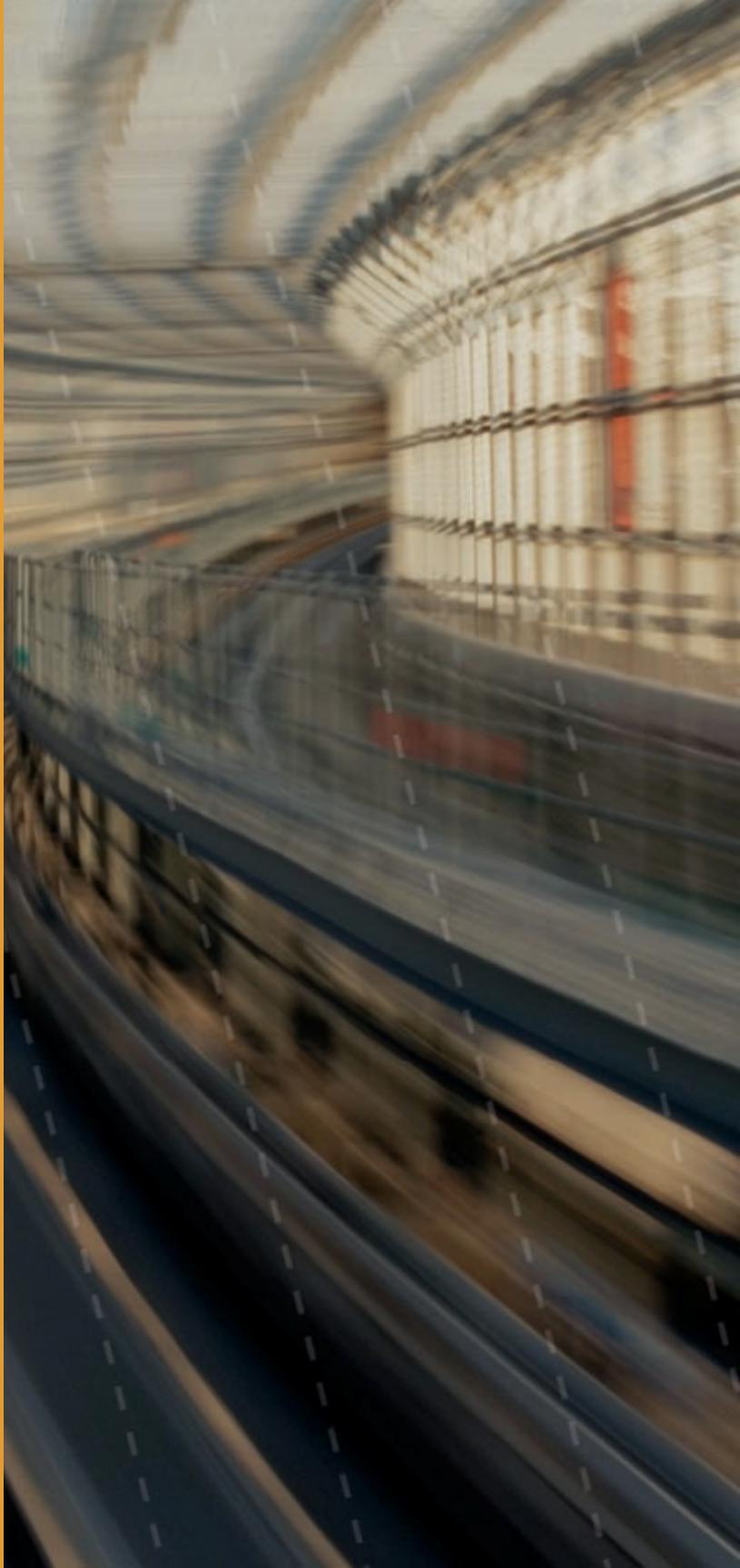


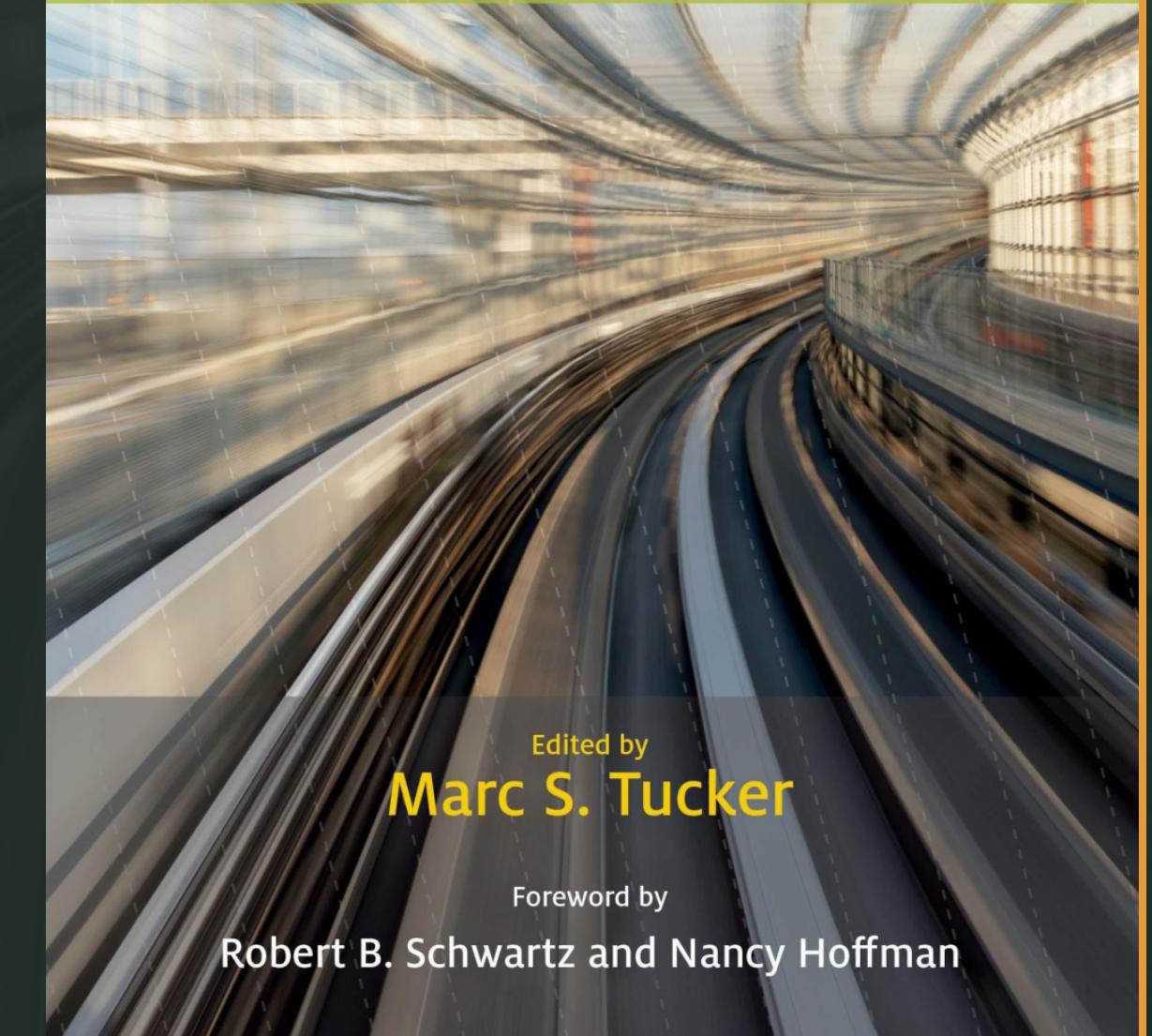
Vocational Education and Training Around the World: *Lessons for the U.S.*

