CTE Systems in Top-Performing Countries

Anthony Mackay and Gretchen Cheney
Rigorous & Adaptive Learning Systems

- Preschool aligned to K12 to ensure all are ready to learn
- Engaging curriculum that promotes deep understanding and assessment that measures the knowledge and skills students need to succeed
- Early identification of struggling learners and ongoing support and extra time to ensure they meet and exceed standards
- Gateway at the end of compulsory education that leads to high-quality options
- State-of-the-art CTE programs that credential students for jobs of the future
The Economic Challenge

In response, top-performing countries have redesigned their CTE systems so that the curriculum for vocational courses

• Assumes a high level of academic mastery (just like the courses designed to prepare students for university) and

• Allows for many different “exit” options depending on a student’s desired career path
Characteristics of Strong CTE Systems

- Applied learning is core
- Equipment is state-of-the-art
- Teachers have relevant, recent experience in industry
- Aligned with economic development goals, curriculum designed by employers
- Compulsory education
Top Performer Highlights: Switzerland

Governed by triad of business, cantons and federal government

Approximately 70 percent of Swiss teenagers enroll

Dual-track = vocational school + paid apprenticeships (students earn between $600-$1200/month)

Mentorship and coaching

Upon completion, students earn nationally recognized credential and have options to access higher education
Top Performer Highlights: Singapore

CTE is key to economic development strategy and the development of a highly skilled workforce.

After finishing secondary school, 65 percent chose CTE: (25% ITE 40% polytechnics)

Instruction is provided in simulated workplaces using state-of-the-art equipment.

Industry partners set standards and assess candidates for diplomas.

Teachers are given regular training in industry best practices.
Making CTE the Pathway of Choice:
To be attractive to a large segment of the population, CTE must offer:

Viable Routes
to well-paying occupations requiring less than a four-year degree

Pathways to more
including further education and training that can prepare them for professional positions

Appeal for all
In our experience, CTE systems risk collapse when enrollment falls below 40% of the population
Comparing Top Performers and U.S. Top Performers

**Top Performers**
- Between 40 and 70 percent of secondary students participate
- Purpose is to train the next generation of workers
- Training is rigorous, lasts 2-3 full years
- Work-based (or other applied) learning is a central feature
- Students graduate with qualifications and industry credentials certified by employers and valued in the job marketplace

**U.S.**
- CTE is seen as a last-resort because of the weak academic component
- Purpose is to improve student motivation and reduce dropout risk
- CTE “concentrators” are typically only required to pass 2-3 classes during HS, with no way of verifying mastery
- Very few students engage in work-based learning
- Students rarely earn meaningful credentials that would distinguish them from other HS graduates