Institute for Higher Education Leadership & Policy

Aligning Policy with the CTE Mission For Better Student Outcomes

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INSTITUTE FOR HIGHER EDUCATION LEADERSHIP & POLICY

IHELP mission: to enhance leadership and policy for California higher education with an emphasis on community colleges because of their importance to providing a diverse and educated workforce.

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 1-4), 2012-13
Workforce Investments, August 2013

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Key Topics

- CTE context – opportunity and challenge
- Policies – the case for better alignment
- Discussion of policy options

CTE in a Transfer-Focused State

Three powerful factors:

1. Historic importance of transfer under CA Master Plan
2. Concerns about equity grounded in unfortunate history of tracking
3. Mental models of “voc ed” lag changes in labor market

Barriers to More Effective CTE

- CTE mission marginalized from academic core
  - Organization (silos)
  - Resource allocation (separate and not equal)
  - Messaging (other states celebrate workforce mission)
- Insufficient focus on CTE *programs* and their outcomes
  - Programs and pathways not well structured for students
  - Too many programs; few credentials awarded
  - CTE enrollment declining as percent of total
- Local variability hinders student success
  - Lack of common skill/competency standards

Huge unrealized opportunity to increase student success and improve CA economy

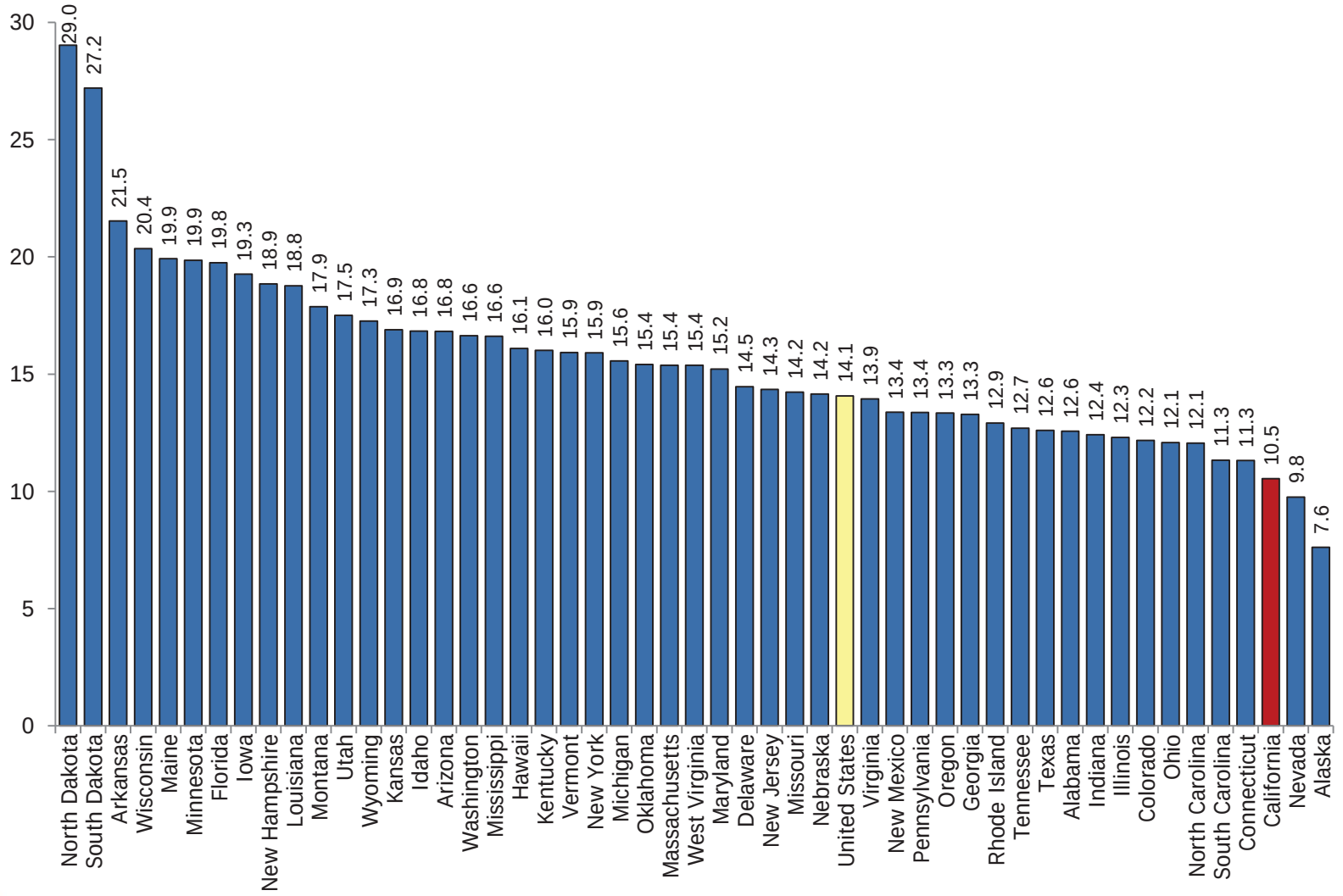
Closing the Education Attainment Gap in California

