

Seminar on Educational Facilities Research

10 February 2026

3F Auditorium, MEXT (Tokyo)

1345 to 1415 hours

Keynote Lecture by Professor Oon Seng Tan

**Key Trends in Singapore's Education
and School Developments**

Warmest Greetings from Singapore and the National Institute of Education



Overview

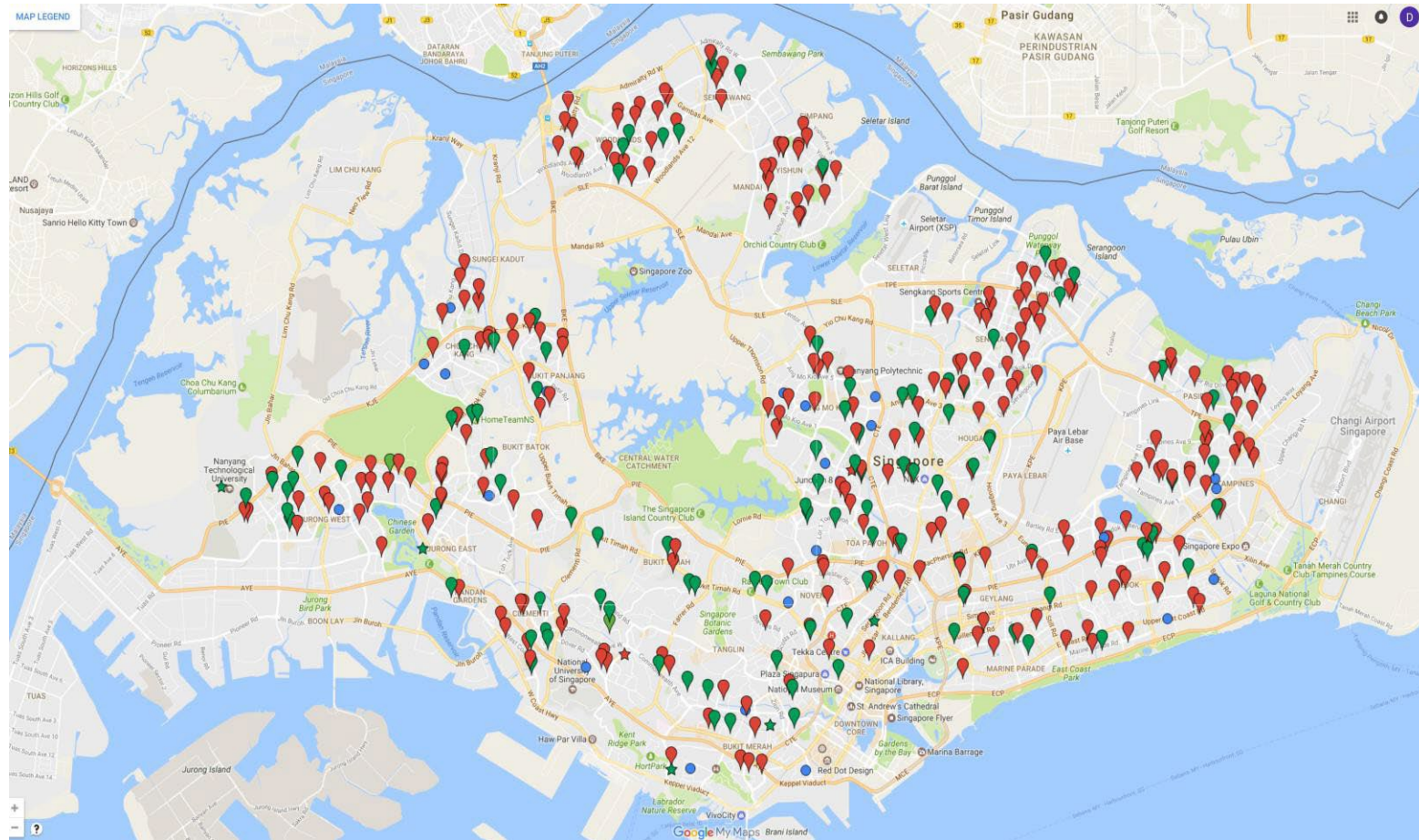
- Introduction to Singapore's Education Landscape
- Evolution of Singapore's Education System (Early Phases)
- Most Recent Developments in Education and Schools
- Complex World and Future Planning
- Conclusion

Introduction to Singapore's Education Landscape

- A small country with limited resources
- **Human resource** seen as most critical asset
- **Education** seen as the key enabler

