Future Schools: Are our leaders ready?

Datuk Dr. Amin Senin
Ministry of Education Malaysia

Areas to be covered

Scenario and Context

Future School

System Readiness
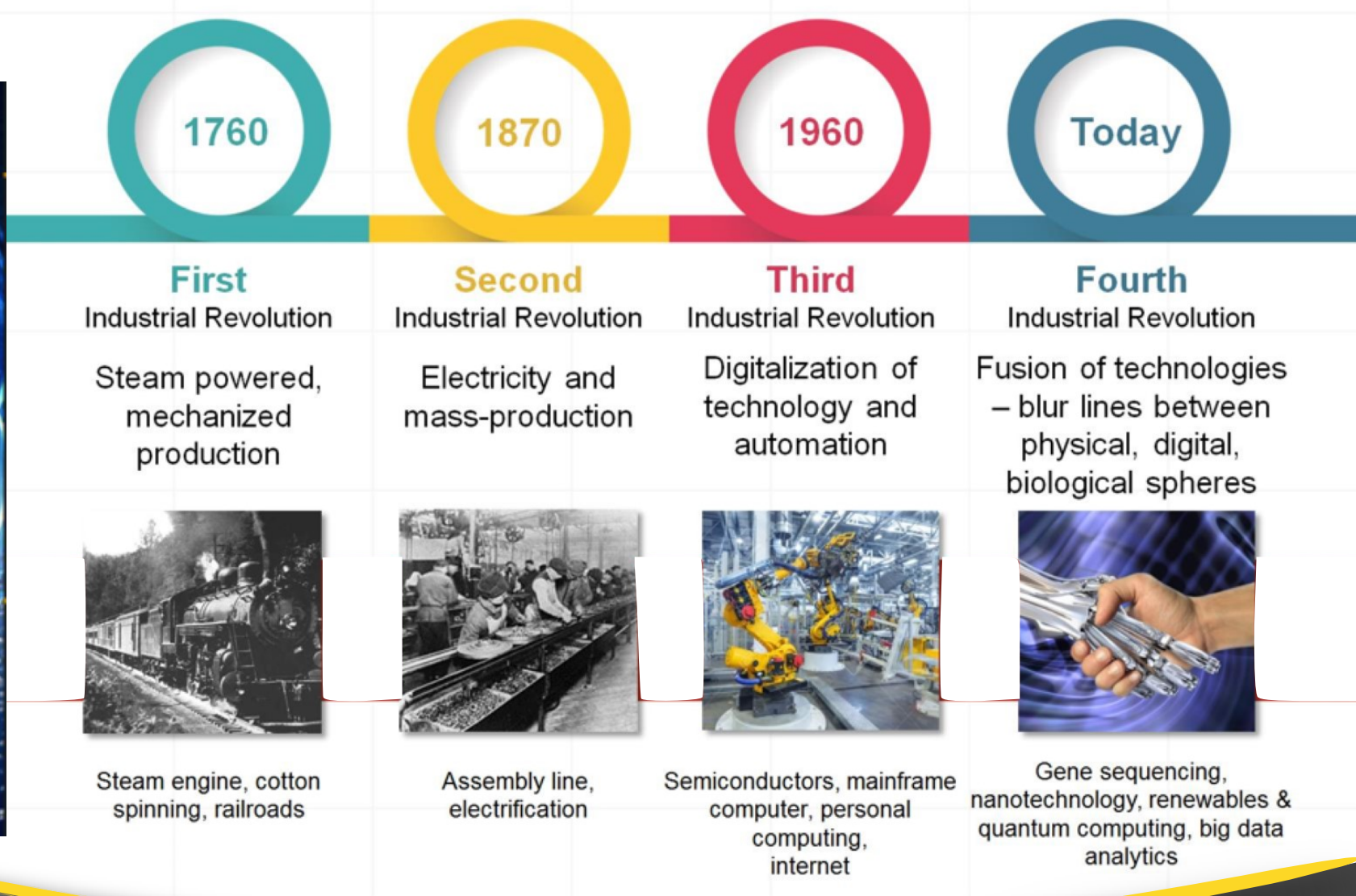
School **Leader** Readiness

Challenges and Moving Forward

Question to Ponder

- ✅ How many here are frequent users of **GRAB CAR** or **UBER** when travelling?