Additional degrees to reach 60% by 2025	**3,500,000**
Improving High School Graduation Rates to National Best	355,000
College-going rate to National Best	230,000
Improving College Completion of Public & Private 4-year	275,000
Remaining Gap	2,640,000
Improving Completion at Community Colleges to the National Best	2,535,000

*Calculations assume enrollments of first-time students are distributed in a constant manner

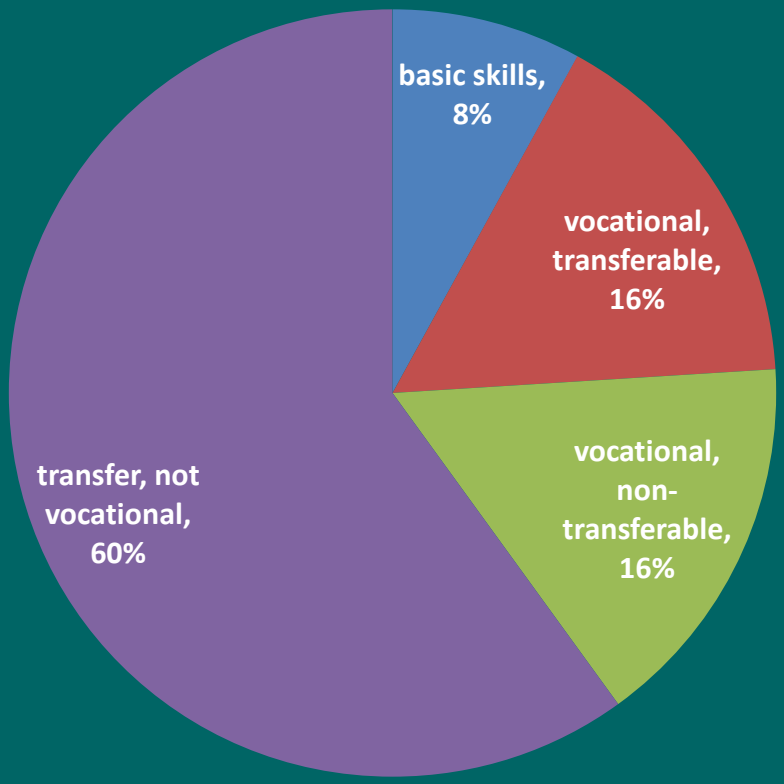
	Recent HS Grads	**Age 20-39**
Public Research	15%	0
Public Baccalaureates & Masters	18	.0
Private	12	16
Community Colleges	55	82

Undergraduate Awards (One Year and More) per 100 FTE Undergraduates – Public Two-Year, 2009-10