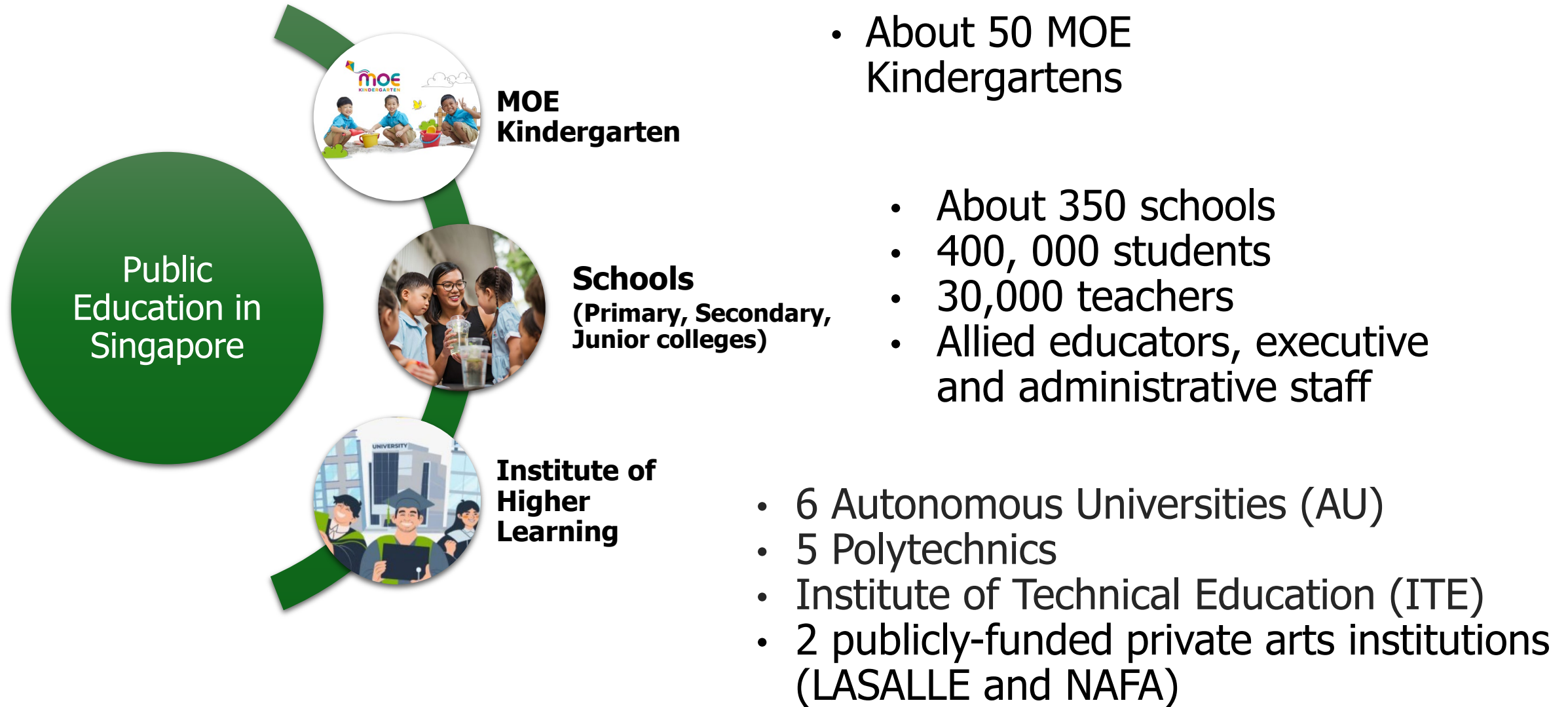


Schools in Singapore



Source: <http://weelookang.blogspot.com/2015/03/google-map-layers-and-open-data.html>

Singapore Education Landscape



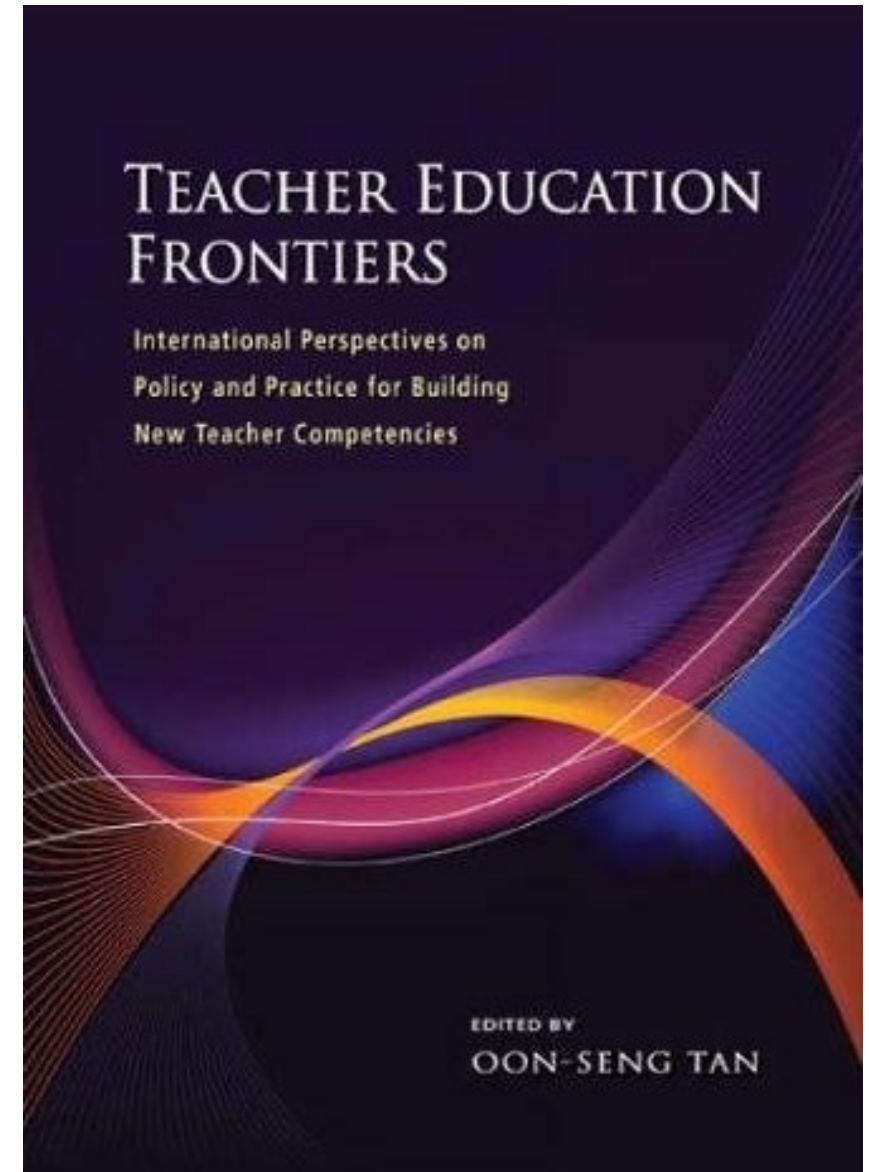
Strategic Investment in People: Education is a national imperative for development in Singapore