- ✅ How many of you here use **AIRBNB** when looking for accommodation?

- ✅ Have you heard of the retail group **ALIBABA**?

- ✅ Have you heard of **NETFLIX** the world's biggest movies house?

The Fourth Industrial Revolution

Klaus Schwab

1760	1870	1960	Today
First Industrial Revolution	**Second** Industrial Revolution	**Third** Industrial Revolution	**Fourth** Industrial Revolution
Steam powered, mechanized production	Electricity and mass-production	Digitalization of technology and automation	Fusion of technologies – blur lines between physical, digital, biological spheres
Steam engine, cotton spinning, railroads	Assembly line, electrification	Semiconductors, mainframe computer, personal computing, internet	Gene sequencing, nanotechnology, renewables & quantum computing, big data analytics

The Fourth Industrial Revolution
Profound and systemic change

"... technology and digitization will revolutionize everything ...

Bring change unlike experienced before:
- **Speed** – faster pace
- **Scale** – returns to scale are staggering
- **Force** – complete transformation of entire systems

Unique due to **harmonization and integration** of many different disciplines and discoveries

Generates great benefits but also big challenges – rising **inequality**

Drivers
Megatrends

Technological advances to change the world

- Physical: autonomus vehicles, 3D printing, advanced robotics, new materials.
- Digital: IoT
- Biological: genome, synthetic biology, genetic engineering, bioprinting.

How to ensure advances continue to be made

- Goverments to allocate **more aggressive funding for research programmes**.
- **Public-private research collaborations** should increasingly be structured for building knowledge and human capital

1. Growth:
mixed views
– ending impact vs
inflection point to surge

- Slower global growth due to ageing and productivity remaining sluggish
- Positive impact: empowering and connecting, ability to address negative externalities, and realising the efficiencies of digital innovation

2. Employment:
new technology will
change nature of work

- Labour substitution innovation forces workers to become unemployed or to reallocate their skills elsewhere
- Demand for new goods and services increases, creating new occupations, businesses and industries

3. Nature of work:
new and flexible
work revolution

- On-demand economy and the human cloud
- Portfolio of things to generate an income
- Challenge: to come up with new forms of social and employment contracts to suit the changing workforce and nature of work

7

1. Hard to discern the full societal impact

2. Challenge: how to accommodate the new modernity while embracing our traditional value systems

3. Rising inequality puts pressure on the middle class and social stability

4. Integration of digital media changes how communities form and relate to one another –
"me-centred society"
- More defined by personal projects and individual values and interests rather than by space, work and family

Impact
The Individual

- **Not only changing what we do but also who we are** – identity, privacy, ownership, consumption patterns, time on work and leisure, how we develop our careers and cultivate our skills
- **Identity, morality and ethics** – redefining what it means to be human
- **Human connection** – negative impact on social skills and ability to emphasize
- **Managing public and private information** – increasing degree of interconnectedness vs privacy

10 Skills to thrive in 4th Industrial Revolution

1. **Complex** problem solving
2. **Critical** Thinking
3. **Creativity**
4. People **Management**
5. **Coordinating** with others
6. Emotional **Intelligence**
7. Judgement and **decision** making
8. **Sevice** Orientation
9. **Nego**tiation
10. Cognitive **Flexibility**

WORLD ECONOMIC FORUM
COMMITTED TO IMPROVING THE STATE OF THE WORLD

Global Challenge Insight Report

The Future of Jobs
Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution

January 2016

Source: Future Jobs Report.
World Economic Forum

What need to change in education?

