2024 Aim Hire Workforce and Education Conference: Education in a Rapidly Changing Global Context

Jason Dougal,
President
October 15, 2024

NCEE

Who is NCEE?

National **Non-profit**

At the intersection of **education & economy**

35+ years translating **global research** into national, state, & district **policy & practice**

Our Approach

We **power the field** by helping schools, districts, states, and far-flung jurisdictions learn from the world to discover what works today and anticipate what is
emerging tomorrow.

We **blaze new paths** by creating new narratives for education and translating research into inspiring, actionable and trajectory-altering policy and program designs.

We **drive impact** in the field by demonstrating what's possible, unleashing the power of many, and meaningfully responding to today's challenges and tomorrow's possibilities.

Our Time Together

A Look Behind

At recent technological developments and global workforce trends that impact what students will face in school, work, and life.

A Look Around

At what Ohio can learn from global and domestic efforts to build stronger, more future-facing schools and workforce development systems.

A Look Ahead

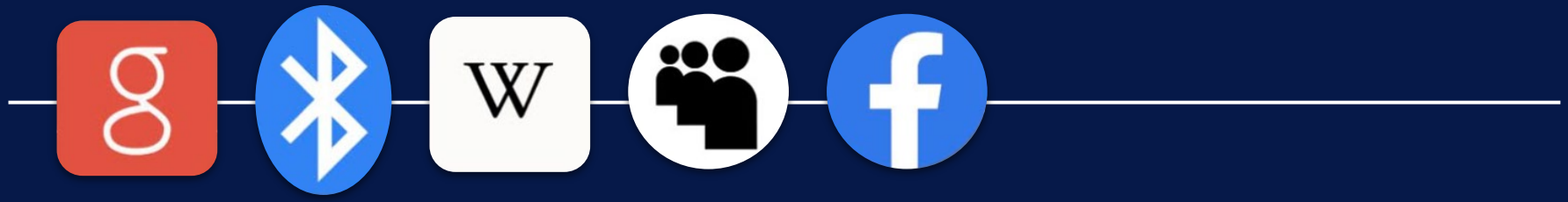
At the urgency to redesign our education system to better prepare students for the rigors of the global economy and the shifting civic landscape.

The world has **changed** for our students.

The world has changed for our students:

Post-secondary

Born between 2003–2006

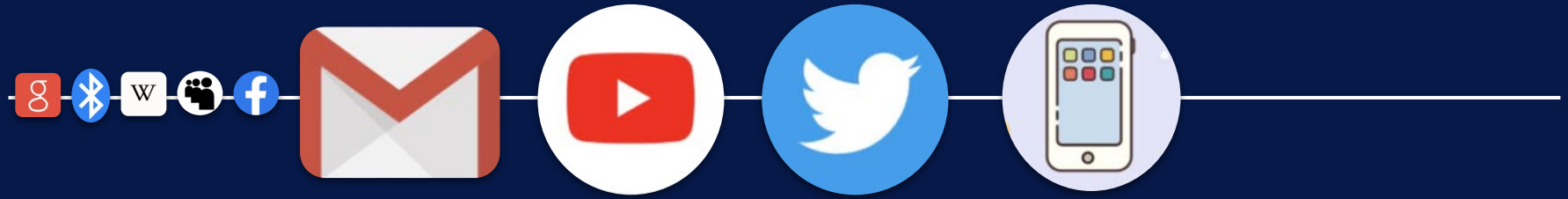


2000

Source: Dr. Sabba Quidwai, Designing Schools

The world has changed for our students:

High School
Born between 2007–2010



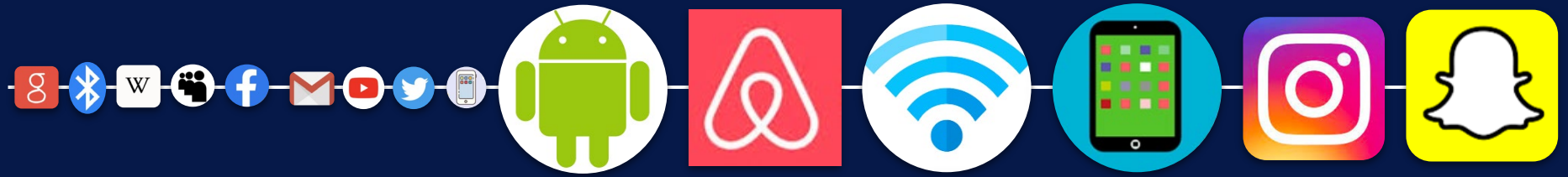
Post-secondary
Born 2002–2005

2000 **2005**

Source: Dr. Sabba Quidwai, Designing Schools

The world has changed for our students:

Middle School
Born between 2011–2013



Post-secondary
Born 2002–2005

High School
Born 2006–2009

2000

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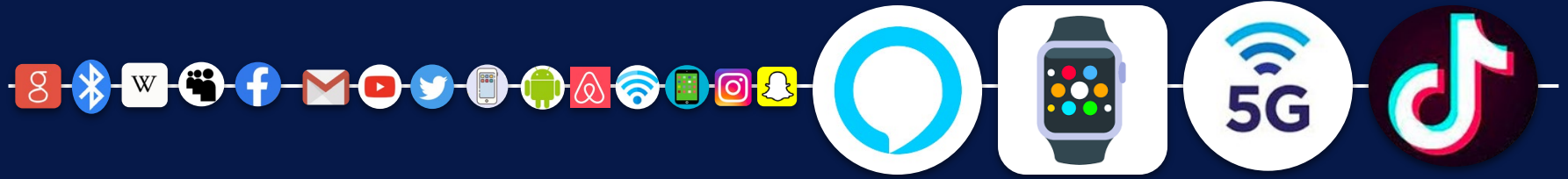
Source: Dr. Sabba Quidwai, Designing Schools

The world has changed for our students:

Elementary School
Born 2014–2019



Post-secondary
Born 2002–2005

High School
Born 2006–2009

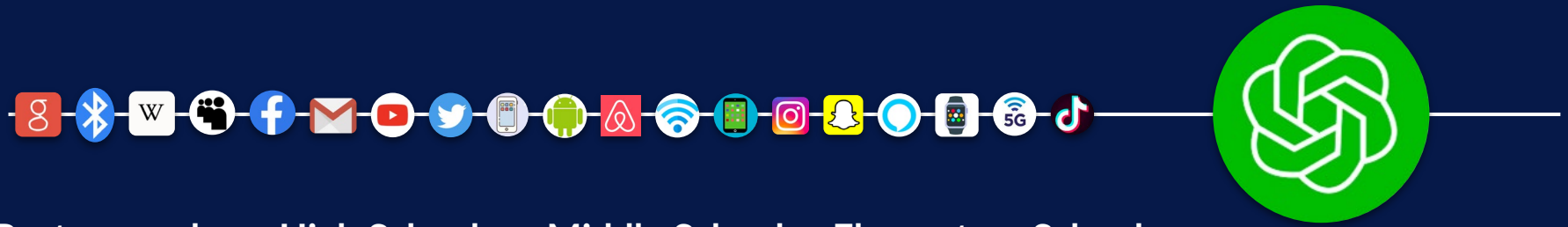
Middle School
Born 2010–2012

2000 2005 2010 2015

Source: Dr. Sabba Quidwai, Designing Schools

The world has changed for our students:

NOW



Post-secondary
Born 2002–2005

2000

High School
Born 2006–2009

2005

Middle School
Born 2010–2012

2010

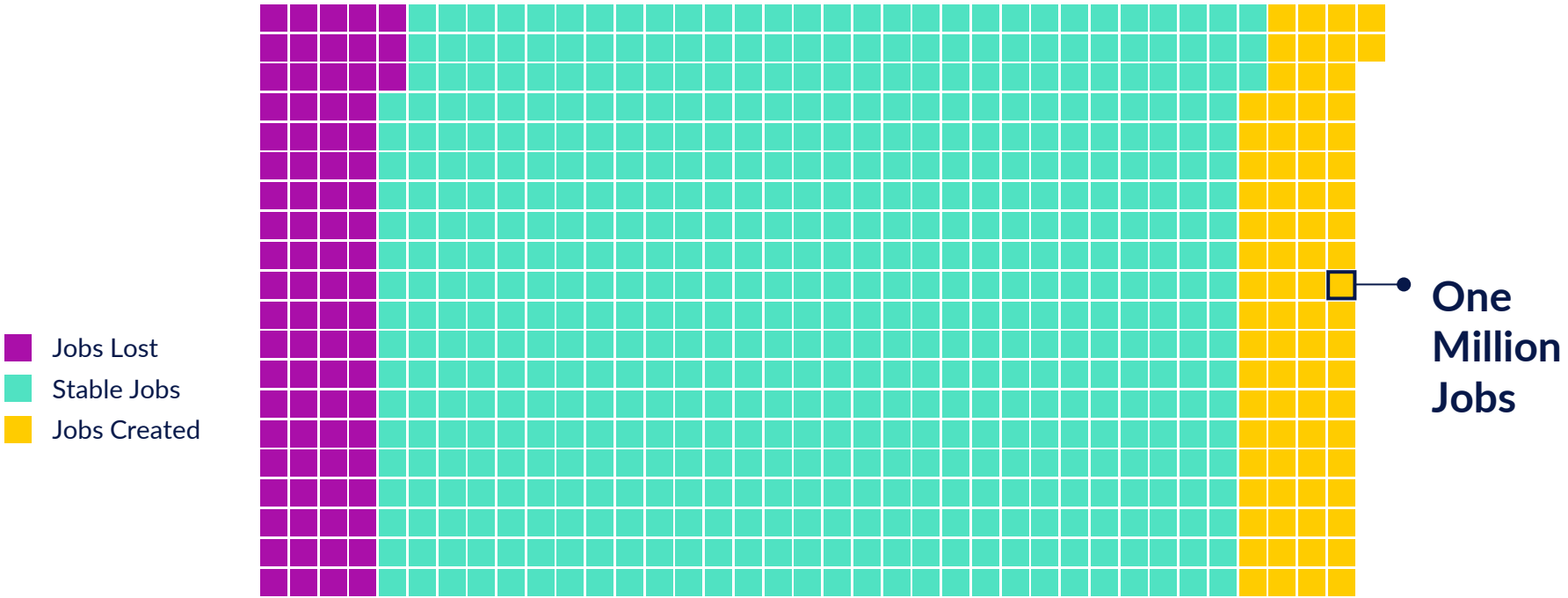
Elementary School
Born 2013–2018

2015

2024

Source: Dr. Sabba Quidwai, Designing Schools

The Changing World of Work:
23% Structural Labor Market Churn - Next 5 Years



Source: World Economic Forum, Future of Jobs Survey, 2023

Demand Across Industries

Top 20 job roles in increasing and decreasing demand across industries

Fastest-Declining Jobs

1. Bank clerks and related
2. Postal service clerks
3. Cashiers and ticket clerks
4. Data entry clerks
5. Administrative and executive secretaries
6. Material-recording and stock-keeping clerks
7. Accounting, bookkeeping, and payroll clerks
8. Legislators and officials
9. Statistical, financial, and insurance clerks
10. Door-to-door sales workers and related

Fastest-Growing Jobs

1. AI and machine learning specialists
2. Sustainability specialists
3. Business intelligence analysts
4. Information security analysts
5. Fintech engineers
6. Data analysts and engineers
7. Robotics engineers
8. Electrotechnology engineers
9. Agricultural equipment operators
10. Digital transformation specialists

