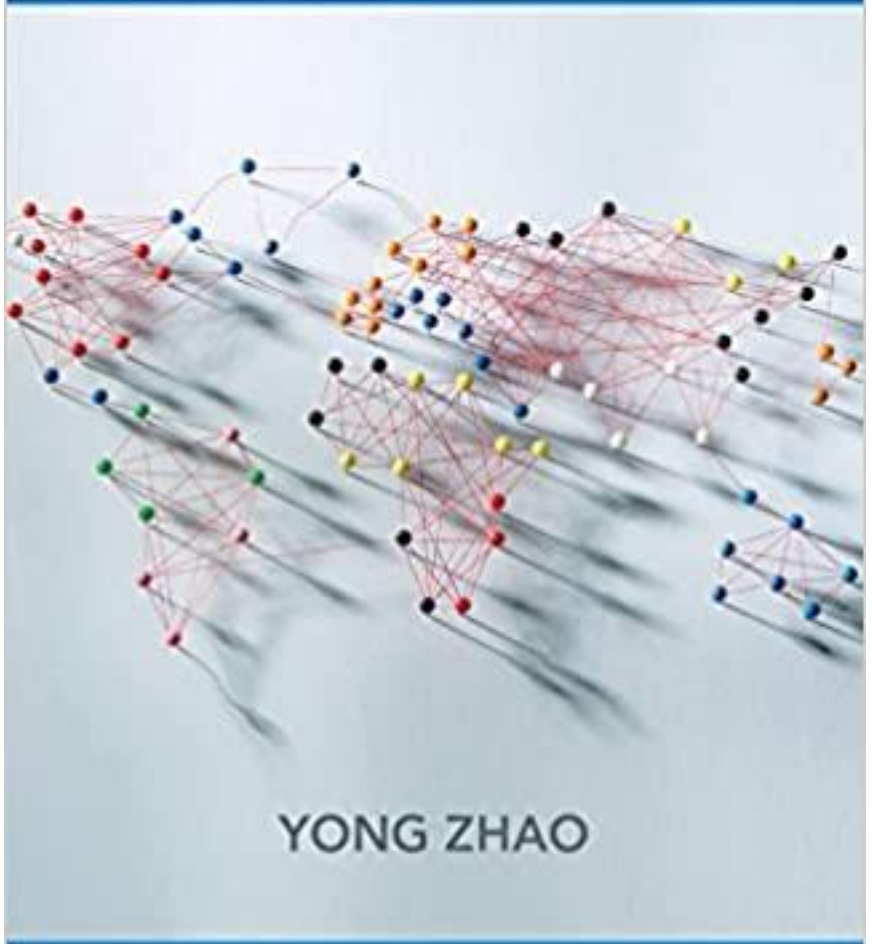
Reach for Greatness

Yong Zhao
University of Kansas
University of Melbourne

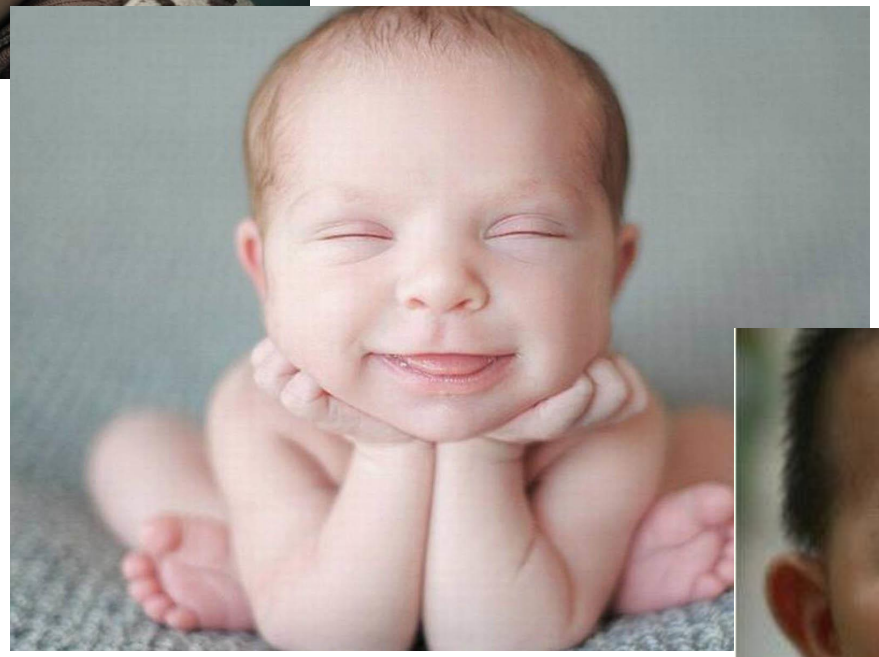
REACH FOR GREATNESS

PERSONALIZABLE EDUCATION FOR ALL CHILDREN



YONG ZHAO

CORWIN IMPACT LEADERSHIP SERIES



THE TOP TEN BESTSELLER

nature via nurture

GENES, EXPERIENCE AND WHAT MAKES US HUMAN

'Sets the modern terms for an ancient debate . . . These times need a book like this.' Ian McEwan

MATT RIDLEY

Author of Genome

naturalist
understanding living things and reading nature

spatial
visualizing the world in 3D

coordinating your mind with your body

bodily-kinesthetic

musical
discerning sounds, their pitch, tone, rhythm, and timbre

finding the right words to express what you mean

linguistic

intra-personal
understanding yourself, what you feel, and what you want

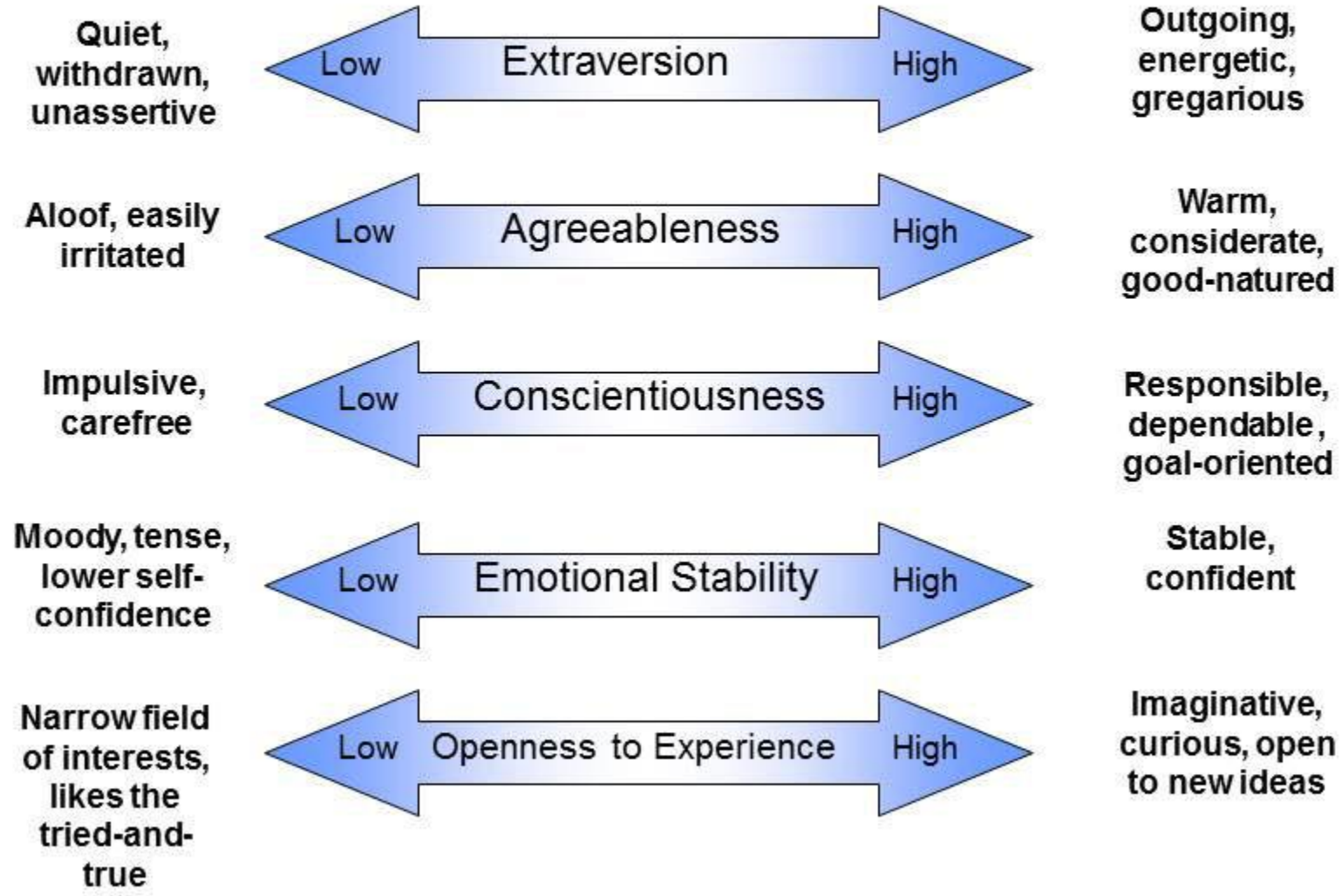
logical-mathematical

quantifying things, making hypotheses and proving them

sensing people's feelings and motives

interpersonal

The Big Five Personality Dimensions



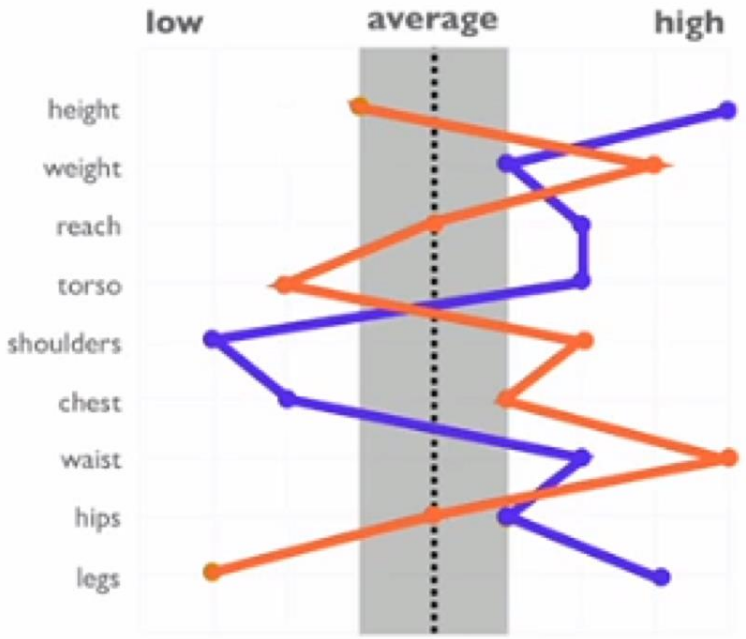
(Tupes & Christal, 1961, as cited by Daft, 2007)

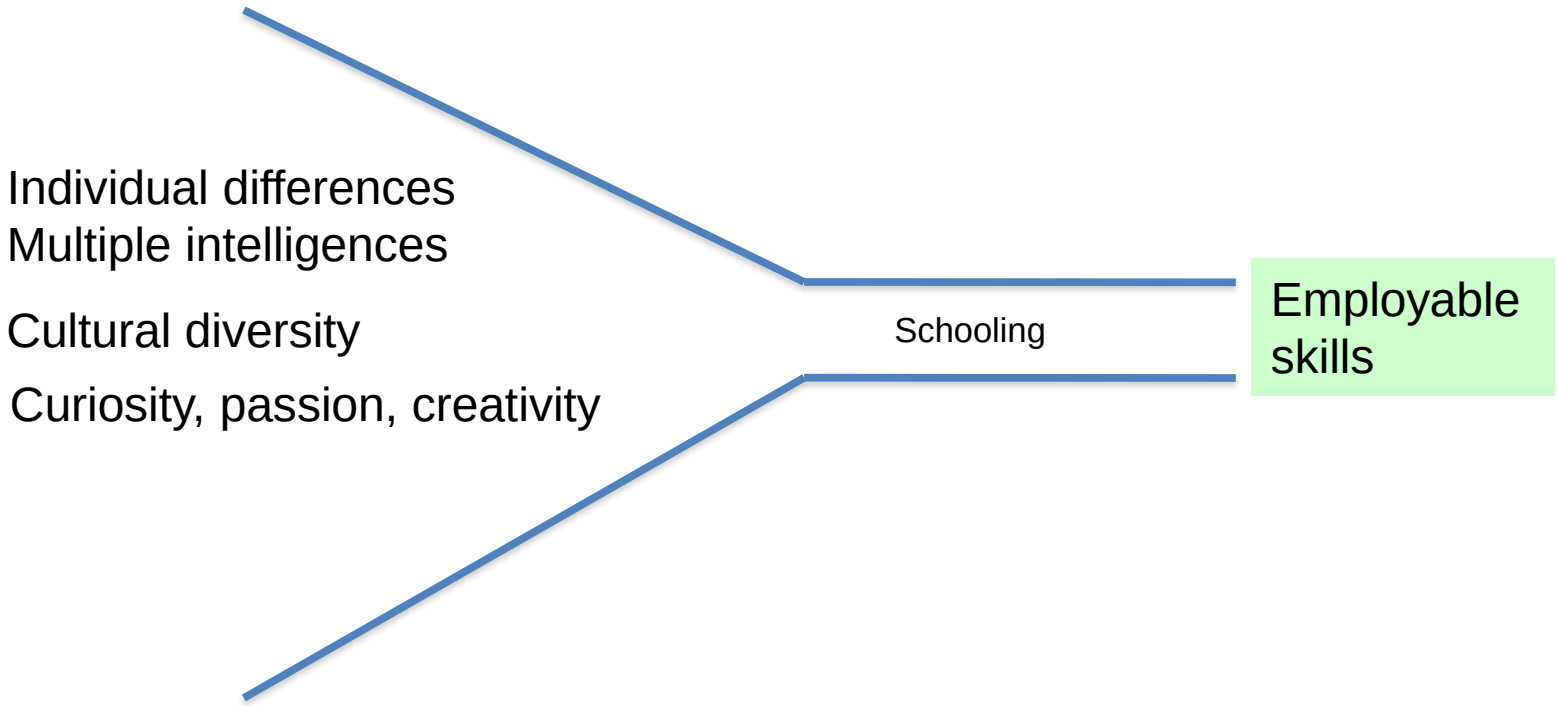
The 16 basic desires

Source: Steven Reiss, PhD.