World Economic Forum Report

> **Connecting** education and employment

> **Improving** forecast

> **Disrupting** education and labour policy

The **4** Pillars of Learning

Learning: the Treasures within (UNESCO, 1996)

- Learning **to know**
- Learning **to do**
- Learning **to be**
- Learning **to live together**

Holistic Needs

Sustainable Development Goal 4
(SDG 4)

SDG 4-Education 2030 :Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning for All

7 Targets
3 Means Of Implementations
(7+3 = 10 Targets)

43 INDICATORS

Defining the Sustainable Development Goal 4

Overarching Goal: "To ensure inclusive equitable quality education and promote lifelong learning for all"

is based on rights, responsibility and action; and

is a 21st Century approach to living

Regards planet earth as common home of humanity and being ethical as an important element (Griffiths, 1998);

SDG4-Education 2030 is pivotal to equip learners in the dynamic world of the 21st century

Future School:
Are Our Leaders Ready

Scenario and Context

Future School

System Readiness

School **Leader** Readiness

Challenges and Moving Forward

Future Schools:
4 Unstoppable themes in education

1 **Traditional** schooling is outdated

2 **Ubiquitous** digital innovation

3 **New modes** of learning

4 **New form** of leadership

Loss of Student Enthusiasm for School by Grade Level
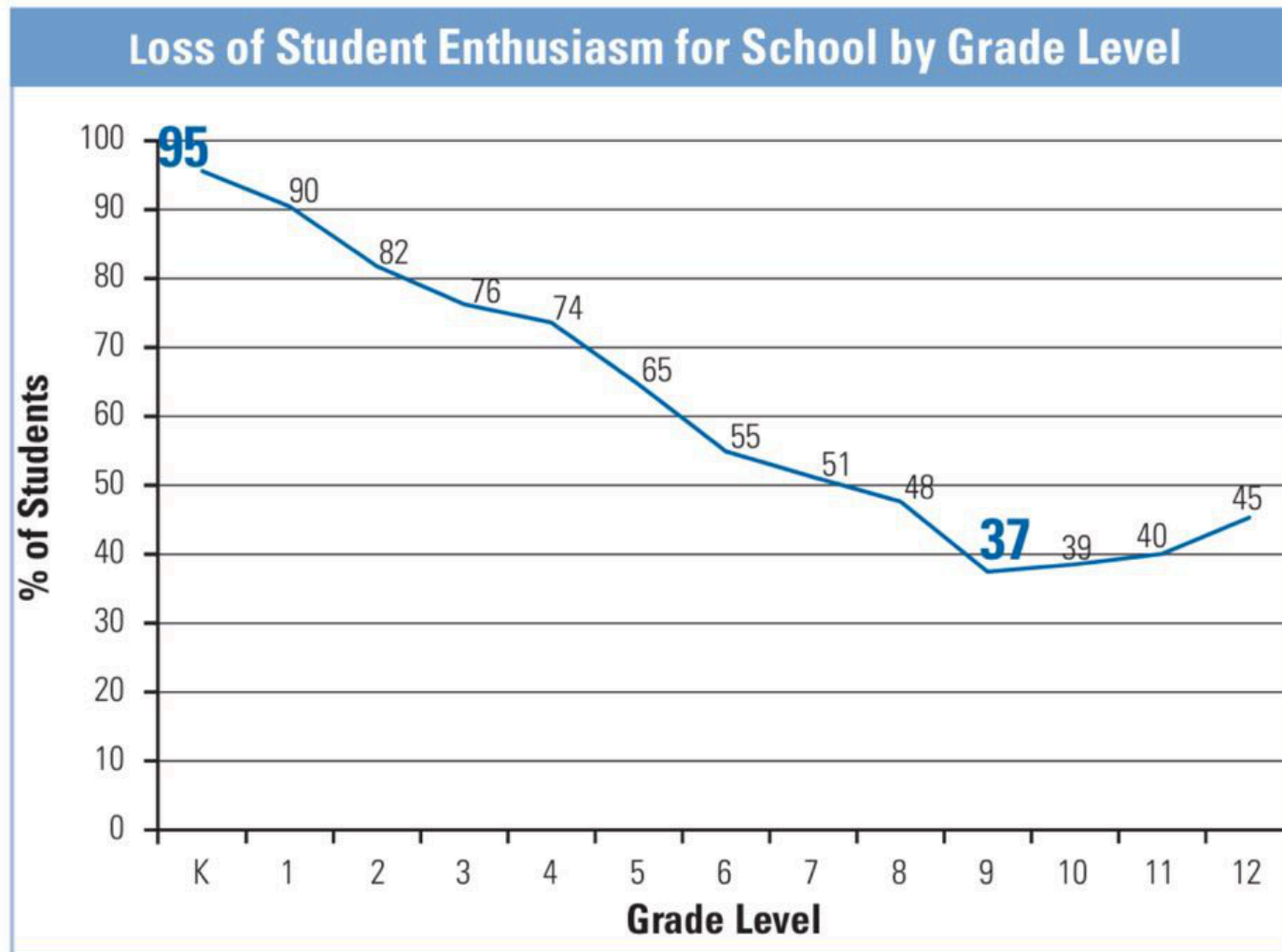
Source: Jenkins (2012)