Marc Tucker



CHINA
SINGAPORE
SWITZERLAND
UNITED STATES

VOCATIONAL EDUCATION
AND TRAINING FOR A
GLOBAL ECONOMY
LESSONS FROM FOUR COUNTRIES



Edited by
Marc S. Tucker

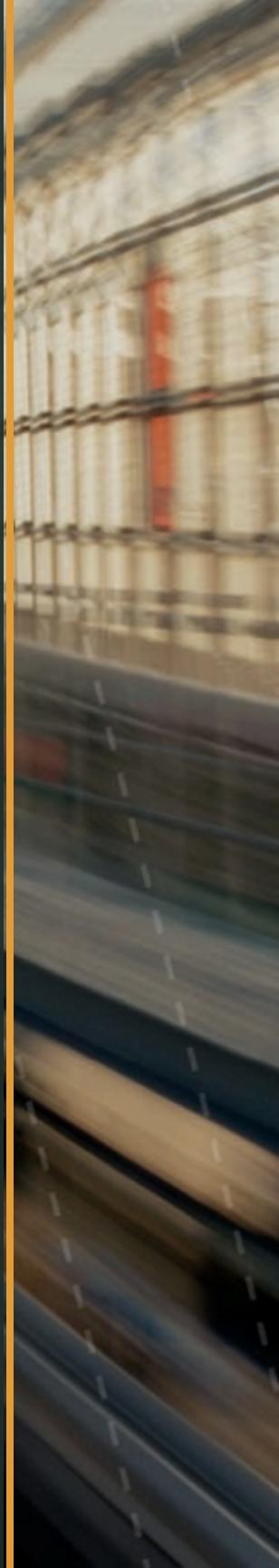
Foreword by
Robert B. Schwartz and Nancy Hoffman

What the findings mean for the U.S.

- Enormous variety in VET in the U.S.—across states, within states
- Particular projects and initiatives have often been a source of inspiration for others, but we lack effective VET systems
- Career and Technical Education—VET—is leaving most students increasingly vulnerable to the robots that are taking the jobs of those without sophisticated technical skills
- My aim this evening is to give you a feeling for what it will take to develop a VET system as good as any in the world

How the U.S. workforce compares

- 50 years ago –
 - Best educated workforce in the world
- Today –
 - Overall: Lower half
 - Millennials: Tied for last
- CENTRAL ISSUE —
 - U.S. workers can't compete—least skilled, highest cost workers in a fully integrated global workforce



Majority of high school graduates entering first year of community college...

- Cannot comprehend first year texts written at 12th grade level; instructors must summarize them in PowerPoints
- Cannot do middle school math
- Cannot write well enough for community college instructors to assign writing tasks