Diverse Experiences: Family and Community

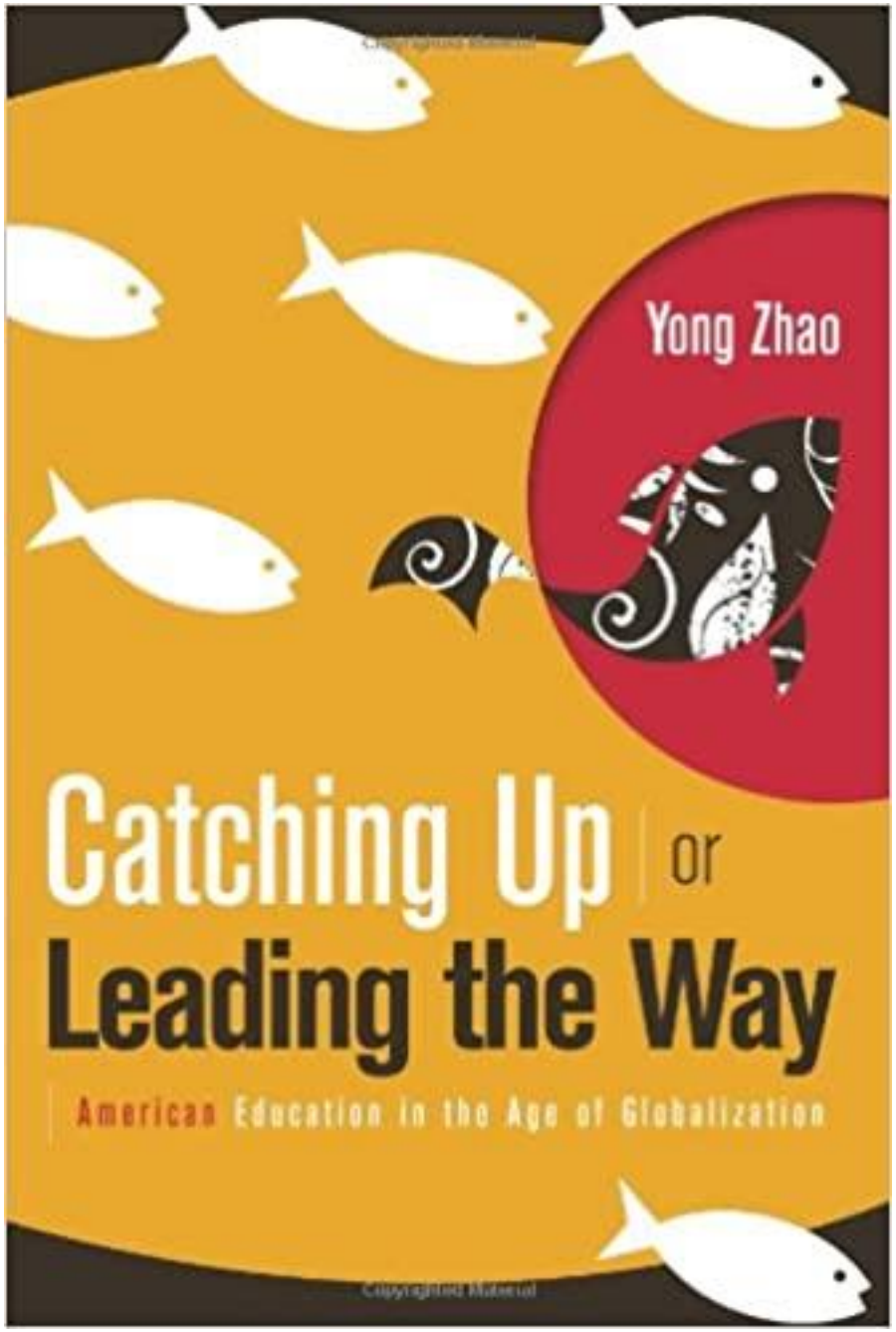
Jagged Profile: Everyone can be great (All are above the Average)



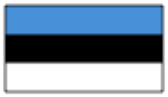

Individual differences
Multiple intelligences
Cultural diversity
Curiosity, passion, creativity
Schooling
Employable skills

What do we have?

- Natural Born Learners
- Naturally Diverse Learners
- Naturally Intentional Learners


Yong Zhao
Catching Up or Leading the Way
American Education in the Age of Globalization

2009 PISA Results

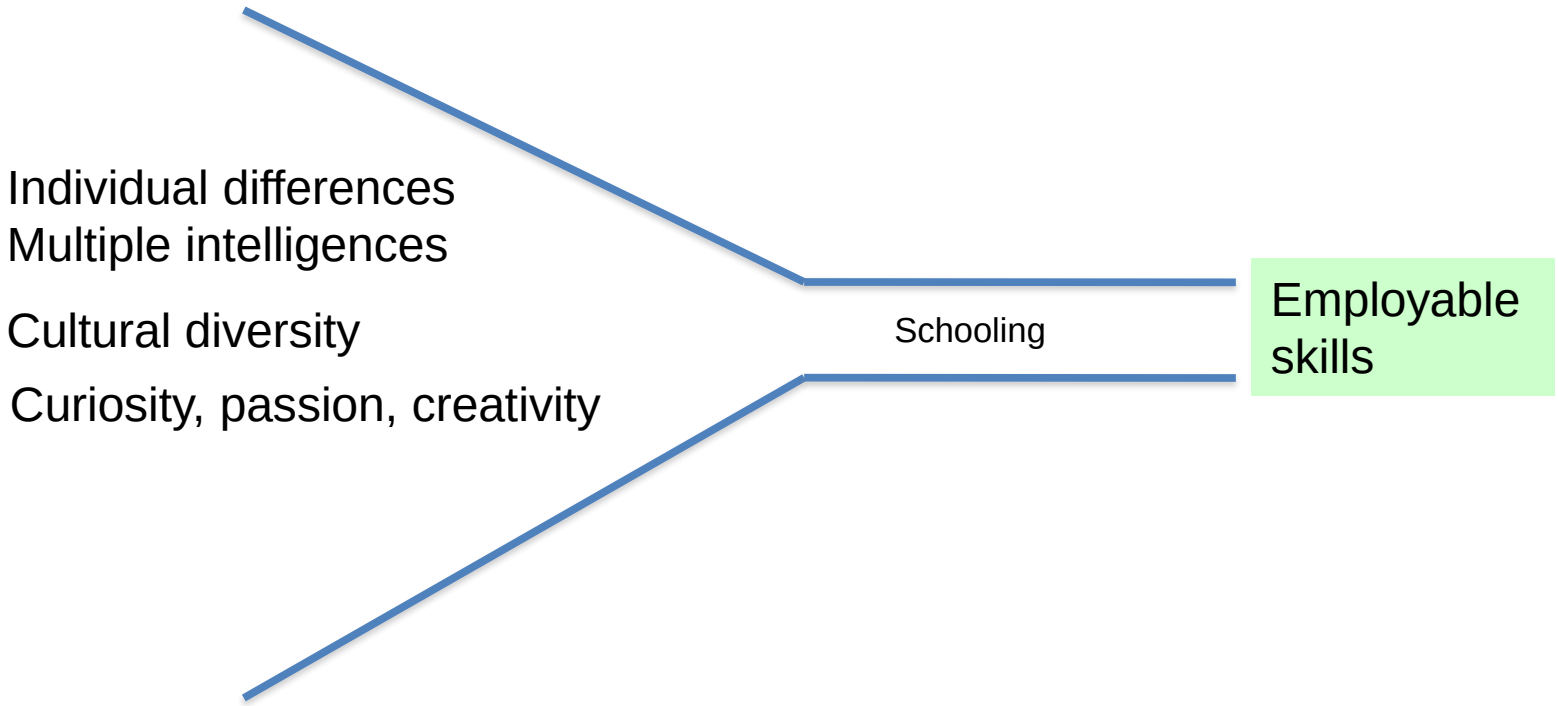
Math	Sciences	Reading
 Shanghai, China	 Shanghai, China	 Shanghai, China
 Singapore	 Finland	 South Korea
 Hong Kong, China	 Hong Kong, China	 Finland
 South Korea	 Singapore	 Hong Kong, China
 Taiwan	 Japan	 Singapore
 Finland	 South Korea	 Canada
 Liechtenstein	 New Zealand	 New Zealand
 Switzerland	 Canada	 Japan
 Japan	 Estonia	 Australia
 Canada	 Australia	 Netherlands

http://www.oecd.org/dataoecd/54/12/46643496.pdf

A Long History of Bad Test-takers

- 1960s
  - –FIMS: 12th out of 12 countries
  - –FISS: 14th out of 18 countries
- 1970s/1980s
  - –SIMS: 12, 14, 12, 12out of 15 (number systems, algebra, geometry, calculus)
  - –SISS: 14th (biology), 12th (chemistry), 10th (physics) out of 14
- 1990s—2007: TIMSS (8th graders)
  - –28th out of 42 in 1995
  - –15th in 2003
  - –9th in 2007

Why Is the U.S. Still Here?