- **Third-largest share of Singapore's national budget:** Education is consistently one of the top three areas of government spending, reflecting long-term commitment to human development.
- **Foundation of national survival, success, and significance:** From a resource-scarce nation to a global hub, Singapore's development strategy has centred on investing in its people through quality education.
- **Education as a means of social mobility and equity:** Policies ensure access and opportunity for all, with targeted support for disadvantaged groups and a commitment to meritocracy with compassion.

Education is the key investment for the long haul and the quality of education impacts on

- Nation Building
- People's Capacity for Adaption
- Value Creation
- Values Preservation
- Capabilities for Innovation

- Professor Oon-Seng Tan

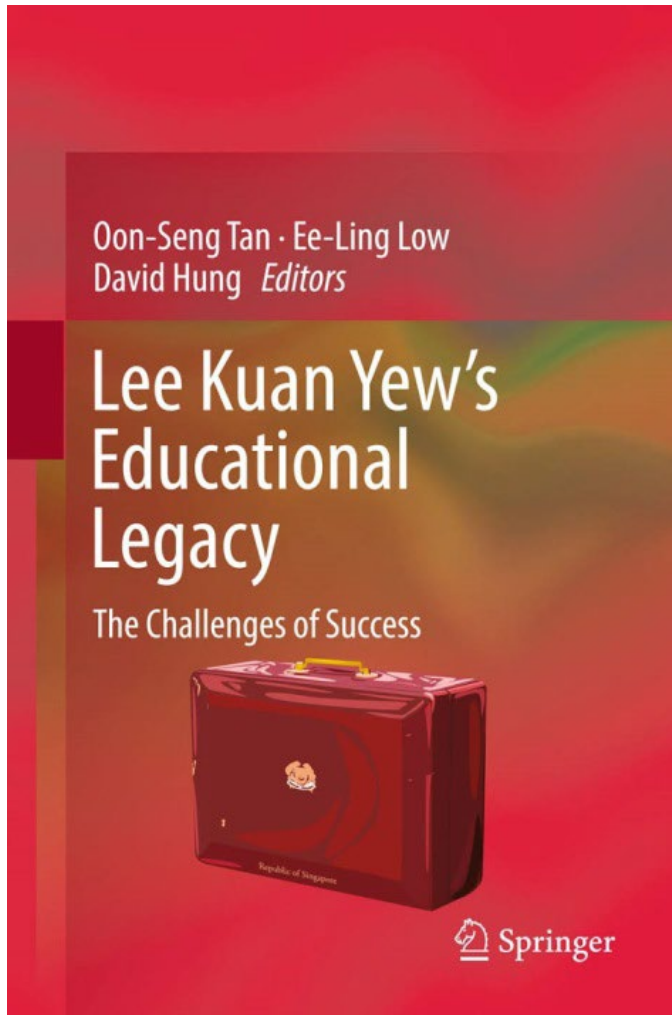


The aim of education

A good man and a useful citizen

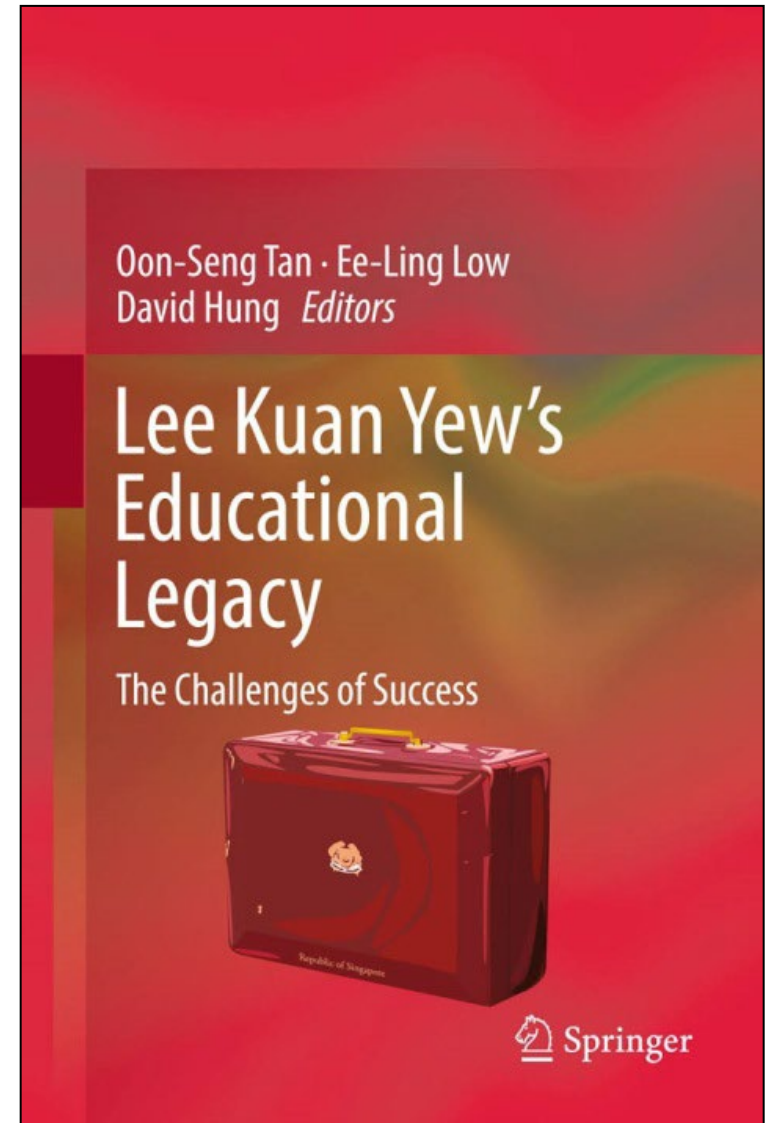
- Lee Kuan Yew
(Founding Prime Minister of Singapore)