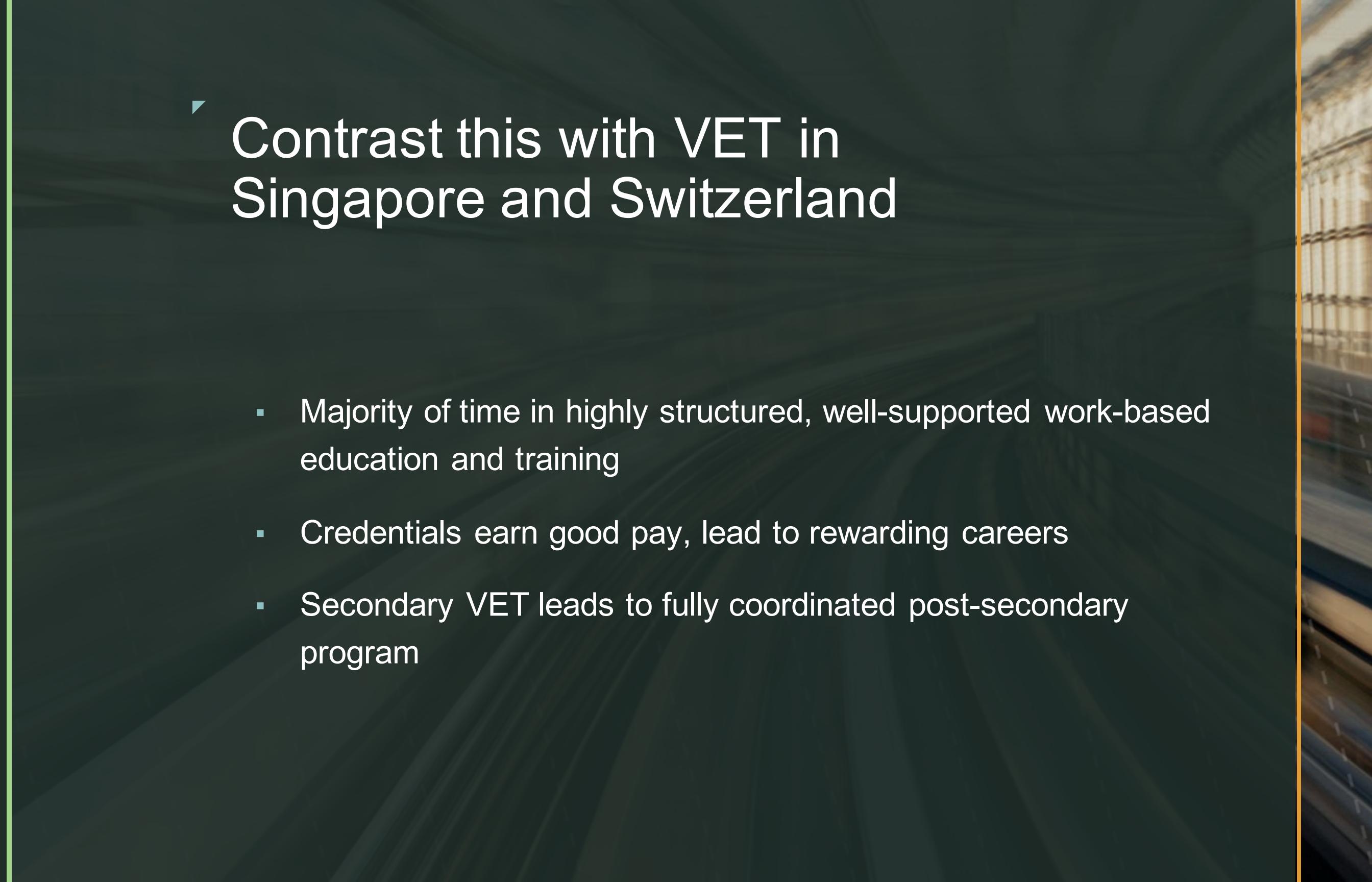
Most community college VET certificate programs are only a few months long

Does the U.S. *HAVE* a VET program?

- U.S. regards high school students who take 3 VET courses in a sequence as Career and Technical Education “concentrators”
- OECD did not include these “concentrators” as VET students in their report of national VET programs—fewer than 5% of American students are in programs that meet OECD definition of VET
- Our failure to give the “Forgotten Half” of our students a sound education and competitive technical skills is leaving them extremely vulnerable to the “rise of the robots”

Contrast this with VET in Singapore and Switzerland

- 60% to 70% of students in VET
- Academic achievement of students in high school VET above the *median* for all U.S. students
- VET has much higher status than in the U.S.
- Programs not a few months; instead are full-time for 3-5 years, coordinated work and theory



Contrast this with VET in Singapore and Switzerland

- Majority of time in highly structured, well-supported work-based education and training
 - Credentials earn good pay, lead to rewarding careers
 - Secondary VET leads to fully coordinated post-secondary program
- 

What we need to do

- Make admission to high school VET contingent on reading at 11th grade level, proficiency in Algebra I, writing fluently
- Make high school VET the front end to community college VET, in one integrated, sequenced curriculum
- Redesign high school/community college VET to terminate in sequence of credentials set to standards comparable to equivalents in Switzerland and Singapore

What we need to do

- Make credentials awarded at the end of community college program the qualifying credential for admission to state polytechnics and applied universities
- Design high school/community college VET so that more than half of a student's time is spent in highly structured work-based education and training program in the school, organized as a real business (Singapore model), or in a non-school enterprise (Swiss model)

What we need to do

- Create governance system for VET largely controlled by business and by government agencies responsible for economic development
- Charge government with involving employers in development of state-of-the-art skills standards system, driven by leading edge employers

NO EXCUSES

- I hear it said that one cannot compare the U.S. with places like Singapore that are so much wealthier and less diverse than some U.S. states
- 50 years ago, most Singaporeans were illiterate. Malays, ethnic Chinese, Indonesians and Indians were fighting in the streets, there was no public education system or common language
- Today, what the ethnic Chinese used to call the “streetsweepers kids” are among the most competitive workers in the world