2 **Ubiquitous** digital innovation
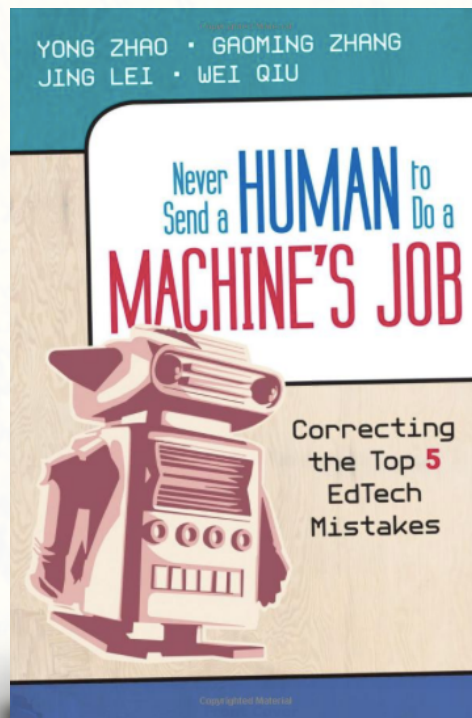
Yong Zhao and his team have written a book that challenges the ideas not of how technology can make teaching better, but of **how technology can create schools** that are truly learner-centered. They focus not only on what technology could do better, but **how the human element of schools** is still needed now more than ever."

Never Send a HUMAN to Do a MACHINE'S JOB

YONG ZHAO · GAOMING ZHANG
JING LEI · WEI QIU

Correcting the Top 5 EdTech Mistakes

learning
anytime,
anywhere

powerful
pedagogies
that unleash
motivational
forces among
student

bringing about **positive** change

- Managing
- Leading
- Cultivating

+ve

Three Clusters of Pedagogy

1 **Antiquated** Pedagogy

2 **Classical** Pedagogy

3 **Contemporary** Pedagogy

Heidi Hayes **JACOBS**
Marie Hubley **ALCOCK**

BOLD MOVES FOR SCHOOLS

How We Create Remarkable Learning Environments
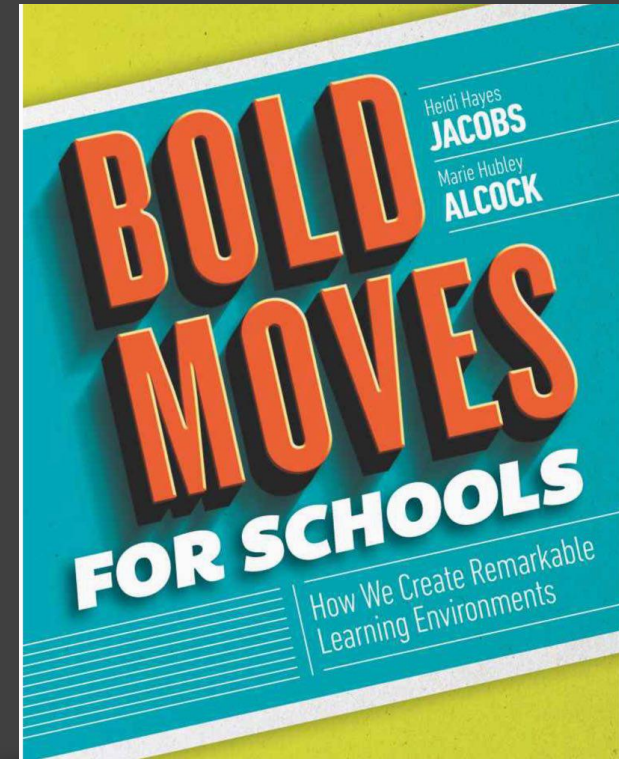
What cluster of pedagogy mostly used by your teachers in classroom?