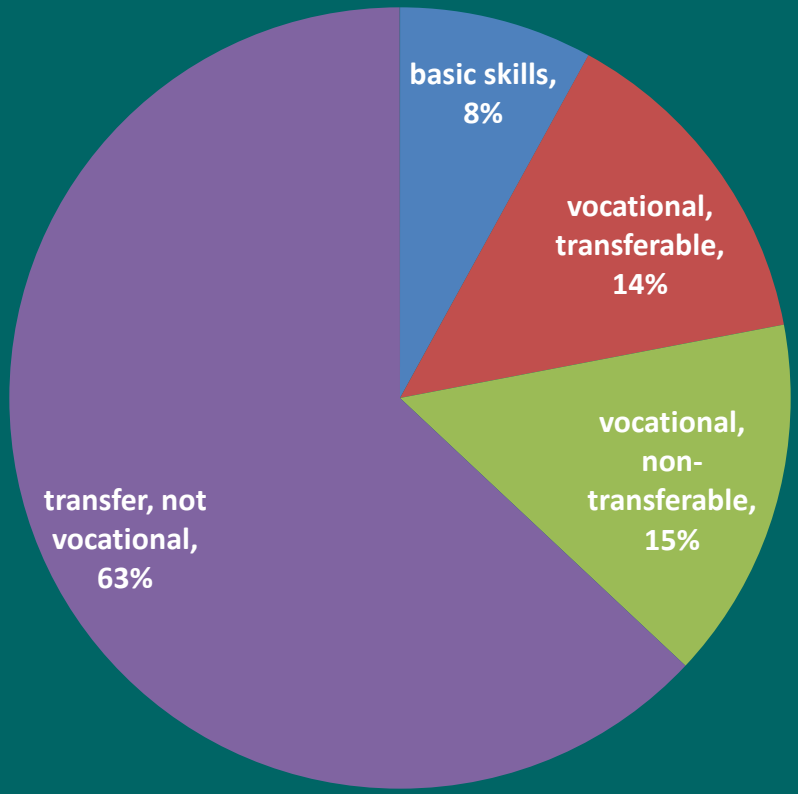


One Third of Course Enrollments are Vocational
but declining

Fall, 2002



Fall, 2012

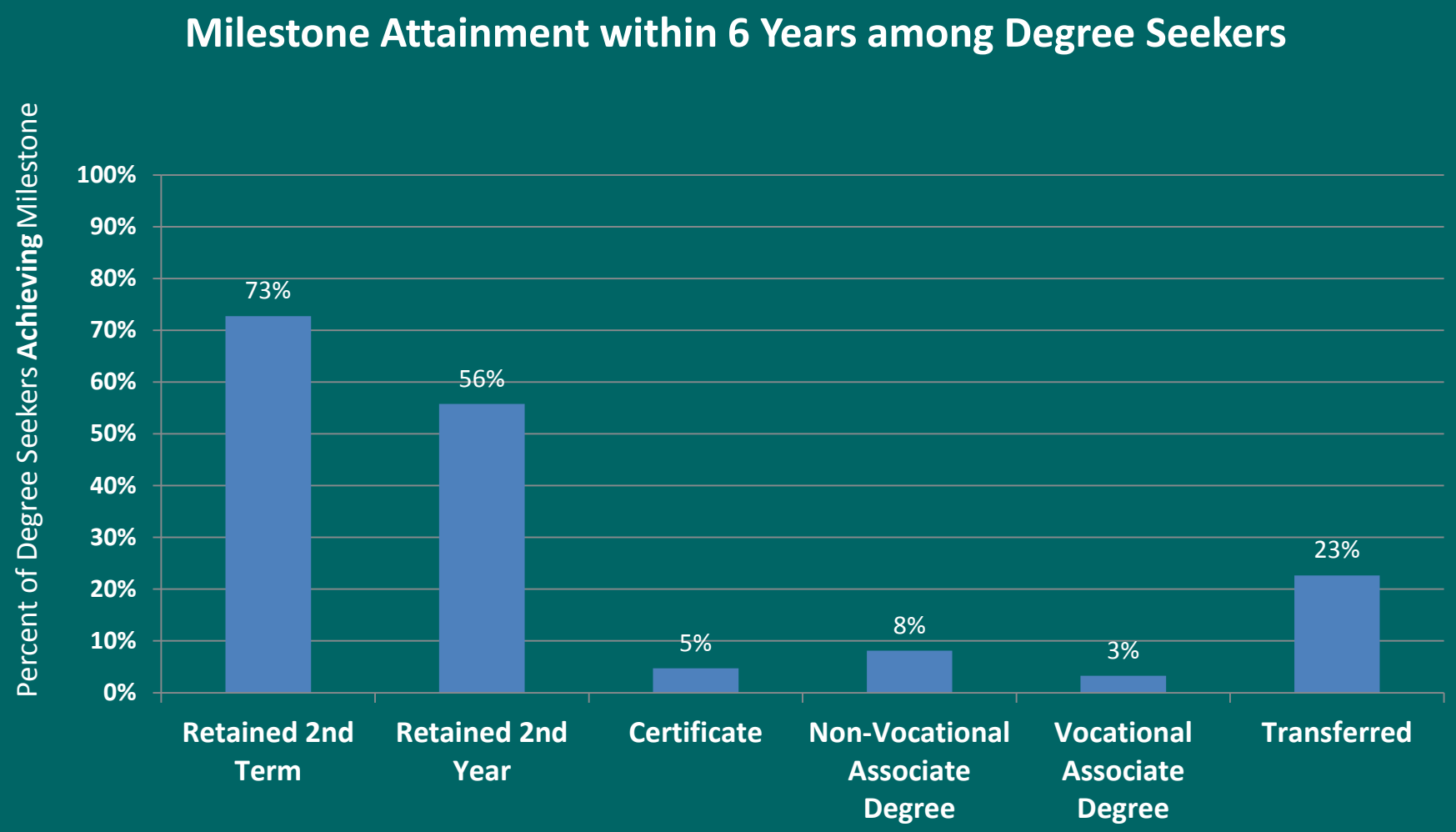


CTE Programs Can Be Costly

Instructional Costs Per Student Credit Hour National Averages (2011-2012)	
Humanities/Humanistic Studies	$52
Biology, General	$64
Engineering-Related Technologies	$73
Allied Health and Medical Assisting Services	$131
Drafting/Design Engineering Technologies/Technicians	$163
Respiratory Care Therapy/Therapist	$265