Individual differences
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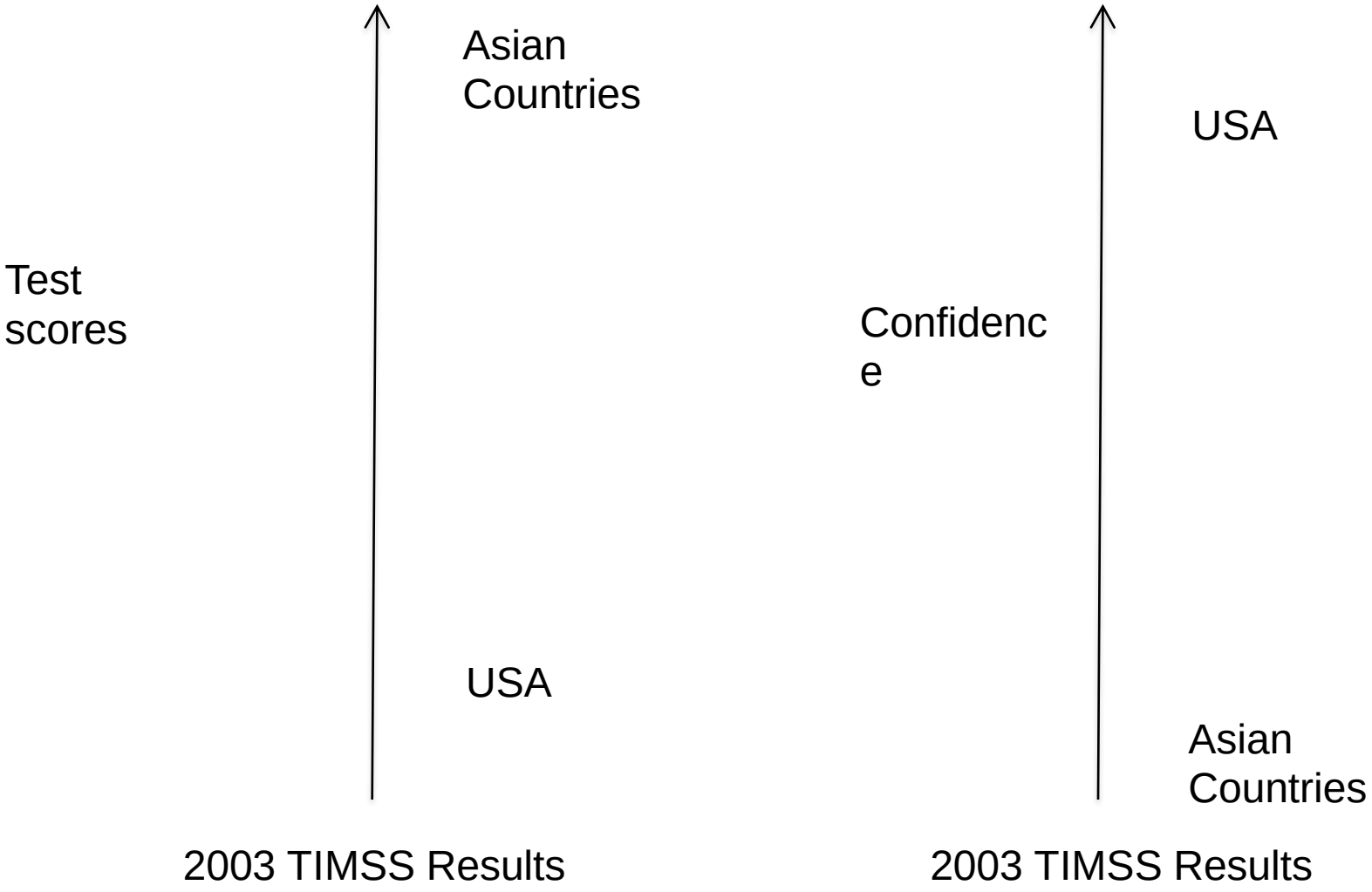
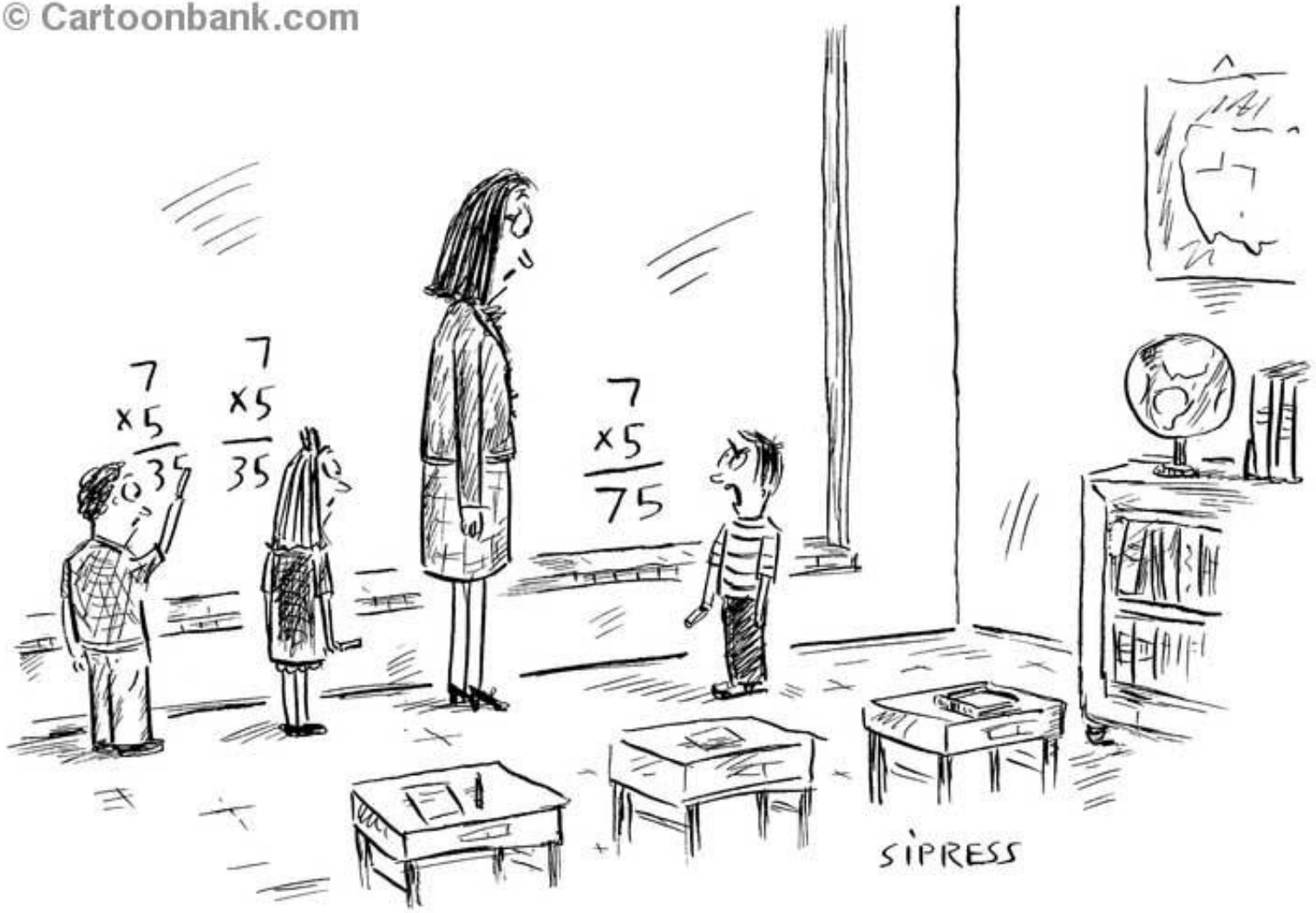

Test scores
Asian Countries
USA
2003 TIMSS Results
Confidence
USA
Asian Countries
2003 TIMSS Results



"It may be wrong, but it's how I feel."

TIMSS 2011 Math Scores vs. Confidence of Select Countries

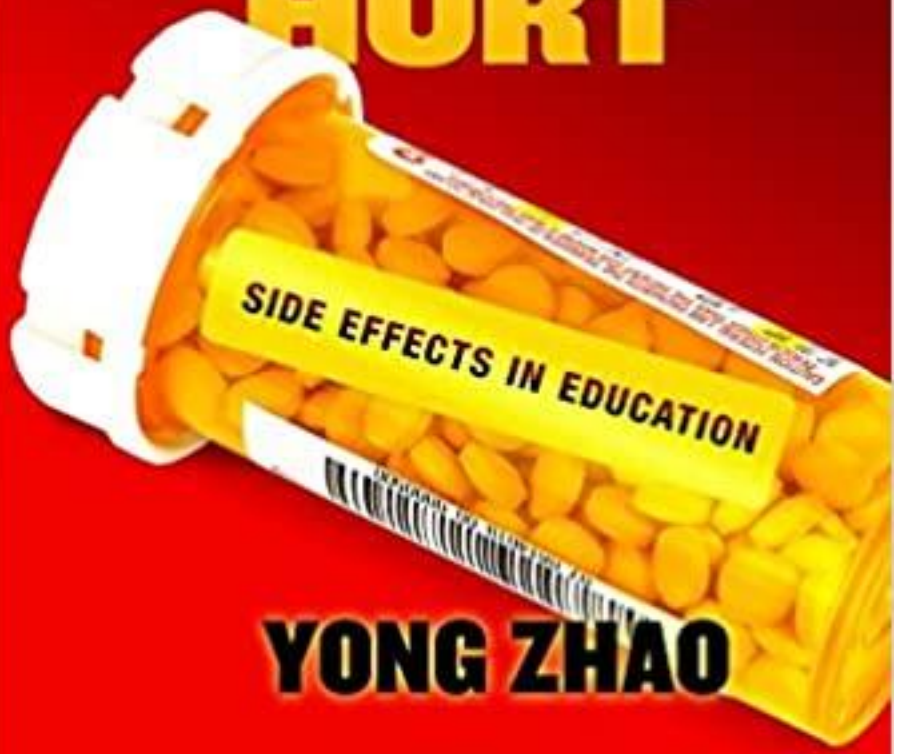
Country	Math Scores	Confidence (%)	Value Math (%)
Korea	613	03 (11)	14
Singapore	611	14 (21)	43
Chinese Taipei	609	07 (20)	13
Hong Kong	586	07 (24)	26
Japan	570	02 (09)	13
United States	509	24 (40)	51
England	507	16 (33)	48
Australia	505	17 (38)	46

Correlations between TIMSS Math Score and Confidence and Enjoyment

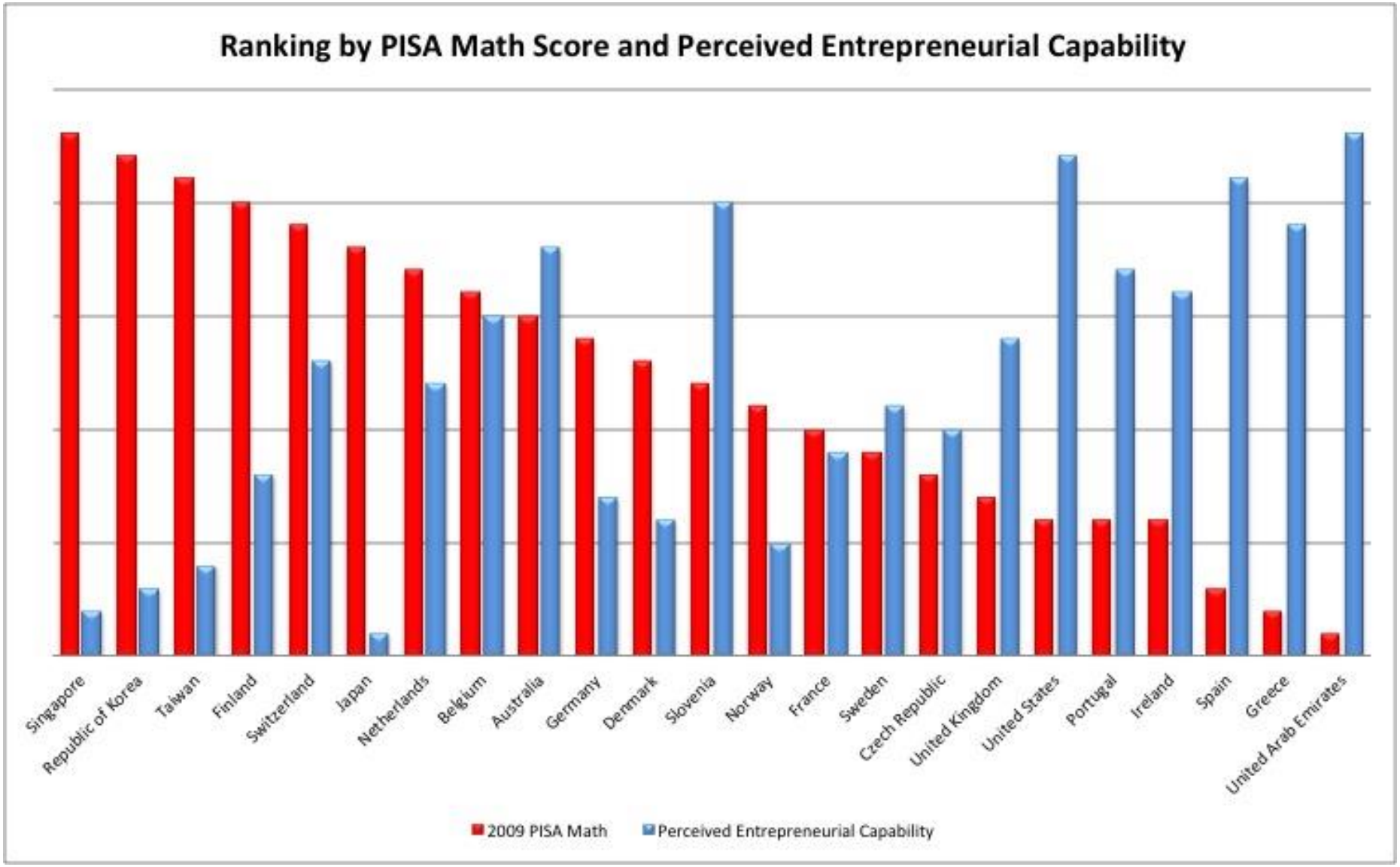
	Grade	Correlation
Confidence	4	-0.58
	8	-0.64
Enjoyment	4	-0.67
	8	-0.75

Tom Loveless (2006): How Well Are American Students Learning
http://www.brookings.edu/~/media/Files/rc/reports/2006/10education_loveless/10education_loveless.pdf