1 **Antiquated** Pedagogy

2 **Classical** Pedagogy

3 **Contemporary** Pedagogy

Antiquated Pedagogy

- Learner as **receptacle**
- Learner as **placeholder**
- Learner as **robot**
- Learner as **obedient receiver**
- Learner as **follower**
- Learner as **nonentity**

Classical Pedagogy

- Learner as **critical thinker**
- Learner as **collaborative team member**
- Learner as **project-based planner**
- Learner as **creative thinker**
- Learner as **researcher**
- Learner as **knowledge organizer**

Contemporary Pedagogy

- Learner as **self-navigator**
- Learner as **social contractor**
- Learner as **media critic & media maker**
- Learner as **innovative designer**
- Learner as **globally connected citizen**

Future School:
Are Our Leaders Ready

Scenario and Context

Future School

System Readiness

School **Leader** Readiness

Challenges and Moving Forward

Is Our System Ready?

MEB 2013-2025

Malaysia
Education
Blueprint
2013-2025
(Preschool to Post-Secondary Education)

System Aspirations

Access — 100% enrolment across all levels from preschool to upper secondary by 2020

Quality — Top third of countries in international assessments such as PISA and TIMSS in 15 years

Equity — 50% reduction in achievement gaps (urban-rural, socio-economic and gender) by 2020

Unity — An education system that gives children shared values and experiences by embracing diversity

Efficiency — A system which maximises student outcomes within current budget

Students' Aspiration
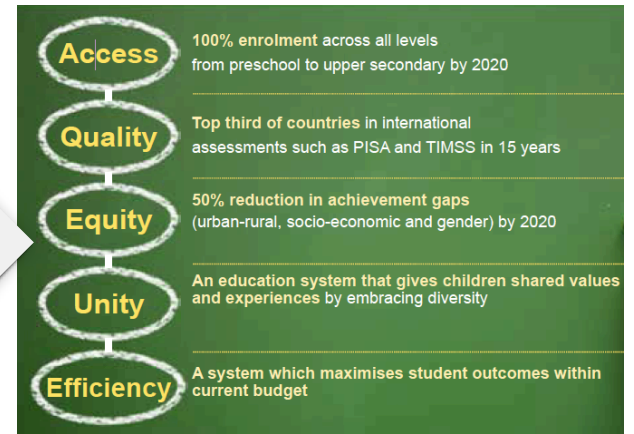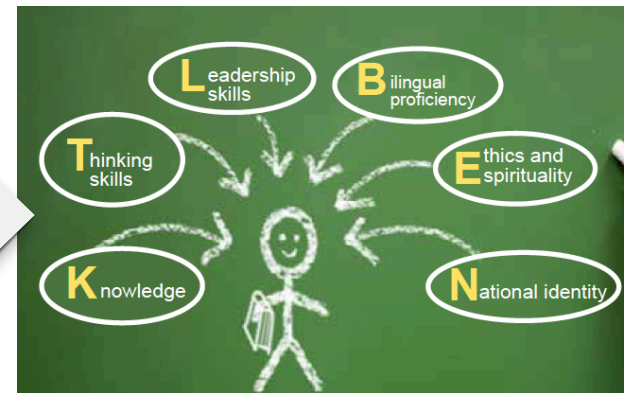
- **L**eadership skills
- **B**ilingual proficiency
- **T**hinking skills
- **E**thics and spirituality
- **K**nowledge
- **N**ational identity