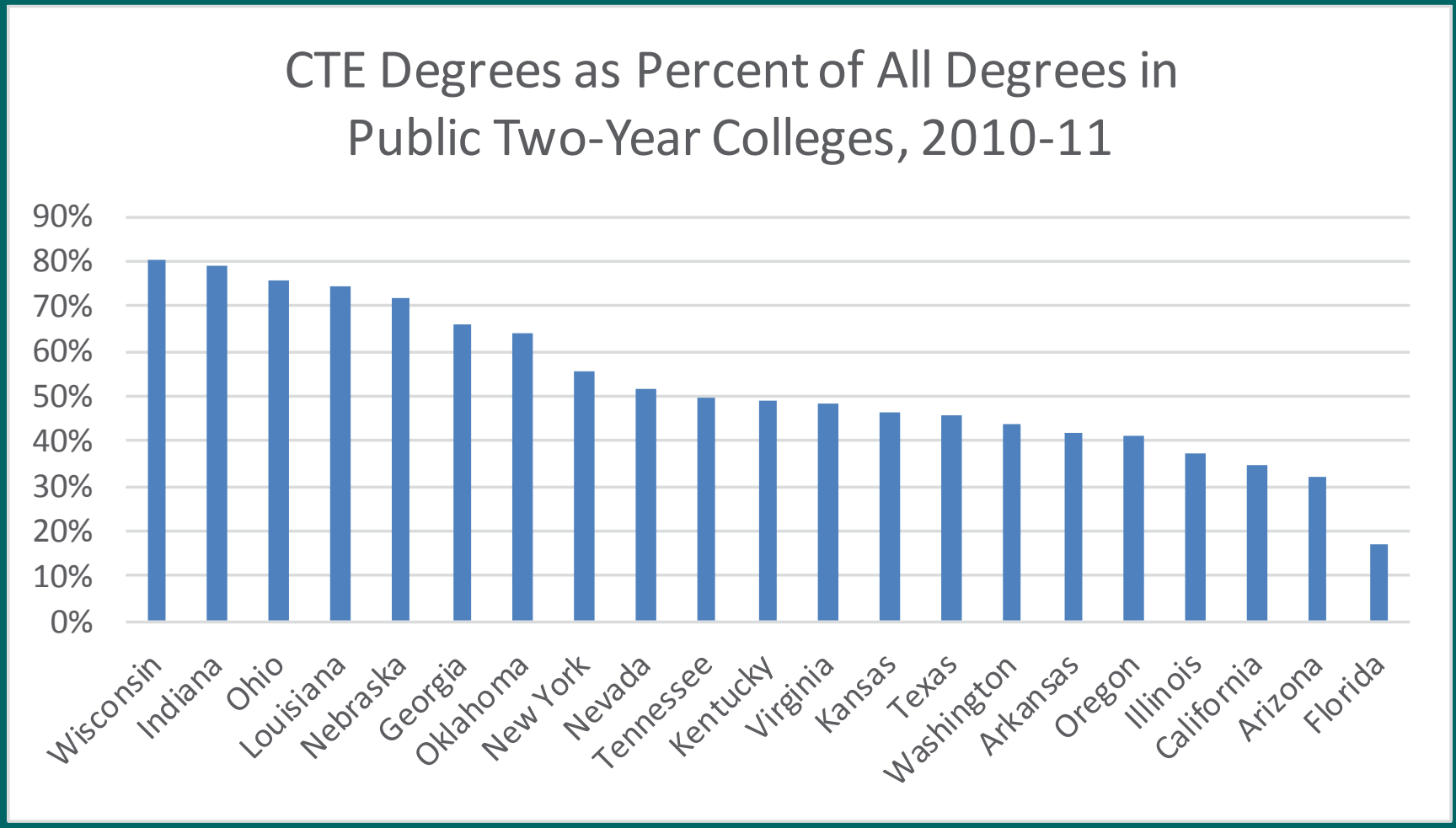
Source: National Community College Cost & Productivity Project, National Higher Education Benchmarking Institute

Few Students Earn Vocational Credentials



Source: Analysis of CCC data for the cohort of entering "degree seekers" in 2003-04, as reported in *The Road Less Traveled,* IHELP, 2011

California's Community Colleges Have Proportionately Smaller CTE Mission



Source: *Workforce Investments*, IHELP, 2013.

Program Mix Not Well Targeted at Needs

- Average per college: 113 programs in 25 fields
- Average per region: 959 programs in 91 fields
- Enrollments and completions highly concentrated
  - 7% of fields enroll *half* of students
  - 6% of fields produce *more than half* of credentials
- No common competency/skill standards=>local variability