WHAT WORKS MAY HURT



YONG ZHAO

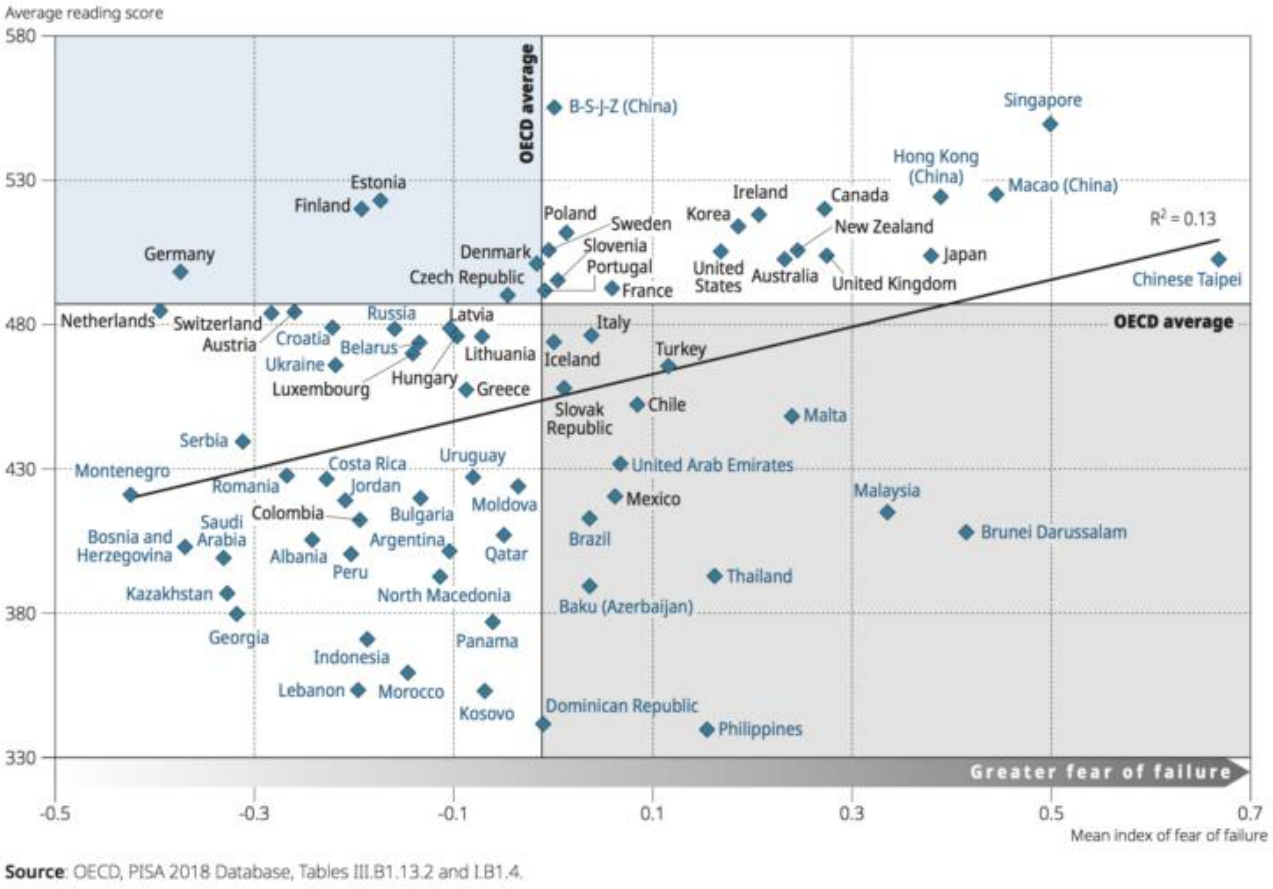

Ranking by PISA Math Score and Perceived Entrepreneurial Capability
Singapore
Republic of Korea
Taiwan
Finland
Switzerland
Japan
Netherlands
Belgium
Australia
Germany
Denmark
Slovenia
Norway
France
Sweden
Czech Republic
United Kingdom
United States
Portugal
Ireland
Spain
Greece
United Arab Emirates
2009 PISA Math
Perceived Entrepreneurial Capability

Correlations between PISA and Entrepreneurship Indicators

	PISA Reading	PISA Math	PISA Sciences
Perceived Capabilities	-.595**	-.586**	-.608**
Nascent Entre Rate	-.693**	-.636**	-.678**
New Biz Ownsp Rate	-.371*	-.374*	-.392*
Total Early Stage Entre Activity	-.658**	-.620**	-.658**

Data source: OECD PISA 2010, Global Entrepreneurship Monitor, 2010

Figure III.13.4 **Fear of failure and average reading performance**



Source: OECD, PISA 2018 Database, Tables III.B1.13.2 and I.B1.4.

"At the system level, the greater the fear of failure expressed by students, the higher the reading scores in that education system" (OECD, 2019, p. 193).

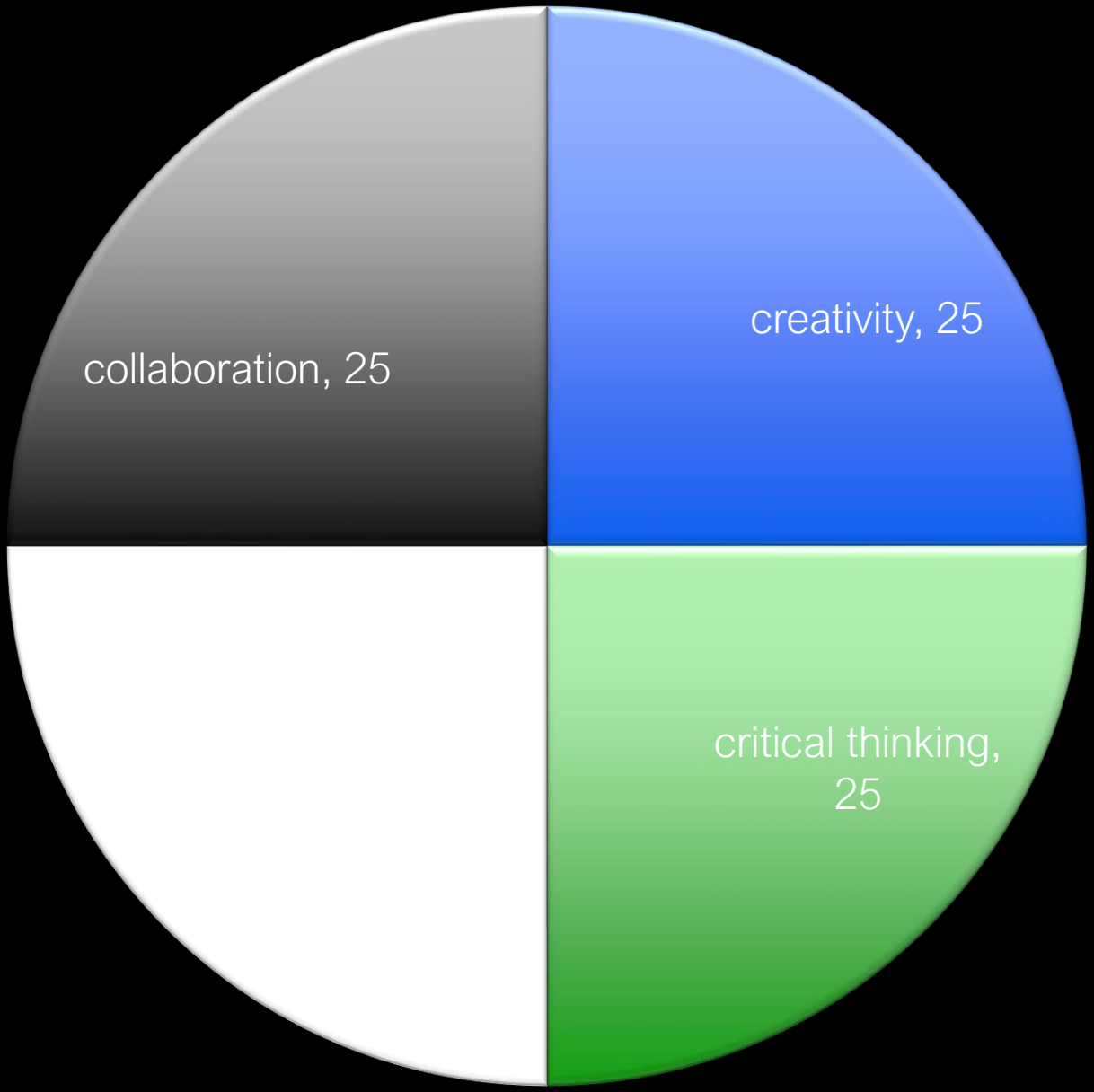
a large number of English-speaking and East Asian education systems were amongst those whose students were both more likely to report a fear of failure and to be high performers in reading. (OECD, 2019, p. 193).

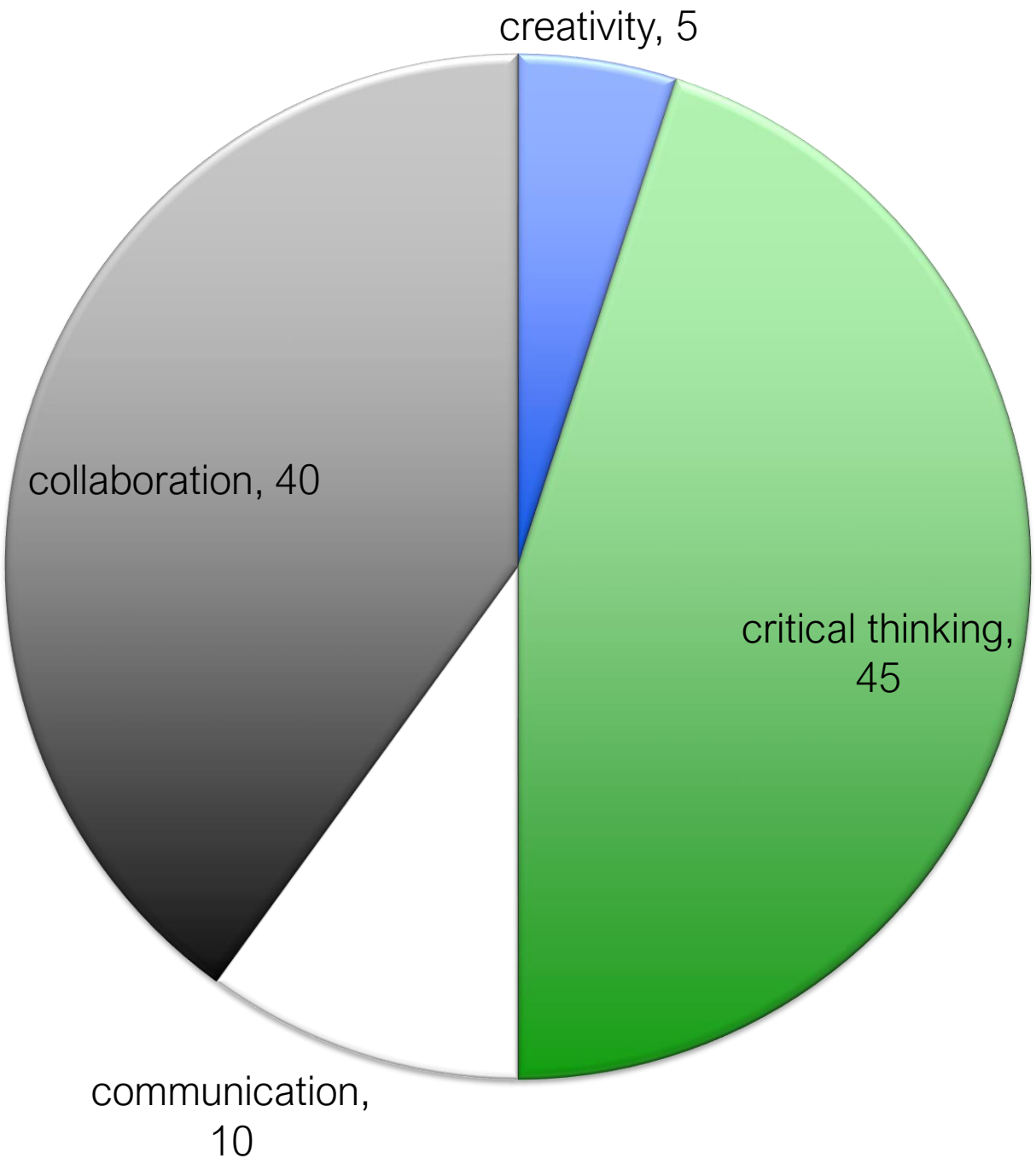
The strongest positive associations between general self-efficacy and reading performance were observed largely in countries and economies whose average reading performance was below the OECD average, whereas the weakest associations were observed often in education systems whose reading performance was at or above the OECD average. In Beijing, Shanghai, Jiangsu and Zhejiang (China) and Japan, students who expressed more self-confidence in their ability to succeed and accomplish tasks scored lower than students who expressed less self-confidence. (p. 190-191).