Source: World Economic Forum, Future of Jobs Survey, 2023

Current Core Top Skills

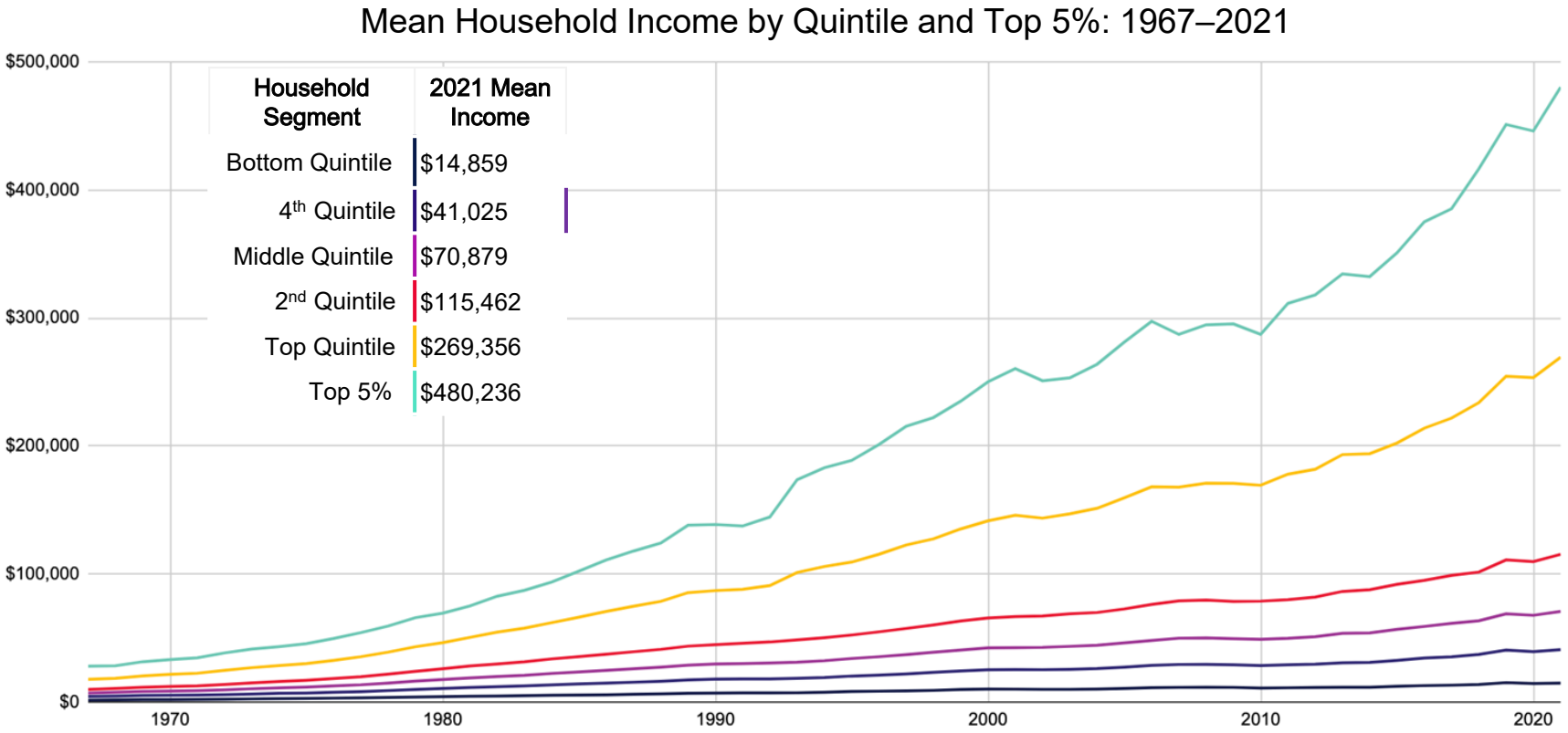
Ranked by Importance

1. Analytical thinking
2. Creative thinking
3. Resilience, flexibility, and agility
4. Motivation and self-awareness
5. Curiosity and lifelong learning
6. Technological literacy
7. Dependability and attention to detail
8. Empathy and active listening
9. Leadership and social influence
10. Quality control
11. Systems thinking
12. Talent management
13. Service orientation and customer service
14. Resource management and operations
15. AI and big data
16. Reading, writing, and mathematics
17. Design and user experience
18. Multilingualism
19. Teaching and mentoring
20. Programming
21. Marketing and media
22. Networks and cybersecurity
23. Environmental stewardship
24. Manual dexterity, endurance and precision
25. Global citizenship

- Cognitive skills
- Engagement skills
- Ethics
- Management skills
- Physical abilities
- Self-efficacy
- Technology skills
- Working with others

Source: World Economic Forum, Future of Jobs Survey, 2023

Income Distribution: The Last Half Century



Source: US Census Bureau, March 2023

NCEE's Global Focus

Why look globally?

- As the world globalizes, **we compete with the world**, not just our neighbors.
- We face **common challenges** across the globe — climate, political division, advancing technology.
- Global leaders inform us about how they **adapt to a changing future.**
- We can **translate insights** from leading global systems to our schools.

Benchmarking Globally

Why PISA (Programme for International Student Assessment)?

