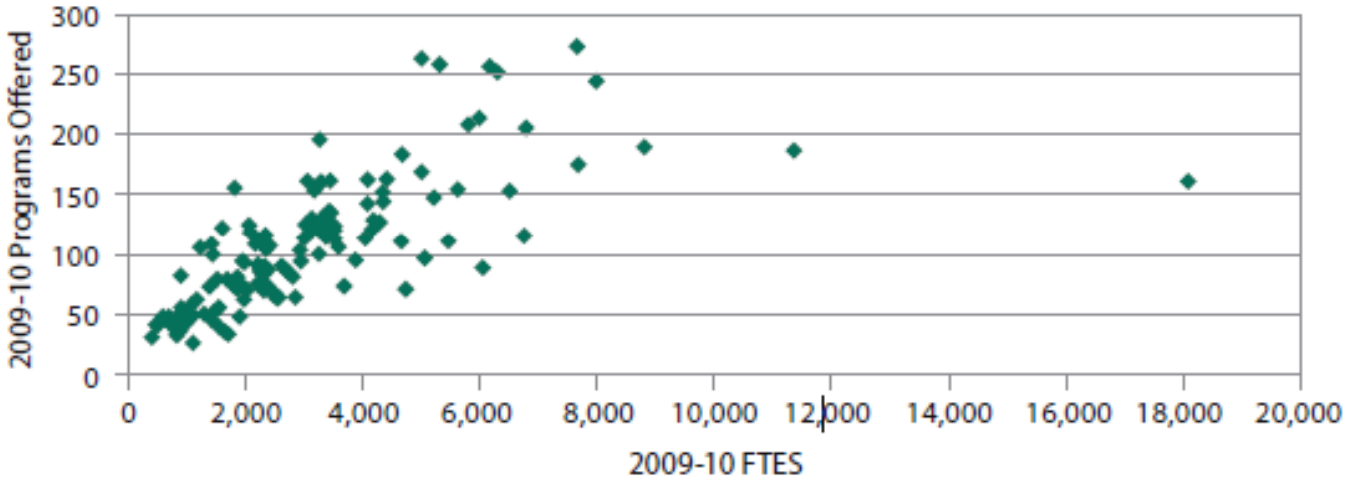
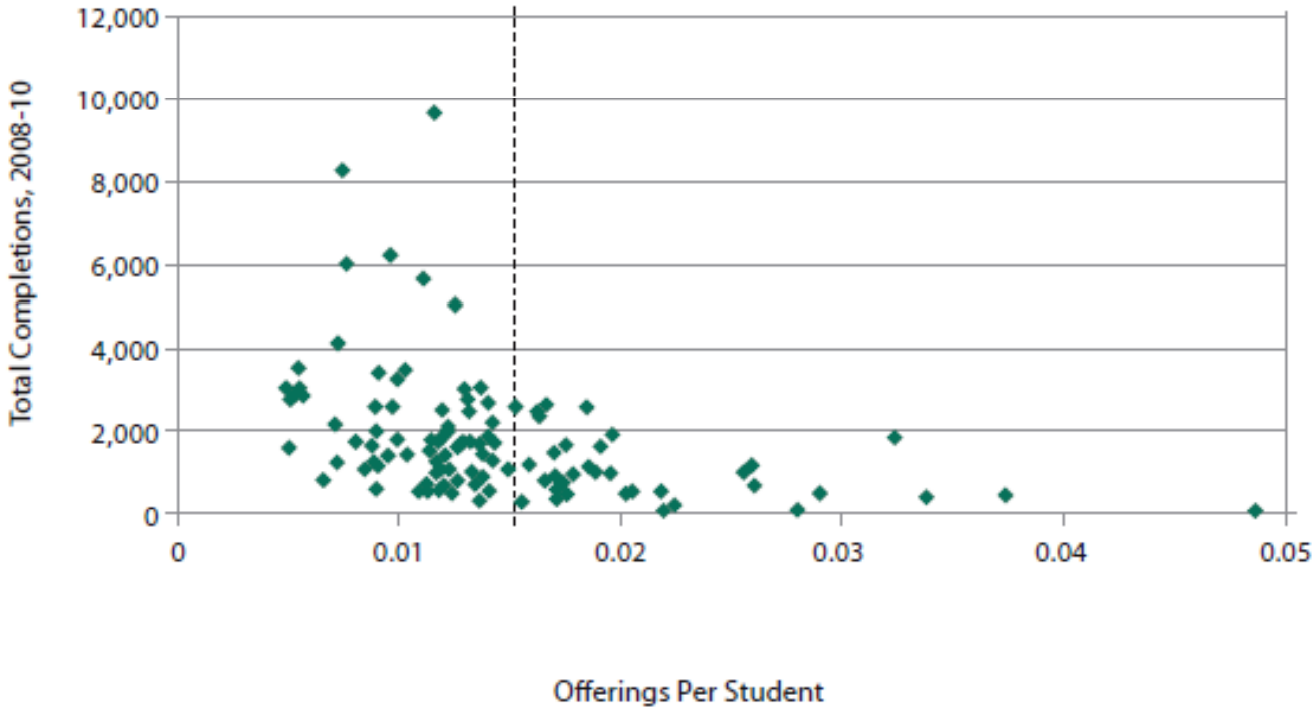