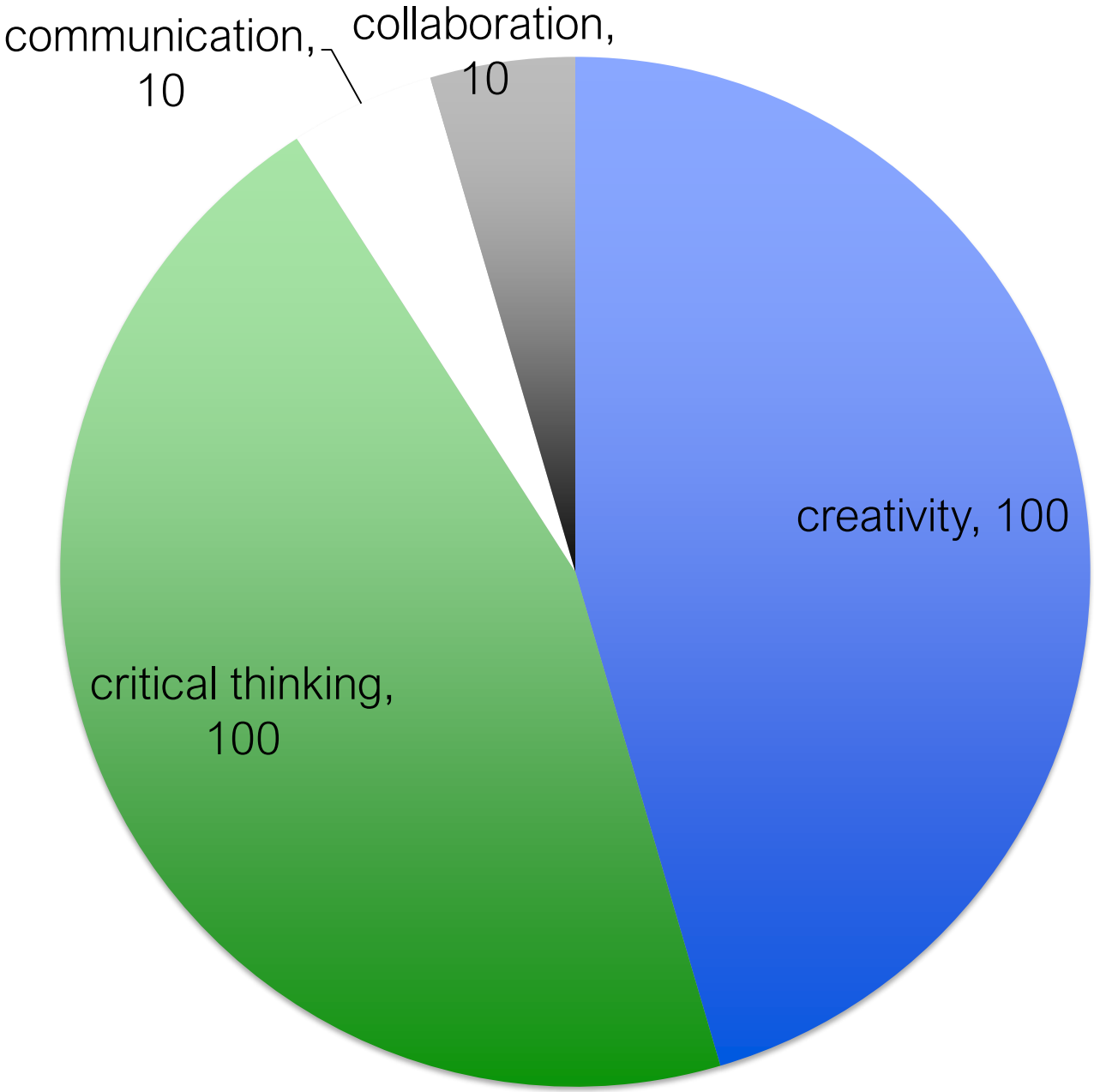
a trend towards poorer reading performance amongst both students with very high and very low levels of life satisfaction… reading scores were lower amongst students who reported between 0 and 4, and 9 or 10 on the life-satisfaction scale, while reading scores were higher amongst students who reported 5 through 8 on the scale" (OECD, 2019, p. 161)

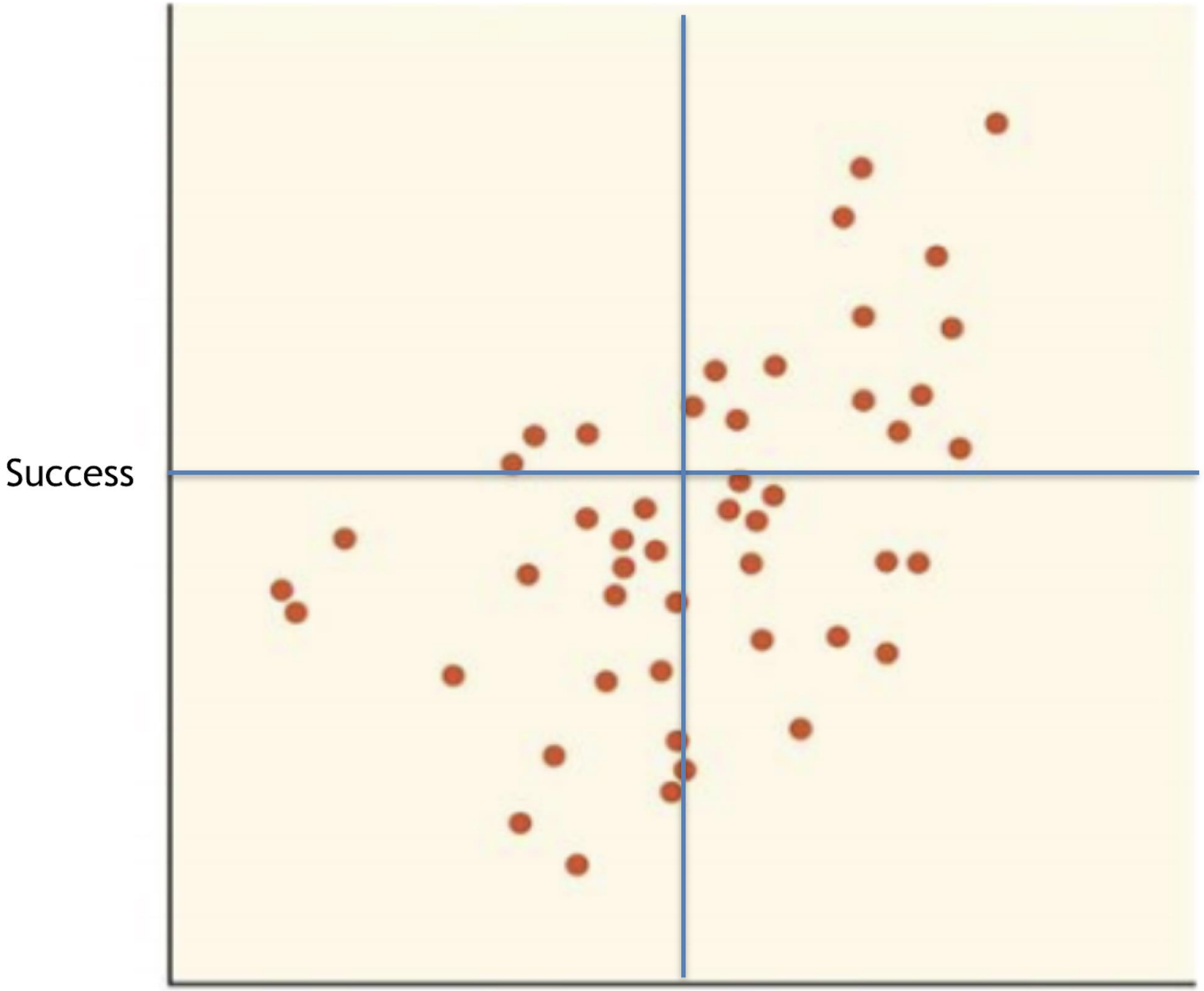
"students in low-achieving countries tended to report higher levels of life satisfaction than students in high-achieving countries… Moreover, in most East Asian countries and economies, such as Beijing, Shanghai, Jiangsu and Zhejiang (China) (hereafter "B-S-J-Z [China]"), Hong Kong (China), Japan and Macao (China), students scored above the OECD average in reading, but reported lower levels of life satisfaction than the average 15-year-old student in OECD countries" (OECD, 2019, p. 160).

"students who were classified as 'very satisfied' with their lives scored 16 points lower in reading than more dissatisfied students, after accounting for students' and schools' socio-economic profile. In Hong Kong (China), Malta and the United States, 'very satisfied' students scored at least 30 points lower in reading than other students."