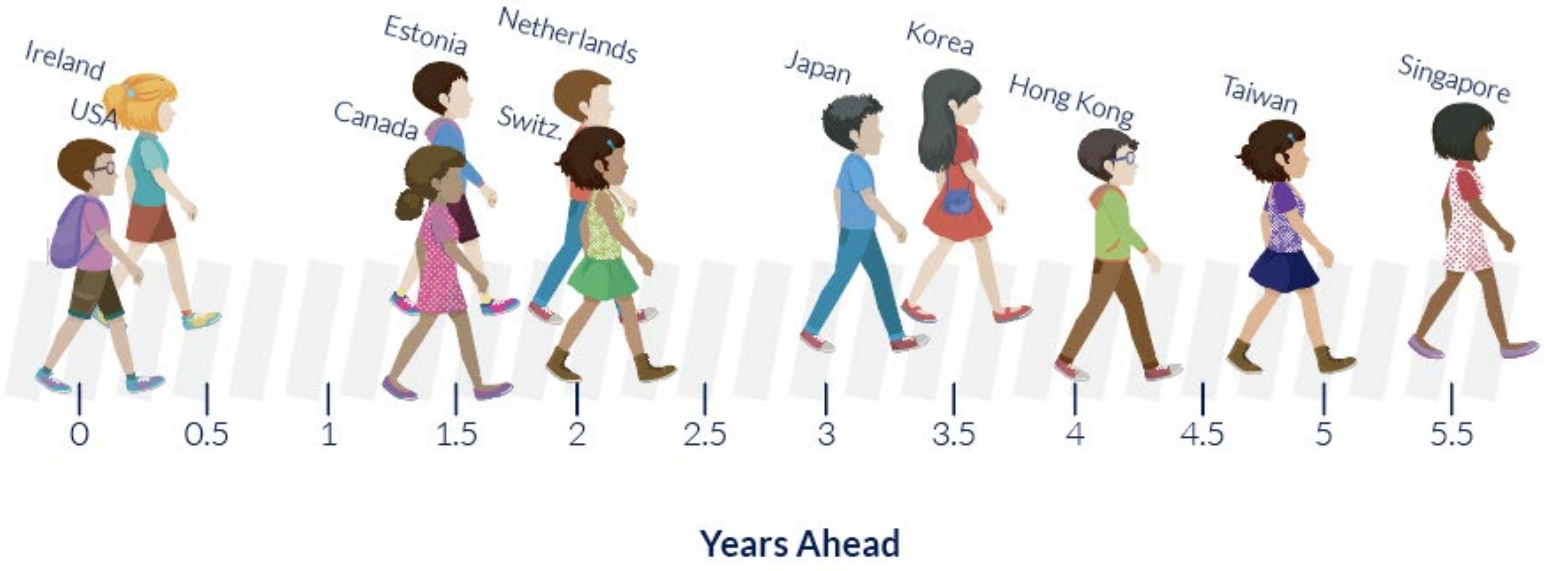
- Assessment of how well 15-year-olds in 81 countries can **apply what they know** in:
  - **Reading** literacy
  - **Mathematics** literacy (core domain)
  - **Science** literacy
  - **Creative Thinking** (in some countries)
- **Mixture** of multiple-choice and constructed response
- Measures **application and transfer** of knowledge
- Paired with survey of student self-efficacy, life satisfaction, and school culture — **not just a score**

Benchmarking Globally

US Average Student Performance on PISA 2022: **Mathematics**

Benchmarking Globally

US Top-Performing Students on PISA 2022: **Mathematics**



PISA: What Can Students Do?

U.S. students have basic skills

80% Can recognize a main idea, cause and effect, and if conclusions are warranted

66% Can compare the distance across two different routes on a road, or convert currency

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But they struggle to apply them.

14% Can distinguish fact from opinion

11% Can apply scientific knowledge to an unfamiliar situation

7% Can model complex situations in math equations and compare and evaluate different ways of solving problems

Imagine Schools Where…

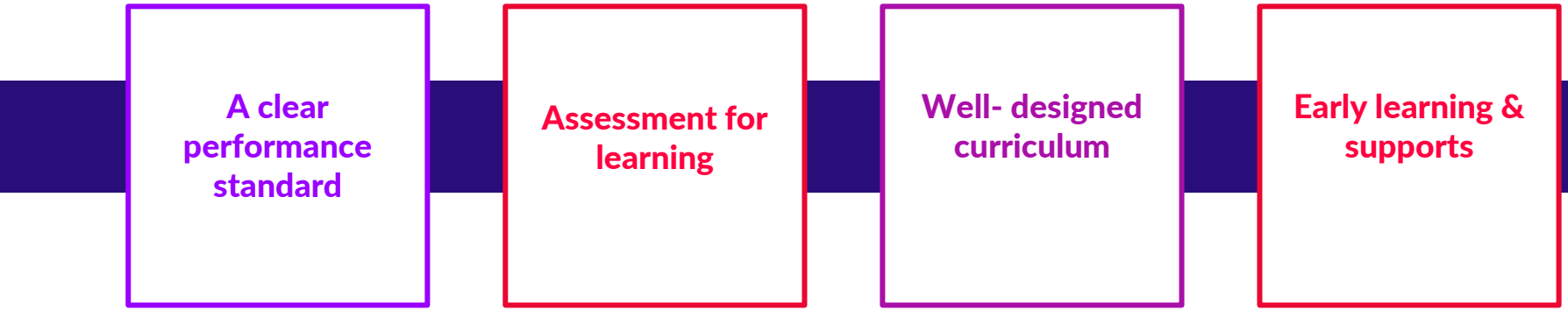
To graduate students future-ready, high-performing schools have:

Proficiency-based learning systems based on future-ready performance standards, with supports for all students

World-class **teaching and learning** to develop confident and engaged self-directed learners

Aligned and coherent leadership focused on accountability for system goals and continuous improvement

Proficiency-Based Learning System



Student work illustrates the standards

Benchmarks along the way

Relentless focus on ensuring all students stay on track to that goal

Provide teachers & students clear info about progress & challenges

External assessment only at key levels.

Designed to ensure students are ready for next level

Pedagogically & developmentally appropriate

Targeted at what is most important

With rigorous personalized pathway options in high school

Including early intervention

Ensure readiness for learning

Wraparound services & targeted academic support

Students stay on track and thrive

World-class Teaching & Learning

Rigorous teacher preparation

Deep content knowledge

Ongoing professional learning

Pedagogical expertise

Focus on practice

Mentorship from expert teachers

A continuum of leadership roles

Incentives to support & reward development of expertise

Aligned leadership development & professional learning

Schools organized for teacher collaboration

Central goal of improving student learning with students at the center

Teacher learning is as important as student learning

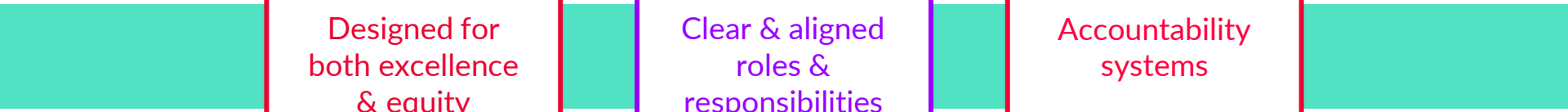
Applied & Relevant Learning

Learning is engaging, personalized, & self-directed

Students have a variety of experiences outside the classroom

Students prepare for the world in which they will live

Coherent & Aligned Leadership



Designed for both excellence & equity

Provides students with the resources needed to succeed

Talent management is the primary focus of leadership

Clear & aligned roles & responsibilities

For leaders throughout the system/school

Long term strategic vision

Building capacity to take on the next teacher leadership role

Accountability systems

Incentives & supports to reach school goals & to innovate to continue to improve

Supports needed to reach accountability goals

Switzerland Youth Apprenticeship

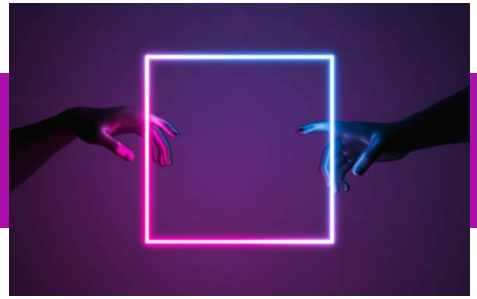
- 70% Swiss high school students enroll in apprenticeships starting in grade 10
- Employers set the standards, commit to training students in their workplaces, and assess their learning
- Combines school-based learning with paid work hosted by employer
- Three-to-four-year learning experience resulting in nationally recognized credential
- Graduates can access further education in an academic or applied university

Singapore Institute of Technical Education

Features:

- Close connection to industry
- Standards set to international benchmarks
- Credentials of value
- 25% of Singapore students enroll
- 2-to-3 year program
- Grads can go to Polytechnic or University

Looking Ahead: What Top-Performers Are Asking



How to **harness emerging technologies** to create new learning environments and more equitable opportunities for students

How to make learning more **personalized, interactive, and competency-based**

How to support students more **holistically**

How to build skills and competencies for a **changing workplace**

How **teacher roles need to shift** in a digital world and as learning becomes more personalized

Thank you.