Mapping of SDG 2030 with MEB 2013-2025

Target in SDG 4	Education 2030 SDG4	MEB 2013 - 2025
4.1 Free, equitable and quality primary and secondary education	●	●
4.2. access to quality early childhood	●	●
4.3 equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	●	●
4.7 knowledge and skills needed to promote sustainable development through education	●	●

District Transformation
Programme (DTP)

Ministry Level

PPD

PPD Head — Oversees DTP implementation

SCHOOL

Principal

Teachers

Senior Fellow — Provides ongoing coaching & support

SIPartner+ — Coaches and mentors ~25-30 school leaders

SISC+ — Coaches and mentors ~15-20 teachers SISC+ for Maths, Malay and English

Master Trainer — Provides ongoing coaching & support
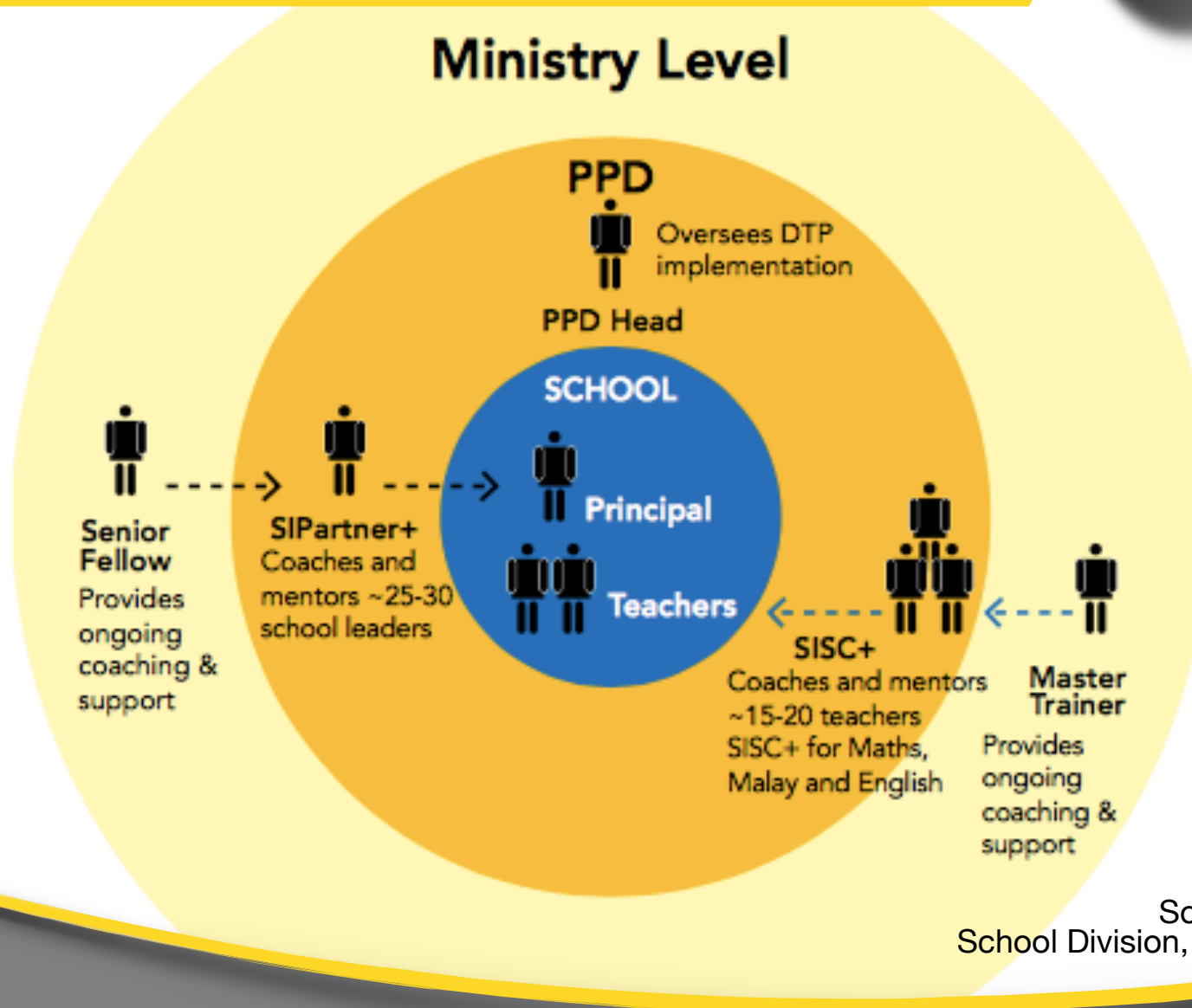
Source:
School Division, MOE