collaboration, 25
creativity, 25
critical thinking, 25

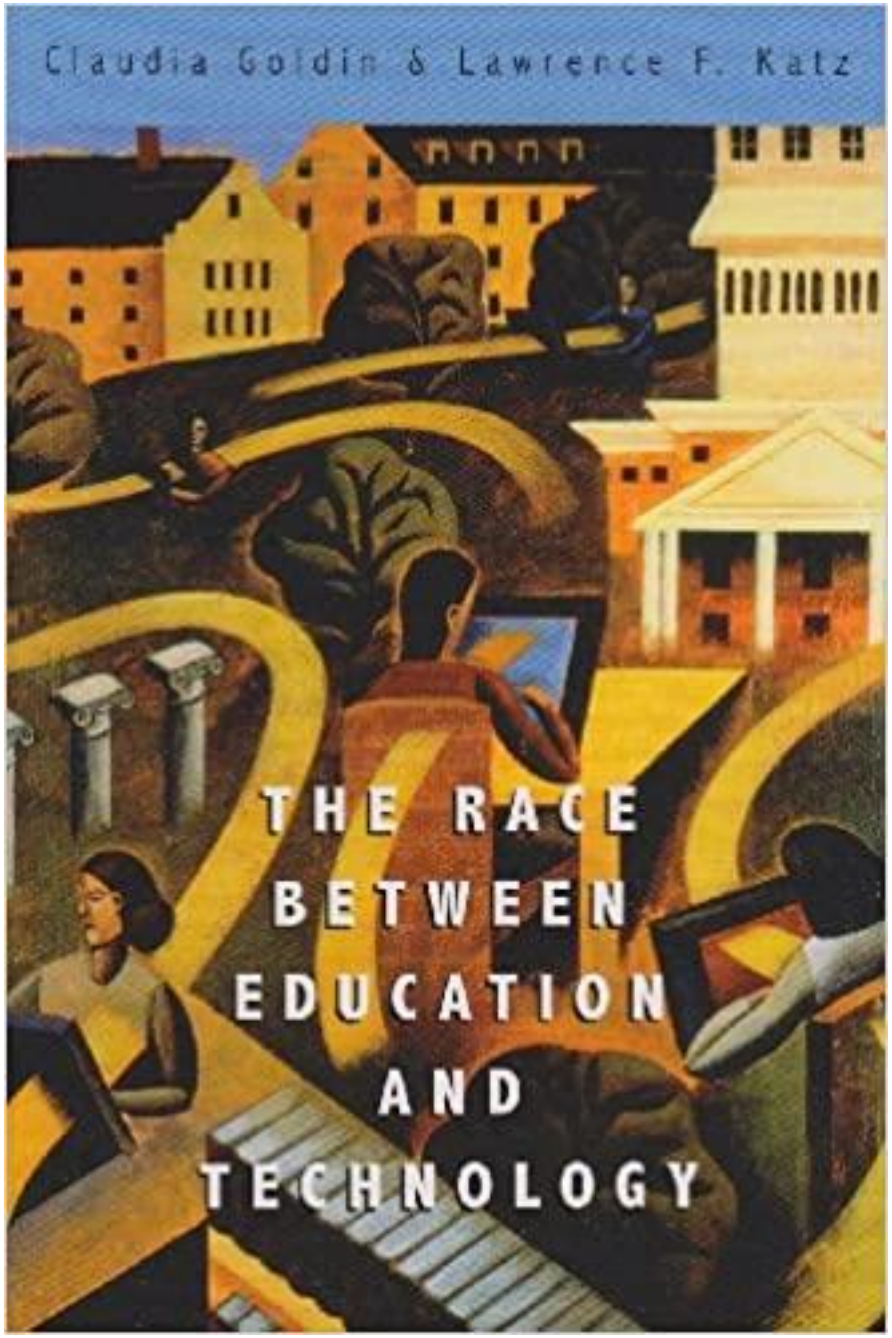

creativity, 5
collaboration, 40
critical thinking, 45
communication, 10

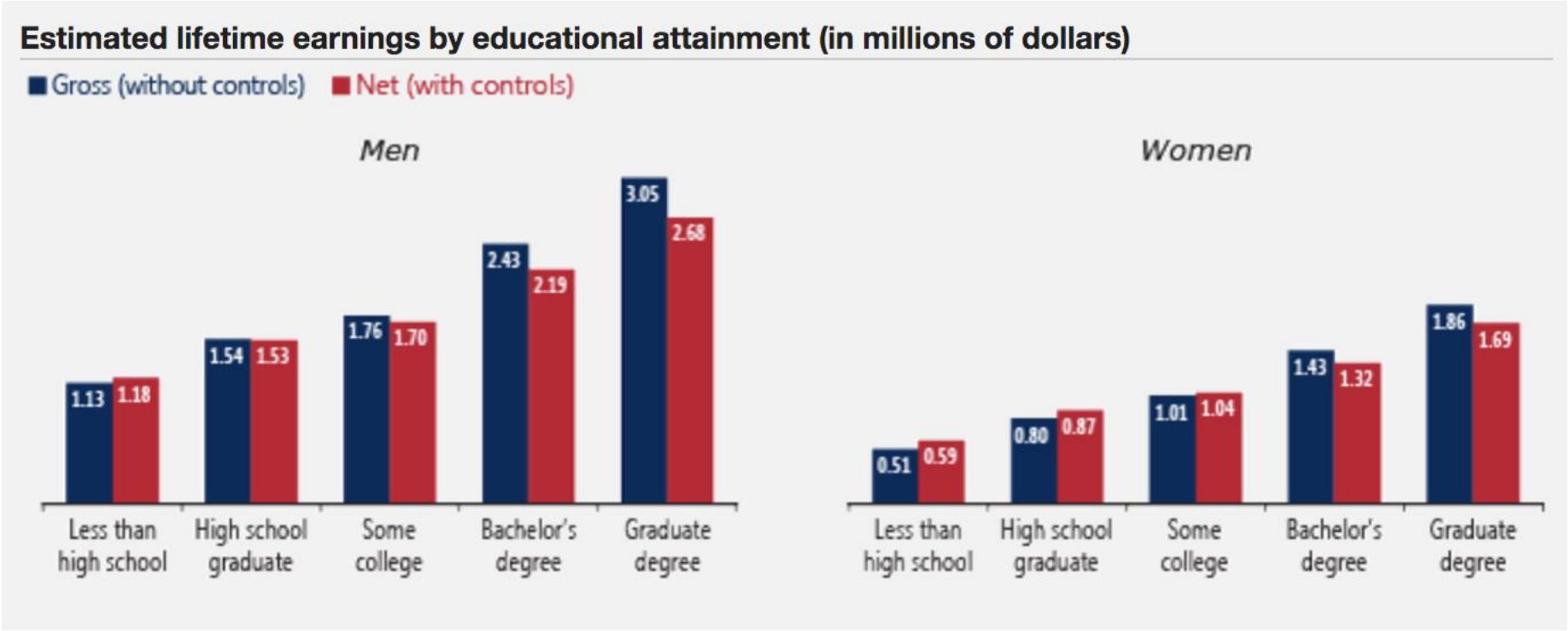

communication, 10
collaboration, 10
creativity, 100
critical thinking, 100


Success
Whatever Factor—Reading, Math, Grit or Personality
Correlation $r = 0.5$

Evidence-based Practice

- Multiple outcomes
- Short-term vs. long-term outcomes
- Instructional vs. educational outcomes
- Cognitive vs. non-cogntive


Claudia Goldin & Lawrence F. Katz
THE RACE BETWEEN EDUCATION AND TECHNOLOGY



SOURCE: Tamborini, Christopher R., ChangHwan Kim, and Arthur Sakamoto. 2015. "Education and Lifetime Earnings in the United States." *Demography* 52: 1383–1407.

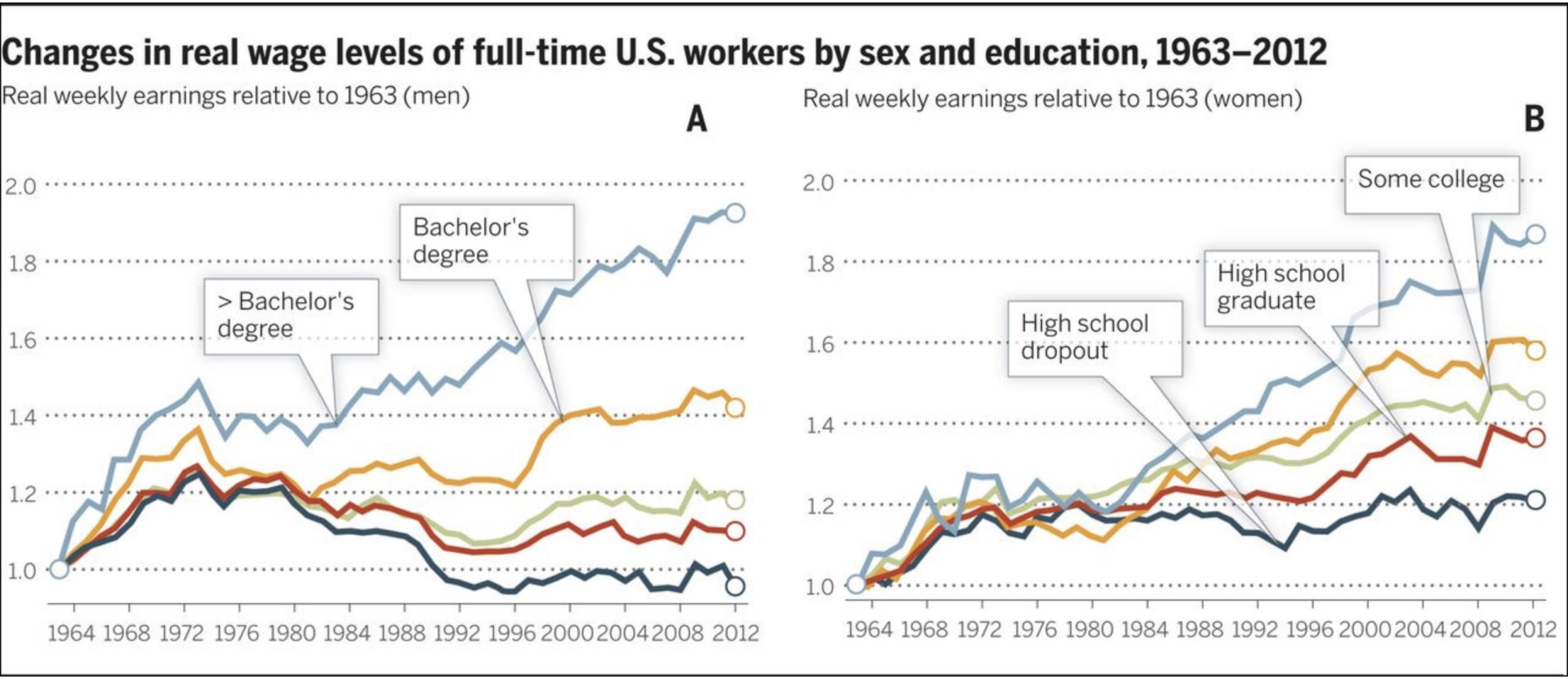
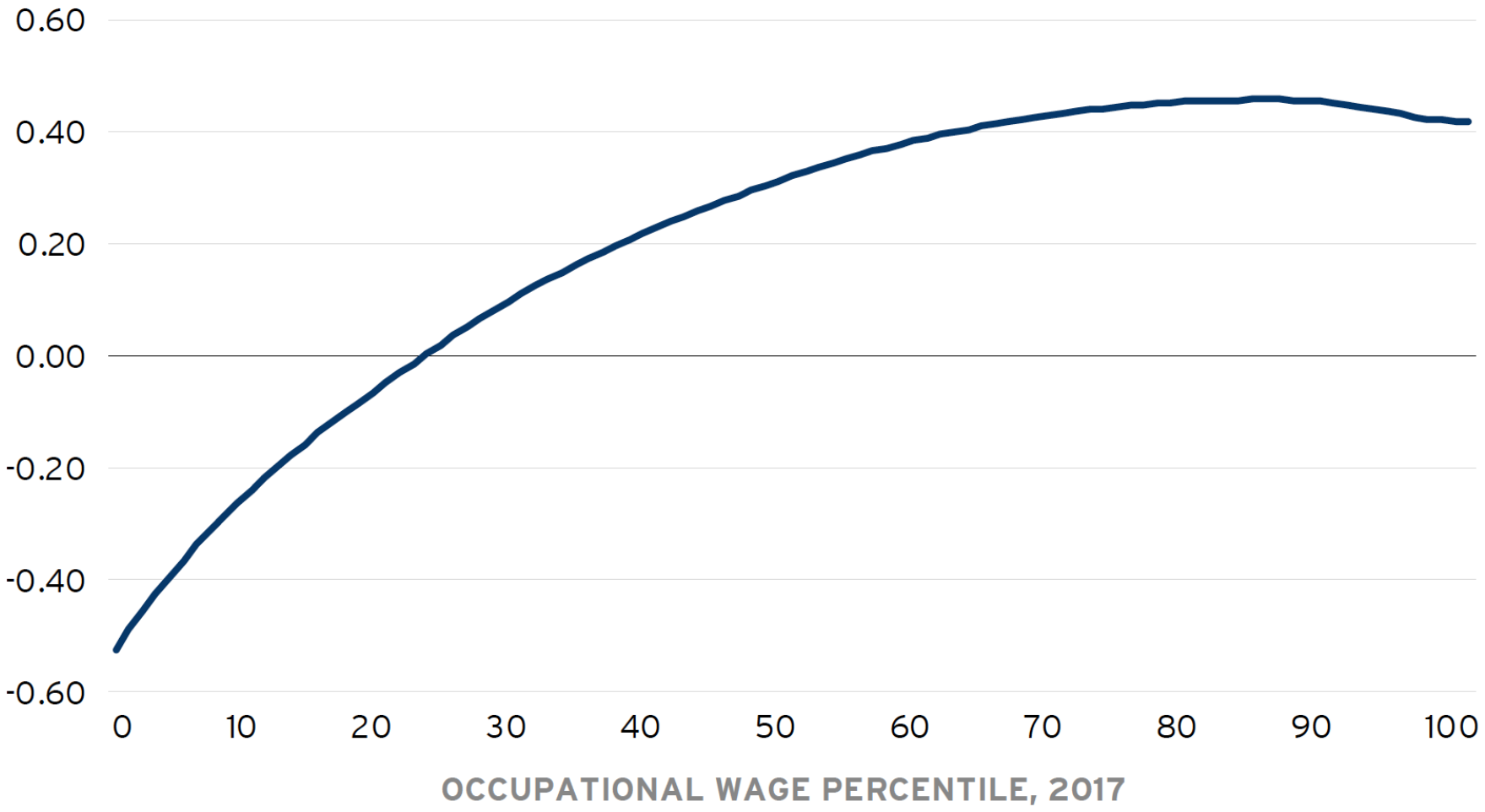

Changes in real wage levels of full-time U.S. workers by sex and education, 1963–2012
Real weekly earnings relative to 1963 (men)
A
2.0
1.8
1.6
1.4
1.2
1.0
> Bachelor's degree
Bachelor's degree
1964 1968 1972 1976 1980 1984 1988 1992 1996 2000 2004 2008 2012
Real weekly earnings relative to 1963 (women)
B
2.0
1.8
1.6
1.4
1.2
1.0
Some college
High school graduate
High school dropout
1964 1968 1972 1976 1980 1984 1988 1992 1996 2000 2004 2008 2012

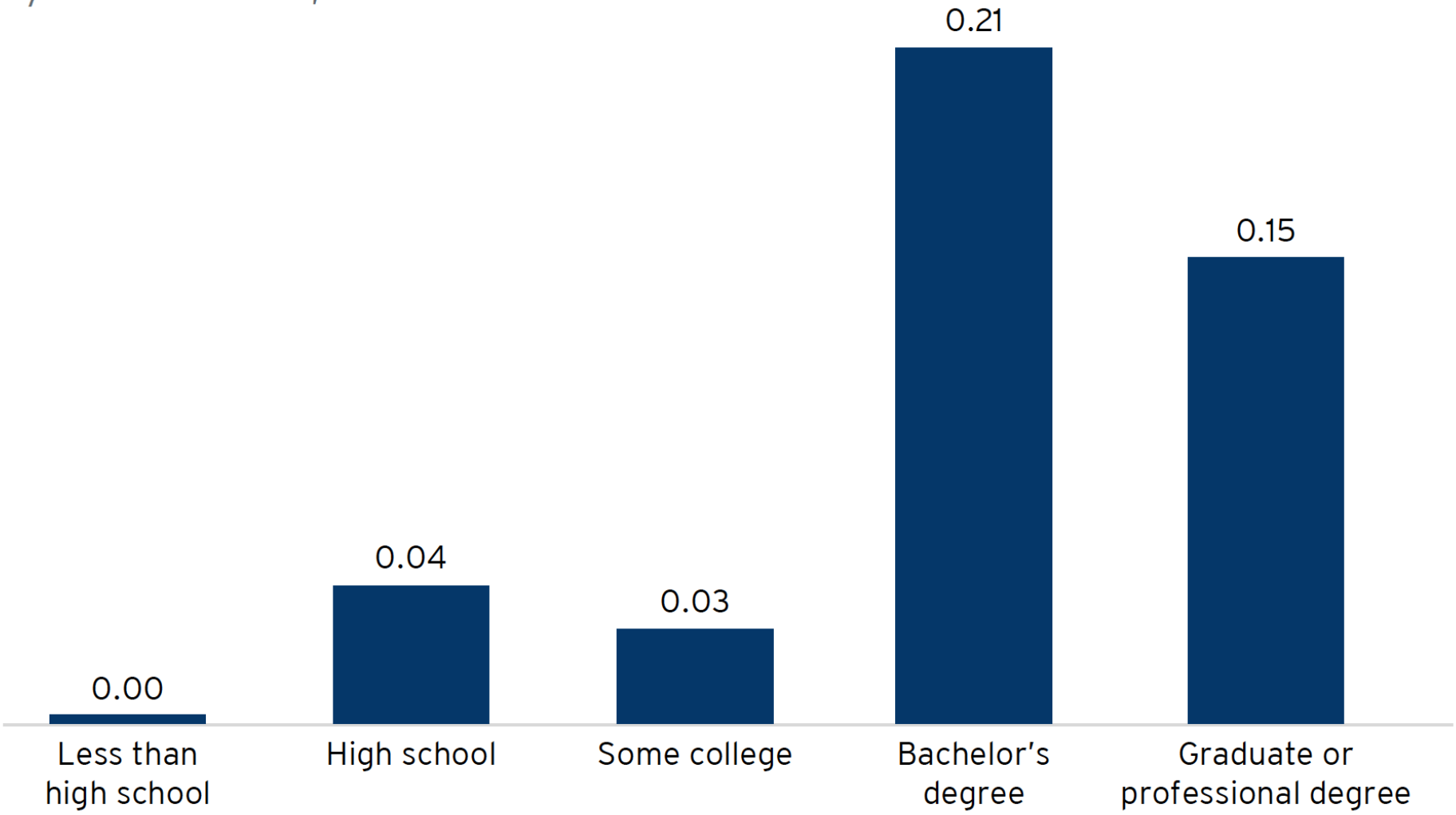
Figure 4. Standardized AI exposure, 2017