**That means Character First
followed by Competence**

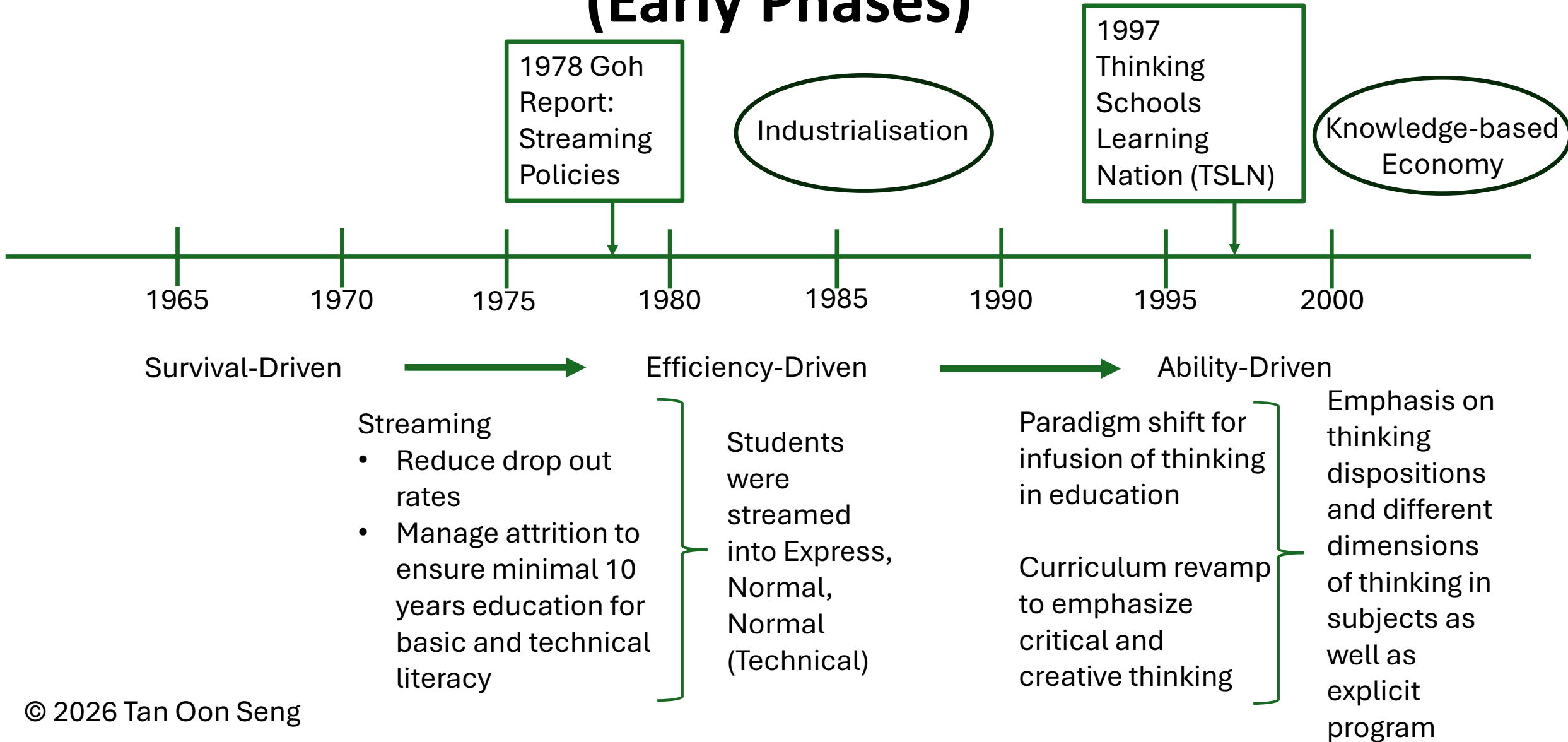


Importance of Education

- “(Education) is the key to the **long term future** of any people”(Lee 1993)
- Developing **every child** to his fullest potential
- “In our youth of today are the leaders and citizens of **tomorrow**” (Lee 1959)
- “The ideal product is the student... who is strong, robust, rugged, with tremendous qualities of stamina, endurance and at the same time with great **intellectual discipline**, and most important of all, **humility and love for his community**” (Lee 1966).
- An educated man is one “who **never stops learning** and wants to learn” (Lee 1977)



Evolution of Singapore's Education System (Early Phases)

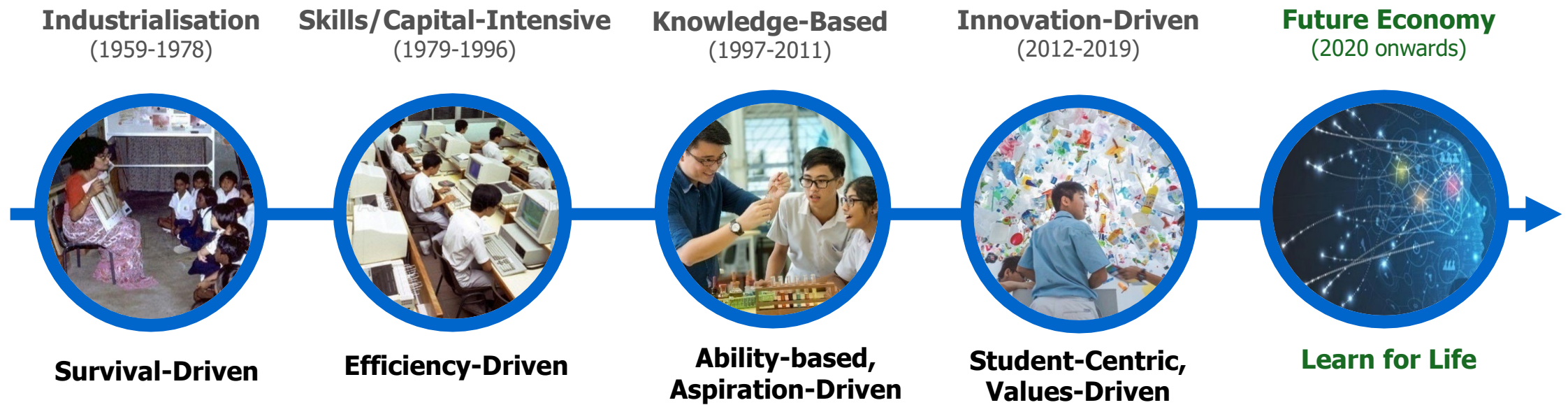


Upgrade School Buildings (1999-2005, TSLN)