Figure 16
Relationship between Program Offerings Per Student and Completions at Individual Colleges



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

Figure 12
Most and Least Popular CTE Fields as Measured by Student Enrollment (FTES)

Field	Average Annual FTES, 2007-08 to 2009-10	Percentage of Ssystemwide FTES (CTE courses only)*	Cumulative Percentage of CTE FTES
Highest Enrollment			
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

Figure 15
CTE Fields with the Highest Number of Completions (Degrees and Certificates)

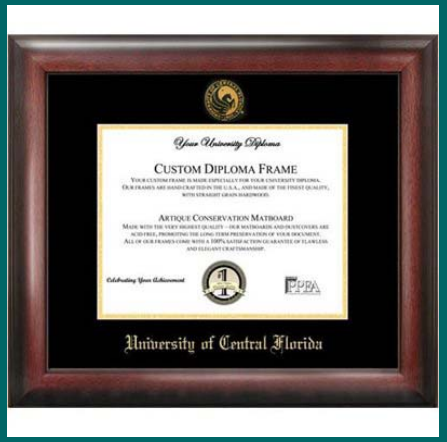
Field	Total Completions 2007-08 to 2009-10	Percentage of Total 2007-08 to 2009-10	Cumulative Percentage
Nursing	25,545	13%	13%
Child Development/ Early Care and Education	20,471	10%	23%
Administration of Justice	18,538	9%	32%
Fire Technology	8,921	5%	37%
Business Administration	8,801	4%	41%
Accounting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

Issue 2
Abundance of Short-term Certificates of Questionable Value

- Research on short-term certificates
  - Limited value as only credential
- Two-thirds of programs < one-year (30 units)
- Reported completions:

Associate Degrees	**40%**
Certificates 30+ credits	**19%**
Certificates < 30 credits	**41%**

- Could serve as building blocks – “stacked”
- Potential to align with industry-recognized



Issue 3
Variability within Similar Programs

- Uncertain meaning of credential
- Devalue the credential for employers
- Confusing to students – what are they preparing for?