31

School Transformation Programme 2025 (TS25)

System Aspirations

Malaysia Education Blueprint 2013-2025 (Preschool to Post-Secondary Education)

Every Student

Students' Quality

Dokumen Standard

Pedagogi ⟷ Pentaksiran

ELIT Support

Every School

Quality Schools

Guru Berkualiti

Persekitaran Pengajaran dan Pembelajaran Bermakna

Pemimpin Berkesan

Sokongan PIBG & Komuniti
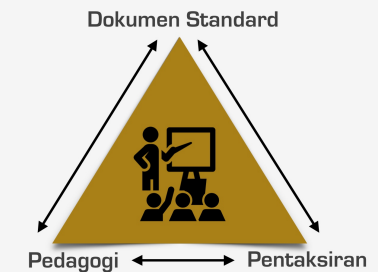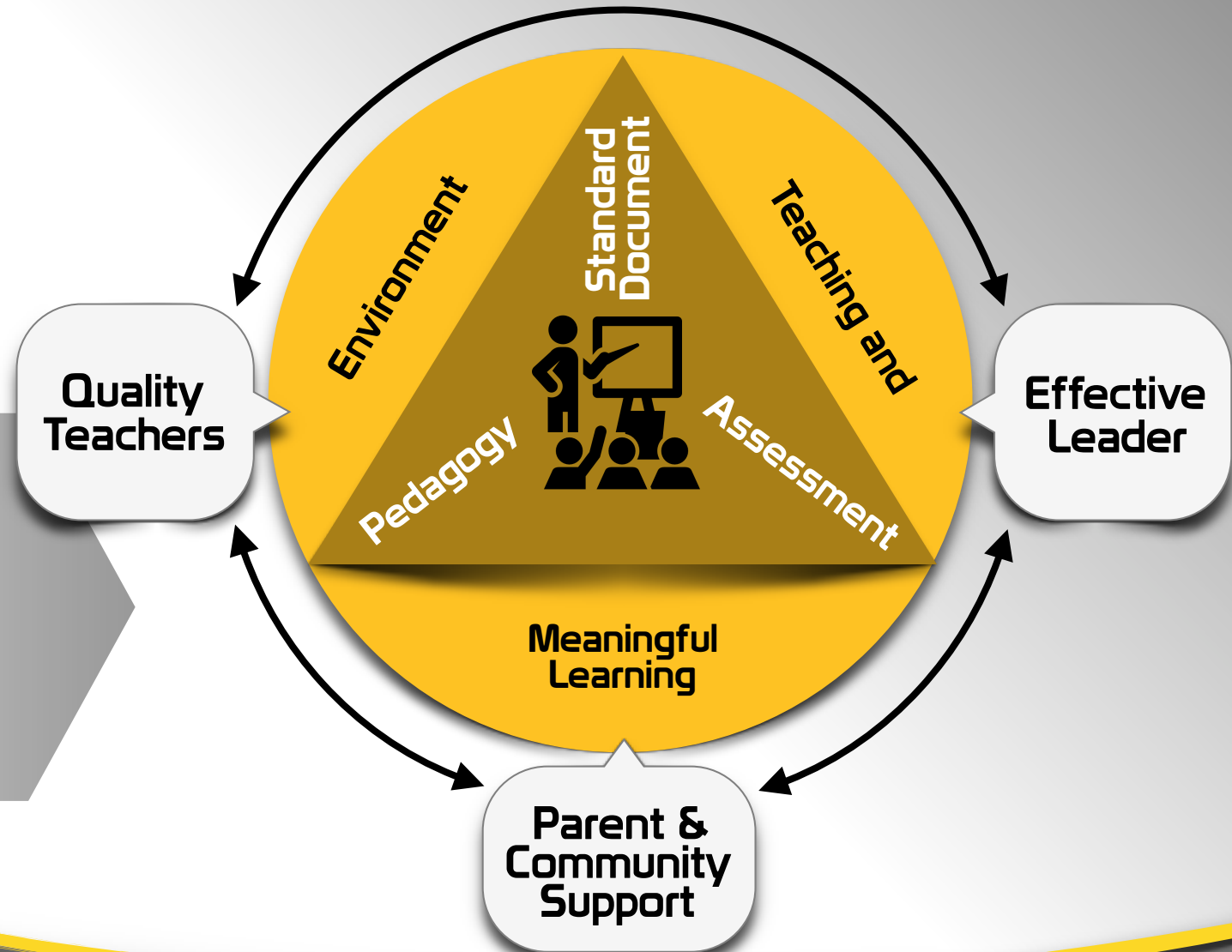
School Transformation
Programme 2025 (TS25)