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

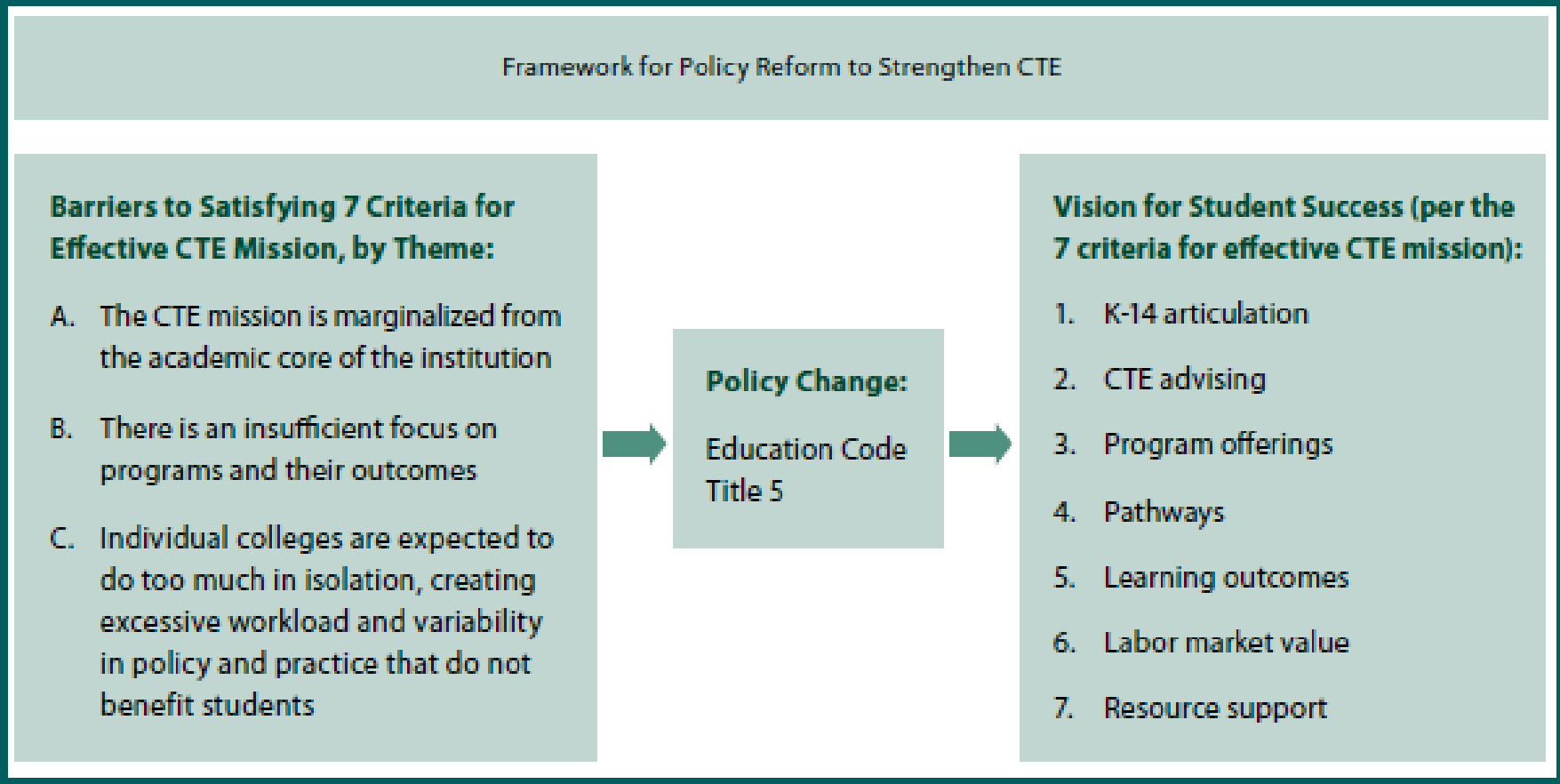
Policy

- Policies create, rules, incentives and expectations; focus attention
- Misaligned policies create barriers
  - Education Code (statutes)
  - Title 5 (regulations)

Criteria for Effective CTE – from literature review

1. Programs articulate with K-12 where appropriate
2. Prospective students are helped to identify and enroll in community college CTE programs of interest
3. Program offerings adapt to changing labor market needs
4. Efficient pathways exist for transition into entry level credentials and advancement through credential levels
5. Students and employers understand the skills and competency outcomes of credential programs
6. Credentials offered have market value for students, as validated by outcomes data
7. Resource allocation for CTE programs is predictable and responsive to workforce priorities