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)

Example of Variation across Programs

Certificate in Computer Programming

Laney College	Gavilan College	San Jose City College
47 - 56 credits • Intro. Comp. Sci. (5) • Intro. Programming (5) • C Programming (4) • Intro to Op. Sys. (1) • Op. Sys. Scripting (1) • Web Publishing (1) •Data Comm./Networks (4) OR Web Pub. II (2) • One writing class (3) •Programming w/C++ (4) • Data Struc./Algorithms (4) • Java Programming I (4) • UNIX/LINUX Op. Sys. (4) • 3 electives (e.g., Java, Assembly Language, Info Security, XML Apps.)	21 - 22 credits • C++ Programming I (4) OR C++ Scientific Prog. (3) • C++ Programming II (4) • UNIX/LINUX Op. Sys. (4) *10 credits from among:* • Web Page Authoring I (2) • Assembly Lang. Prog. (4) • Java Programming I (4) • C#.NET Programming (4) • Visual Basic.NET Prog. (4) • Perl Programming/Lab (3) • Web Sites with SQL and PHP (4)	30 credits • Intro. Comp. Info. Sys. (3) • C++ Programming (3) • Visual Basic Prog. (3) • Data Structures (3) • Object-oriented Prog. (3) • Java Programming (3) • Intro to UNIX (3) • 9 credits of CIS department electives

Some Preliminary Implications

- Better organizational integration of CTE
- Better advising about CTE programs – esp. high school
- Program-centric, not course centric approach
  - Enroll in programs
  - Articulate programs, not courses, with K-12
  - Track program outcomes (including labor market)
- More effective program review
- Need for competency standards for programs
- Better attention to high cost/high need