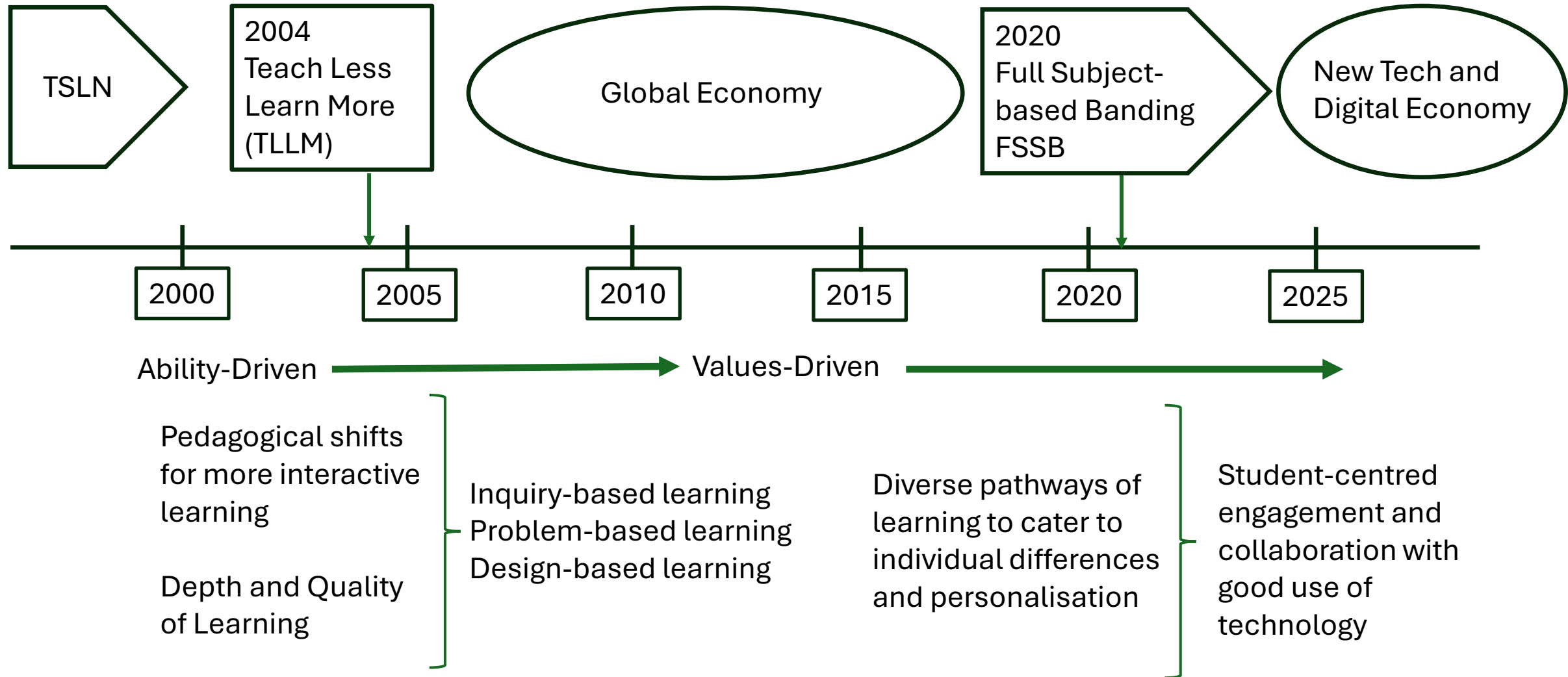
- Program for Re-building and Improving Existing (PRIME) Schools
- Over the 7-year period 290 schools were upgraded and rebuilt

Phases of Education Improvement

- **Foundation Stage** (Early Nation Building):
Accessibility and Fundamentals [Numeracy, Literacy, Citizenship]
- **Progress Momentum** (Industrialization):
Potential to Performance (Ability-driven and Quality), TSLN, TLLM
- **Pathways Multiplication** (Academic to Holistic):
Holistic and Values, Pre-School, Ed Tech, FSBB, Personalisation



Most Recent Developments in Education and Schools



TSLN

Thinking Curriculum

ICT Master Plan 1

Learning Environment

Future Schools @ Singapore

Project Work

- Computers and Multi-media
- Facilities for project work spaces
- Library resourcing

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TLLM

Pedagogical Innovation

ICP Master Plan Refinements

Interactive Environment with Technology

Student Engagement Pedagogies

Teacher Professional Development

- Internet and Digital facilities
- Flexible classroom for interactions
- Collaborative learning spaces
- Space for teacher professional development

FSBB

Personalized Learning

AI for Personalized & Digital Learning

Flexible Learning Spaces

Enhanced Support for Special Needs Education

- Breakout spaces
- Multi-purpose rooms
- Digital spaces
- Individual learning spaces
- Creative library spaces
- Community engagement spaces

Creation of Flexible Physical and Learning Spaces TLLM

- We transited from equipping school with comprehensive facilities to Flexible School Infrastructure (FleSI) Framework
- Modular classroom and Ed Tech

FSBB and Tech Environment

- Ed Tech Master Plan 2030
- Student Learning Spaces
- Flexible classroom spaces with technology