Policy Alignment can Strengthen CTE Outcomes



Pathways from High School

- Problem
  - Counseling about CTE pathways is inadequate and pathways are not well aligned from high school to college
- Policy Constraints
  - Counseling function is poorly funded and not mandated
  - No statewide career exploration curriculum as in some states
  - Pathway articulation efforts are grant-dependent, temporary, and have focused on *course* alignment, not *pathway* alignment
  - Dual enrollment, dual credit, and articulation policies vary widely
- Suggestions for Policy Change
  - Adopt career exploration curriculum in middle/high schools
  - Strengthen counseling for CTE *programs*; professional development
  - Standardize policies on dual enrollment, credit, articulation
  - Develop and incentivize *statewide* articulated career pathways for local adoption

Associate Degree

- Problem
  - Students seeking associate degrees to gain entry to workforce are not well served; most associate degrees awarded in "general" or "interdisciplinary" studies
- Policy Constraint
  - New transfer degree leaves unclear the intent of AA/AS degrees
  - AA/AS degrees lack flexibility for English, math, GE
  - CA one of only two states that do not offer *applied* associate degree in public two-year colleges
- Suggestions for Policy Change
  - Authorize CCC to offer applied associate degree that allows different math, English, general education requirements *or*
  - Recast the non-transfer associate degrees to make them more explicitly aimed at preparing for employment
  - Develop statewide degree pathways for career programs

Program Approval and Review

- Problem
  - Program approval/review processes do not produce coherent set of programs that meet labor market needs
- Policy Constraints
  - Process too decentralized; individualized
  - Insufficient labor market analyses required in program review
  - Insufficient use of advisory committees and other experts
  - No proficiency standards for certificate programs
- Suggestions for Policy Change
  - Change program approval process; allow joint program ownership; fast tracking
  - Designate one entity as primary provider of labor market info
  - Reorganize advisory committees by region and industry sector
  - Develop statewide curriculum frameworks/competencies
  - Make program review/discontinuation more rigorous, standard

Finance

- Problem
  - State funding formula creates disincentives to offer higher-cost programs - CTE has taken disproportionate cuts
- Policy Constraints
  - State formula funds enrollment (FTES) at one set rate
  - CTE reliant on competitive grants => inequities, competition
  - Tuition is low for all programs; small percentage of revenue
  - Ability to assess course fees is limited to items of lasting value
- Suggestions for Policy Change
  - Implement differential funding: state funding formula would have different funding rates for different programs
  - Authorize colleges to set higher tuition for selected programs
  - Loosen or remove restriction on course fees so they can cover costs of labs, equipment, supplies as approved by local boards

Messaging

- Problem
  - Prospective students and families and lawmakers get strong message that workforce education is a less valuable mission
- Policy Constraints
  - Major policy misalignment to reflect transfer bias
  - No infrastructure to support technical college mission
- Suggestions for Policy Change
  - Rename system “California Community and Technical Colleges” as is done in several states
  - Give local boards the option of renaming individual colleges as “community and technical college” or “technical college”
  - Form advisory board for technical colleges

Hopeful Signs But…

- CTE finally getting needed recognition
- CCC System is “doing what matters…”
- A policy agenda can support the changes – institutionalize
- The bigger agenda: cultural change to complement policy change
  - Better understanding of career education
  - New vocabulary to replace “career” versus “academic” and “CTE” versus “transfer”
  - Embrace and celebrate (like other states)

Discussion Tasks – Use Handouts

- Choose 1-2 policy areas that interest you
- Think/discuss/write about:
  - How big a problem? Why?
  - Which changes would have the biggest impact?
  - Other ideas to address problem?
  - What are the biggest obstacles to change?
  - How could those obstacles be addressed?