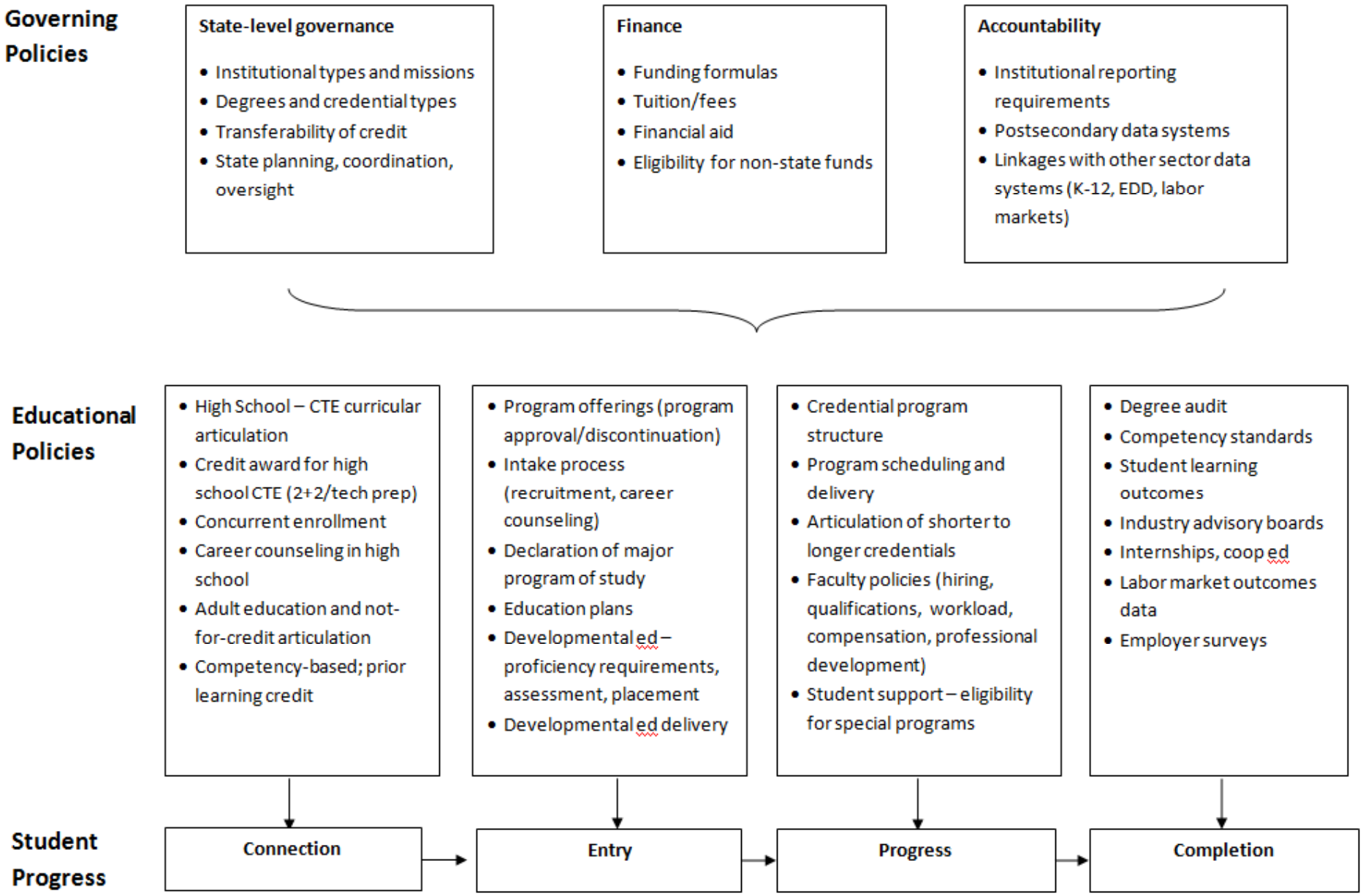
Part III:
Learning from Other States

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

- Arkansas
- Florida
- Kentucky
- Ohio
- Oregon
- Tennessee
- Washington
- Wisconsin

Policy Implications and Ongoing Research Directions

Identifying Policy Barriers and Opportunities: Community College CTE Mission



Examples of Policy Barriers

- *Associate Degree requirement*
  - Math course with prereq. of elementary algebra or equiv. creates disincentives for contextualized math in CTE courses
- *Transfer of credits*
  - Substantive CTE coursework can't transfer if taught as upper division at CSU
  - High school-CCC articulation agreements are course-specific, and don't create pathways
- *Program approval*
  - Too slow for credit CTE (and encourages keeping program on the books)
  - Full process required even if program operates in other colleges

Examples of Policy Barriers - continued

- *Faculty hiring*
  - Full-time faculty obligation
  - Part-time pool processes
  - Minimum degree requirements – problematic in some fields
  - Teaching credential required to teach high school CTE
- *Faculty workload provisions*
  - Semester-based policies don't accommodate some CTE
    - e.g. Academy format - must pay higher contract rates if exceed # days
  - Open labs must be scheduled courses at higher $$
  - Professional development and outreach not compensated

Opportunity to Build on Student Success Task Force

- Importance of entering program of study
  - IHELP: *Sense of Direction* findings – completion twice as high if enter program in first year
  - CCRC*: Get with the Program* – dev ed should be integrated into a program of study (beyond contextualized courses)
- Education plans
  - Emphasize CTE programs – not just GE
- College scorecards
  - Much work needed on CTE metrics
- Basic skills - alternative approaches
  - But what about competencies for certificates?

It Could Happen – Everyone Could Pass the Quiz!

- "College for all" could include *community* colleges and *sub-baccalaureate* credentials
- CTE pathways could be seen as viable for *traditional* college-age students
- Place of CTE in the new economy could be celebrated

- Recommended extra credit:
  - Learn about Washington State's Community and Technical Colleges' 20-year laser focus on jobs

IHELP Contact Information

Institute for Higher Education Leadership & Policy

Reports and presentations: www.csus.edu/ihelp

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

Reports on community college student success:

Rules of the Game, February 2007

Beyond the Open Door, August 2007

Invest in Success, October 2007

It Could Happen, February 2008

Crafting a Student-Centered Transfer Process in CA, August 2009

Steps to Success, October 2009

Divided We Fail, October 2010

The Road Less Traveled, February, 2011

Sense of Direction, August, 2011

Career Opportunities (Parts I and II), January-February 2012