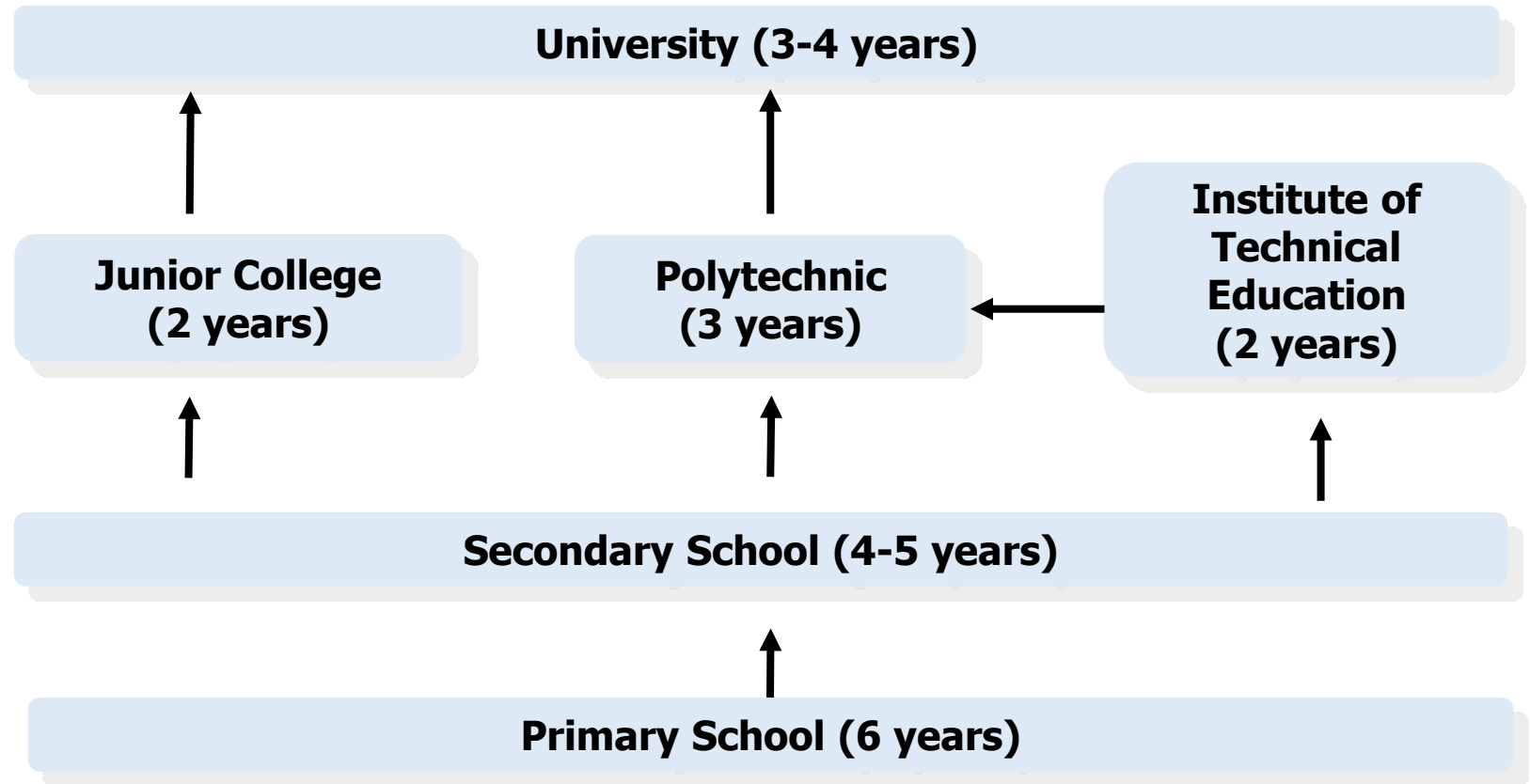
We want to nurture the next generation to thrive in a complex world with

- Agility to learn and adapt
- Creativity to improve and invent
- Relationships building
- Connective capabilities to draw on diversity of strengths