Note: Figures smoothed using a LOWESS regression
Source: Brookings analysis of Webb (2019) and OES data

Figure 3. Average standardized AI exposure

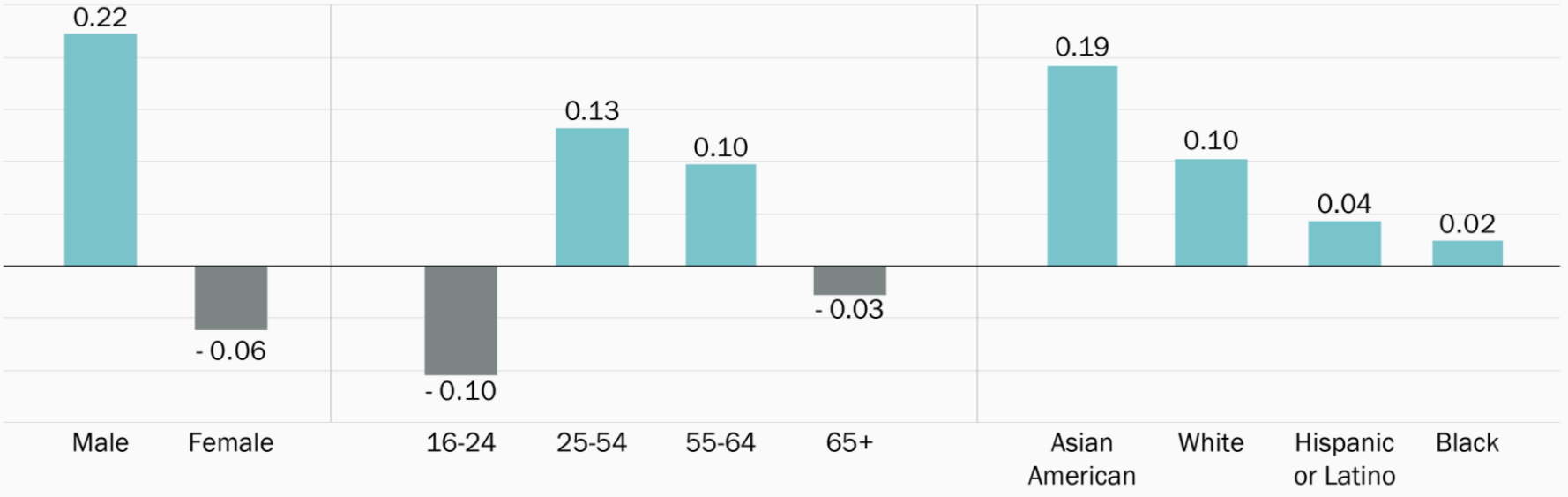
By education level, 2017



Source: Brookings analysis of Webb (2019) and IPUMS-USA ACS 1-year microdata

AI may not spare any demographic, but exposure levels will vary

Average standardize AI exposure by sex, age, and race-ethnicity, 2017

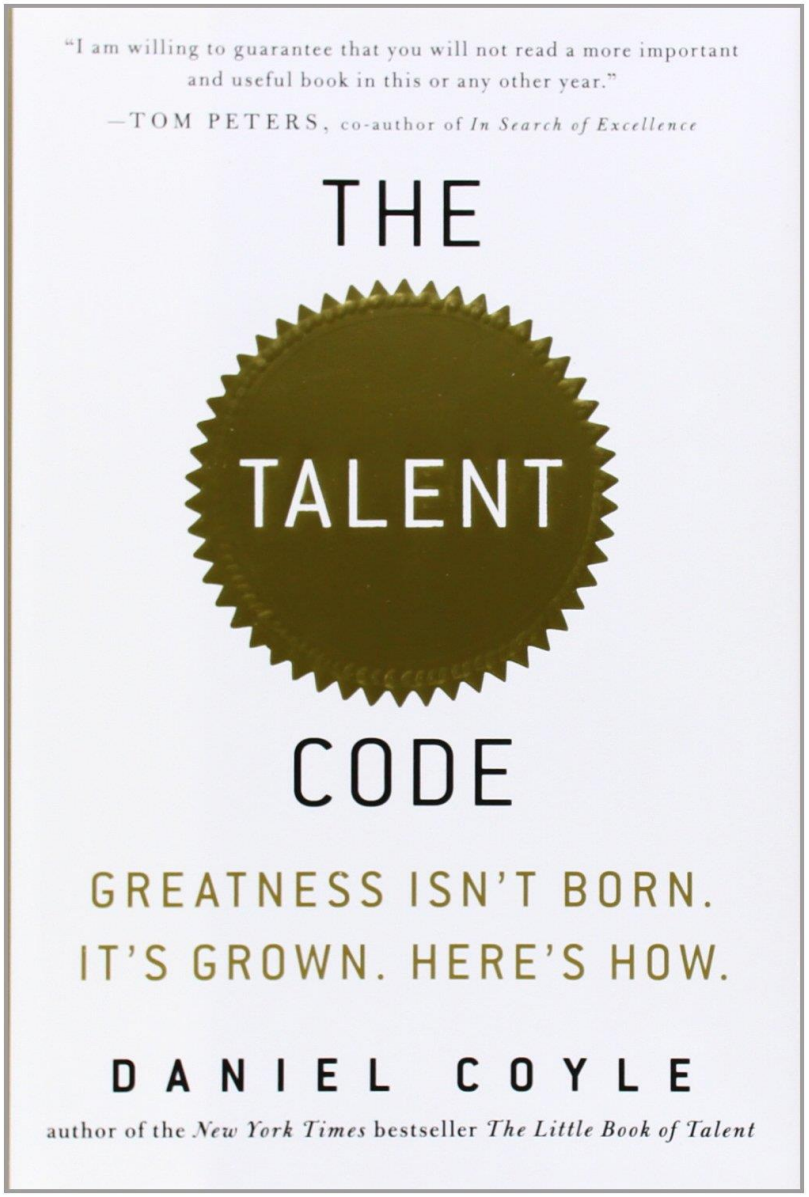


American Indians and Alaskan Natives, Native Hawaiians and Pacific Islanders, and people indicating they are two or more races are not shown due to limited data availability.

Source: Brookings analysis of Webb (2019)

What do we need?

- Creative, entrepreneurial, globally minded
- Diverse and unique
- Social and emotionally healthy



3 Ts: Talent, Time, & Teaching

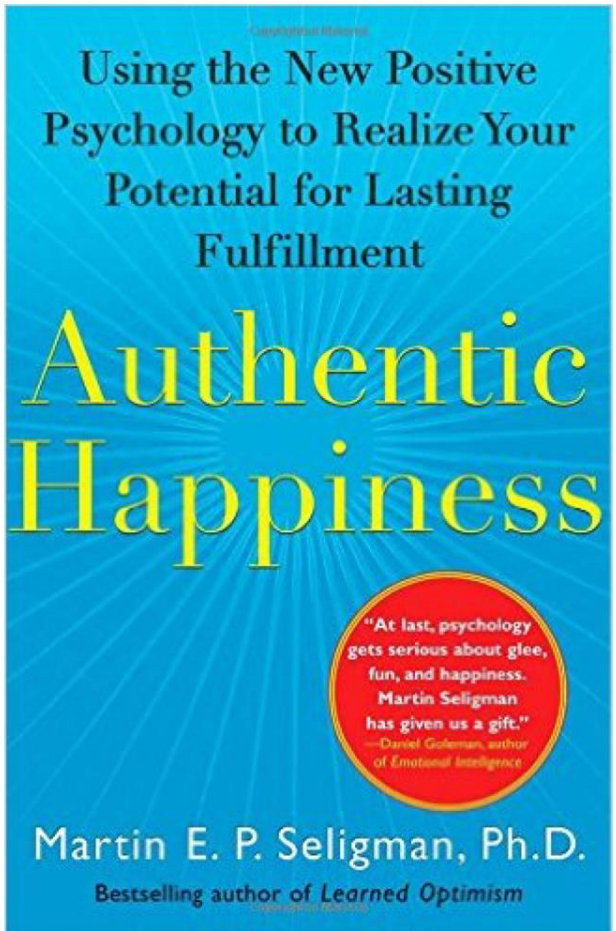
Everyone Needs to be Great

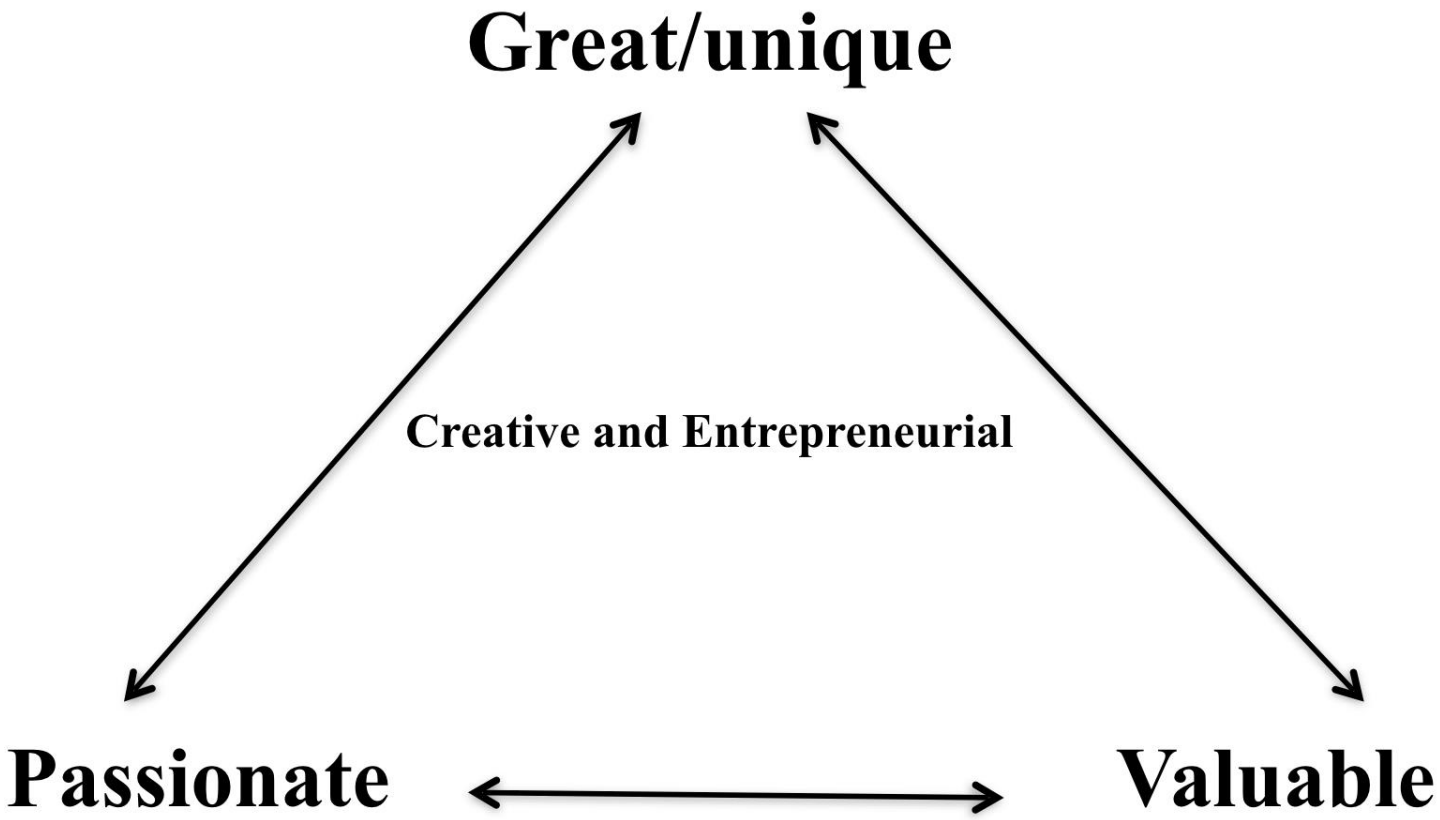
A musician must make music, an artist must paint, a poet must write, if he is to be ultimately at peace with himself. What a man can be, he must be.