Aligned with **systems and students' aspiration** as in MEB 2013-2025

Quality Teachers

Effective Leader

Parent & Community Support

Environment

Standard Document

Teaching and

Pedagogy

Assessment

Meaningful Learning

Teacher Quality

> Strengthening teacher quality

The Ministry has succeeded, in **shifting** the negative perception of the masses from regarding teaching as the last profession of choice to become one of **the most preferred** professions of choice.

Review of Teaching Career Track	Unifed Instrument for Education Office	Teacher Certification	CPD Master Plan

Exciting **career** pathway and progression, fair **performance** evaluation and comprehensive **continuing professional development** for sustainability.

Malaysian Teachers
Literacy in ICT

International Society for Technology In Education (ISTE)

84%
(356,246)

scored above minimum level of ICT Literacy.

16%
(56,987)

have completed the Digital Literacy Self-Assessment in 2016

413,233 in-service teacher
sat for Online Diagnostic Test in 2013

Future School:
Are Our Leaders Ready

Scenario and Context

Future School

System Readiness

School **Leader** Readiness

Challenges and Moving Forward

Are Our Leaders Ready?

Scenario
Understanding of **OUR** current population

	Student	Teacher	Leaders
Alpha (Born after 2011)	0 – 14 years old	Age Gap	Greater Age Gap
Gen Z (Born 1996 – 2010)	15 -16 years old		
Gen Y (Born 1980 – 1995)		30%	
Gen X (Born 1965 – 1979)		70%	30%
Baby Boomer (Born 1946 – 1964)			70%

Leadership Charter

NPQEL

National Professional Qualification for Educational Leaders (a mandatory course)

Key focus area
- **Leadership**
- **Instructional Leadership**
- **Resourse Management**
- **Community Partnership**

LCML

Leadership Course for **Middle Leaders**

Based on **distributed** leadership

Focusing on
- **Self** Management
- **Staff** Management
- **Instructional** leadership / management

Developing future School Leaders

Future School:
Are Our Leaders Ready

Scenario and Context

Future School

System Readiness

School **Leader** Readiness

Challenges and Moving Forward

Challenges and Moving Forward

→ Implementation Challenge
- Heterogeneity of school
- Complexity of change

→ Moving forward
- District Transformation Programme (DTP)
- TS25
- Teacher Quality
- Developing Future Leader

Thank you!

Ministry of Education Malaysia

KEMENTERIAN PENDIDIKAN MALAYSIA