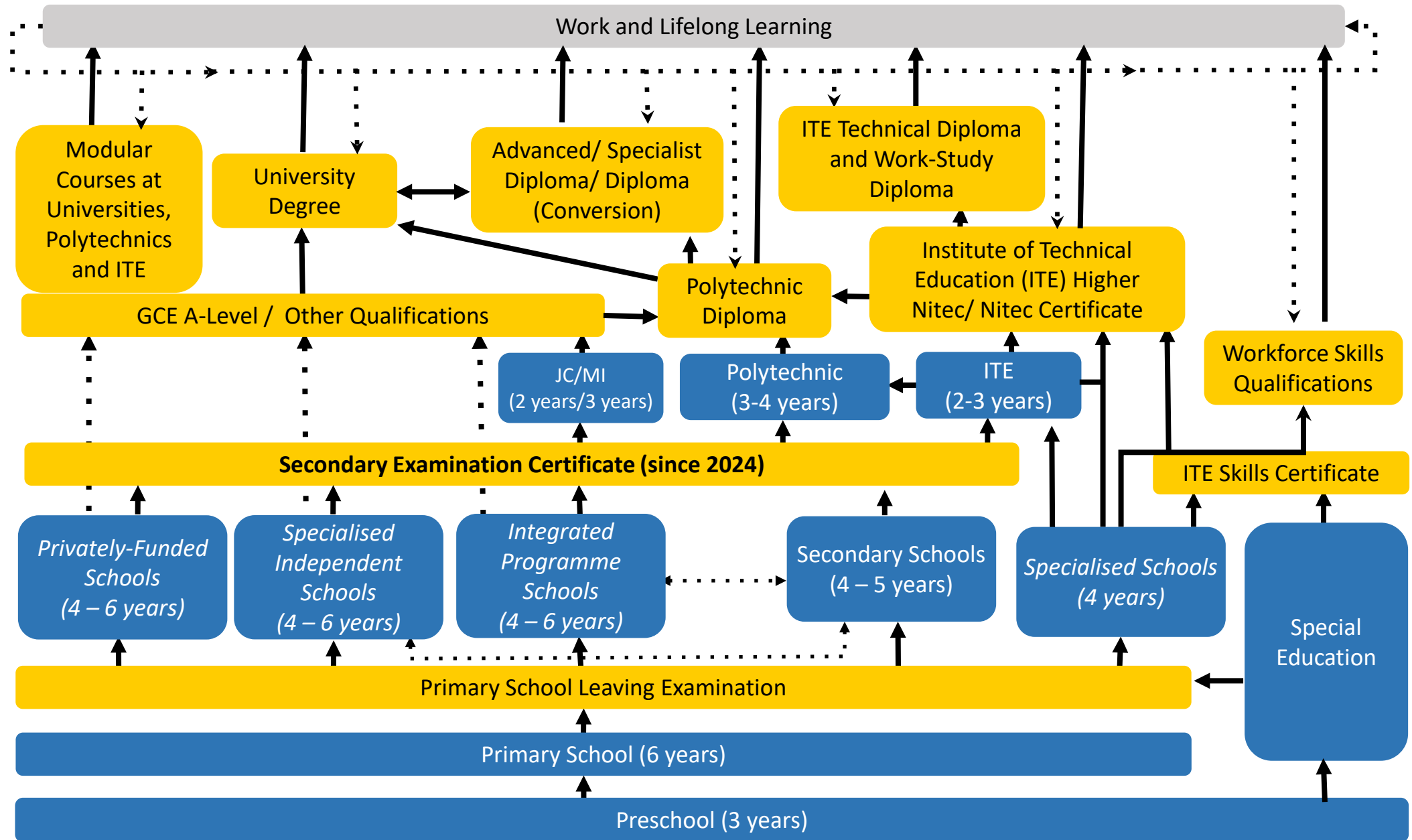


Ensuring Education for All: From One Size Fits All to Multiple Pathways

Educational Pathways in the Past:



Educational Pathways Now: Diverse Pathways and Opportunities



Complex World and Future Planning

- Prime Minister Lawrence Wong announced at the National Rally 2024 that Singapore continue to enhance infrastructure for “a conducive environment for teachers to work, and for students to learn, interact and collaborate with each other”
- In the next 10-15 years we will invest in school infrastructure progressively to adapt to changes in environment and operations for teaching and learning
- We will also invest in additional resources for students of disadvantaged backgrounds and students with diverse learning needs.
- For 2025 Budget S\$852 million was allocated for development spending representing a sharp increase compared with S\$451 million in 2024. These were for school building and infrastructure upgrades

Understanding developments in Education calls for understanding in

- World Trends
- Real World Work
- Education Ecology

Trends in our world today:

FEARS

The society is full of fears today!

FEARS

- Fractured world – trend of fragmentation across all levels of society. Divisiveness and polarization across dimensions never seen before....
- Ecological deterioration – scale of climate change and issues devastating vast regions affecting huge communities...
- Artificial Intelligence – the rise of AI especially GAI and prospect of AGI disrupting all arena of human lives, work, education....
- Resiliency breakdown – never before had we faced so much mental breakdowns, depression across all generations
- Social media and trends – impacting and re-wiring the psyche of future generations

The Singapore Approach to AI

- Anticipating global shifts and positioning itself as a strategic hub (for sectors including trade, finance, aviation, maritime, digital innovation, etc)
- Our national strategies are underpinned by three key principles:
 - A big-picture, systems-level approach to national strategy and policy
 - Integrated planning and implementation across sectors and ministries
 - Deep investment in people and capability development

The EdTech Masterplan 2030 sets out four strategic outcome areas