--Abraham H. Maslow

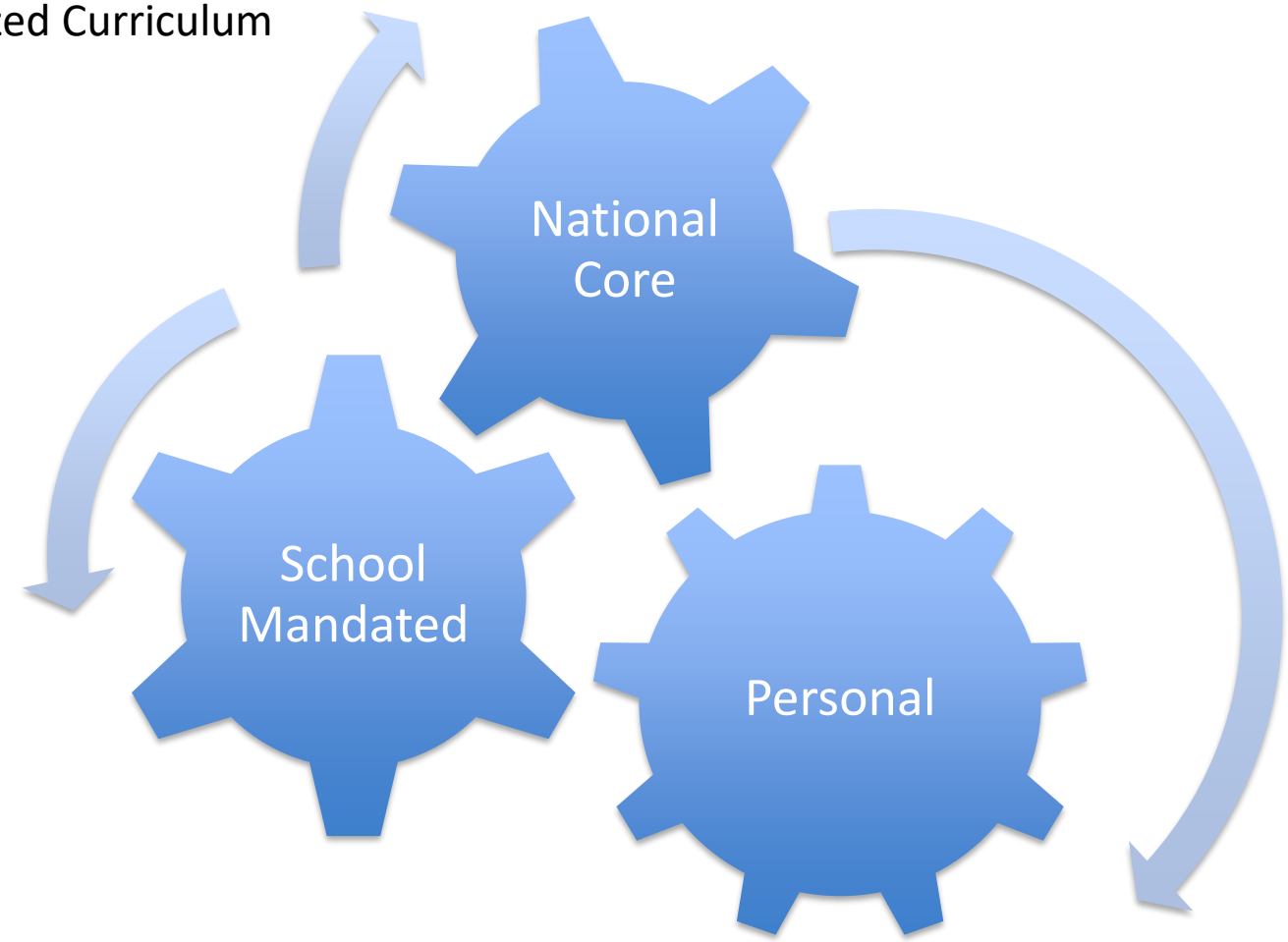
Creating value for others: Entrepreneurial Mindset

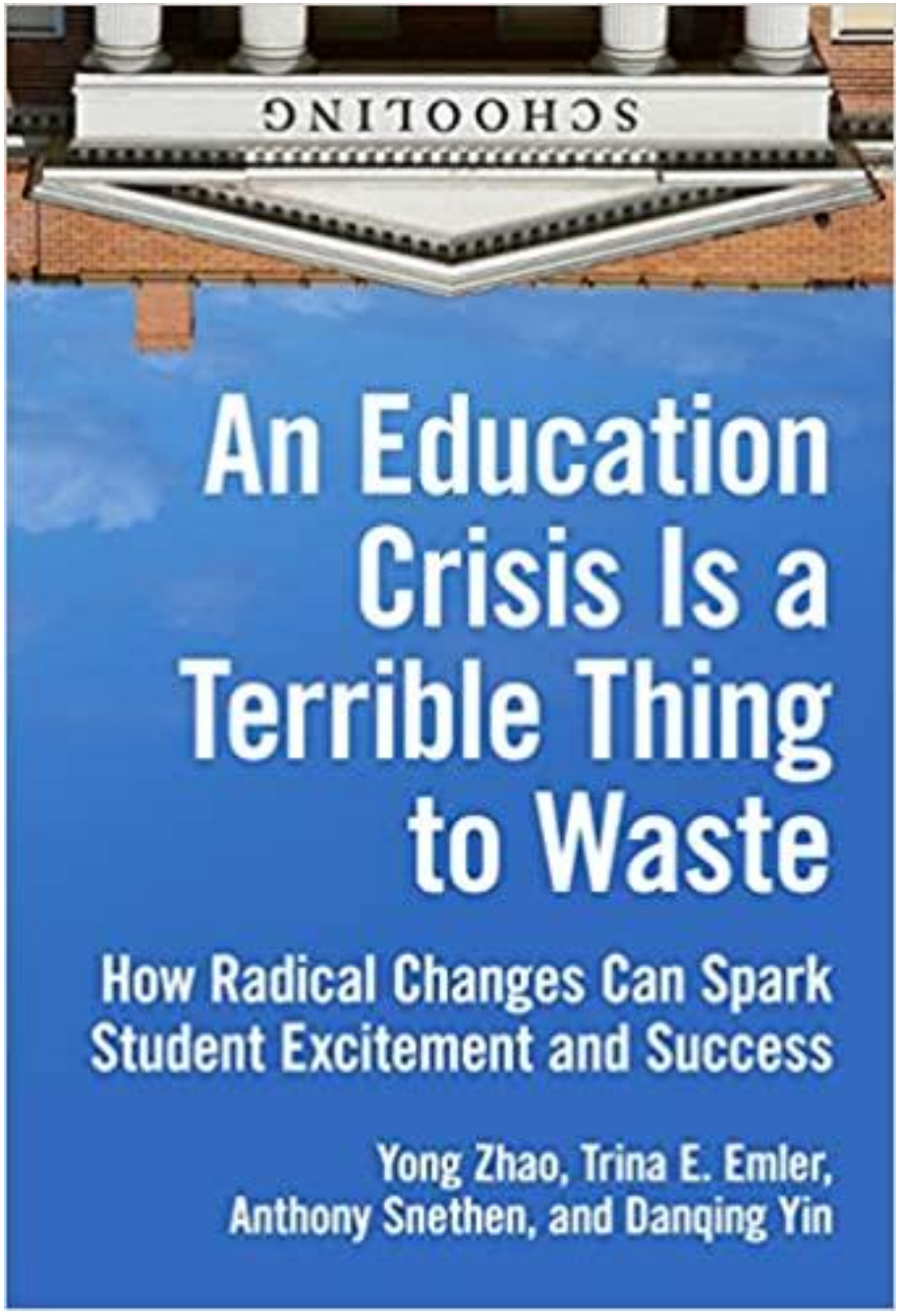
Use your signature strengths and virtues in the service of something much larger than you are." ~ Martin Seligman

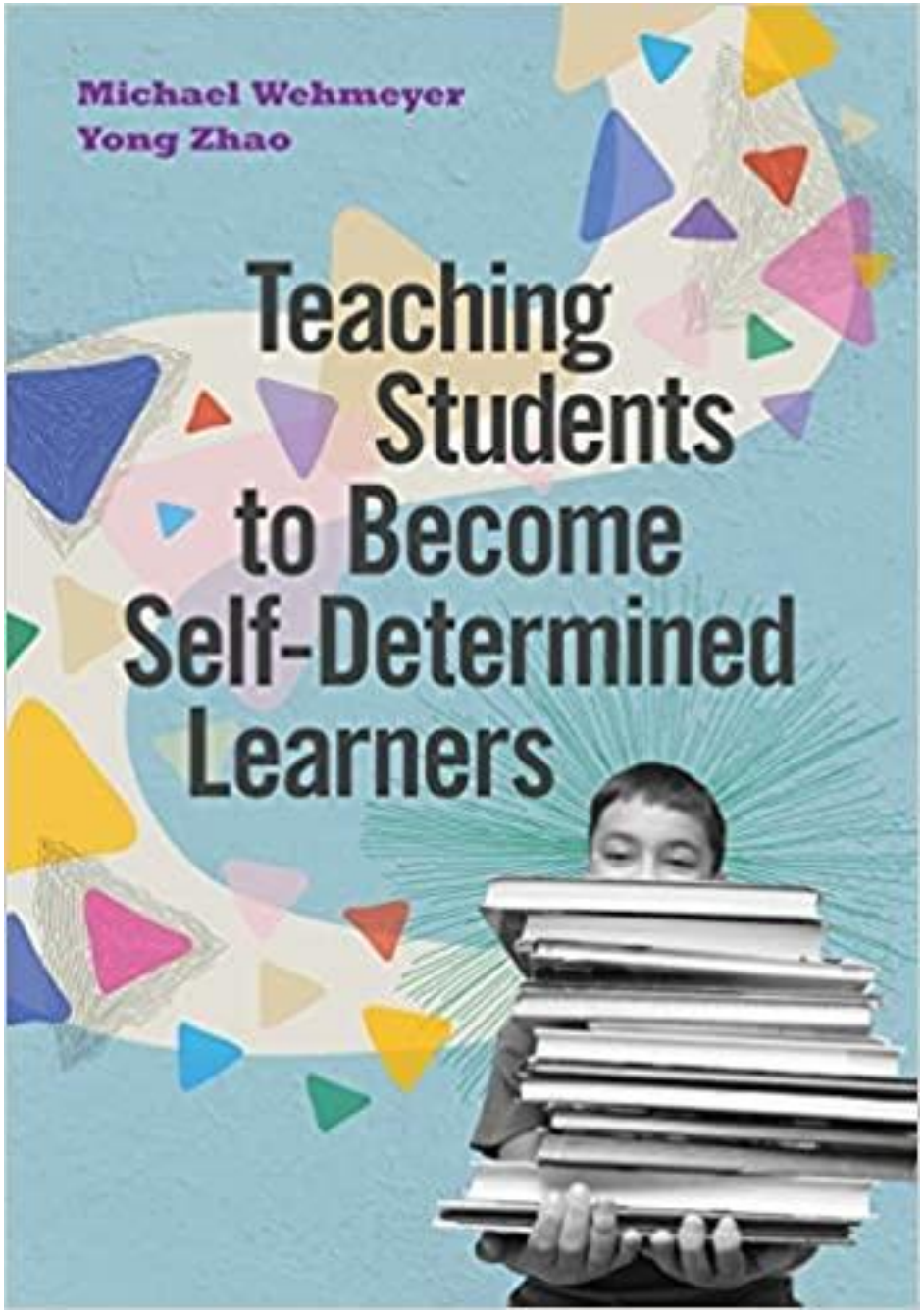



Great/unique
Creative and Entrepreneurial
Passionate
Valuable

Personalized Curriculum




SCHOOLING
An Education Crisis Is a Terrible Thing to Waste
How Radical Changes Can Spark Student Excitement and Success
Yong Zhao, Trina E. Emler, Anthony Snethen, and Danqing Yin


Michael Wehmeyer
Yong Zhao
Teaching Students to Become Self-Determined Learners