- Students - Digitally empowered, future-ready learners and innovators
- Teachers - Technologically adept, collaborative designers of learning
- Schools - Intelligent, responsive, digitally equipped learning environments
- Systems - A trusted, networked EdTech ecosystem

OS Tan Thinking Model:

In line with this, I developed the **HIGHER thinking model** which provides a cognitive and ethical framework to guide teachers, and by extension, their students, in navigating an AI-powered world with intentionality and wisdom. While using AI, these thinking capacities are crucial:

- **H – Helicopter Thinking:** Seeing the big picture, making interdisciplinary connections, and framing learning from AI within broader contexts
- **I – Inferential Thinking:** Drawing contextually relevant insights and meaning from data and patterns
- **G – Generative Thinking:** Exploring divergent ideas, innovating, and creating new knowledge with AI with the right questions and prompts
- **H – Human-Centric Thinking:** Continuing to value empathy, relationships, and social-emotional dimensions of learning
- **E – Ethical Thinking:** Making principled decisions in the use of AI, with awareness of consequences and responsibilities
- **R – Reflective Thinking:** Synthesising past experiences with future-oriented planning and personal meaning-making

AI with Wisdom

Across all contexts of AI adoption, I encourage reflection around five key considerations, summarised by my **ABCDE framework**:

- **A - Accuracy and Authenticity:** How do we verify the credibility and trustworthiness of AI-generated information, especially in an age of misinformation and deepfakes?
- **B - Bias:** All data is shaped by perspectives. Are we aware of the underlying assumptions and cultural lenses embedded in AI outputs?
- **C - Constraints:** AI remains limited in specialised fields requiring expert judgment. How do we acknowledge and complement these limitations with human insight?
- **D - Dependence:** Are we cultivating critical thinkers, or are learners becoming overly reliant on AI at the expense of their own agency and curiosity?
- **E - Ethics:** How do we uphold data privacy, human dignity, and responsible use—especially in systems that monitor, predict, or profile learner behaviours?

Thinking Ahead

(big picture and preparation for the future)

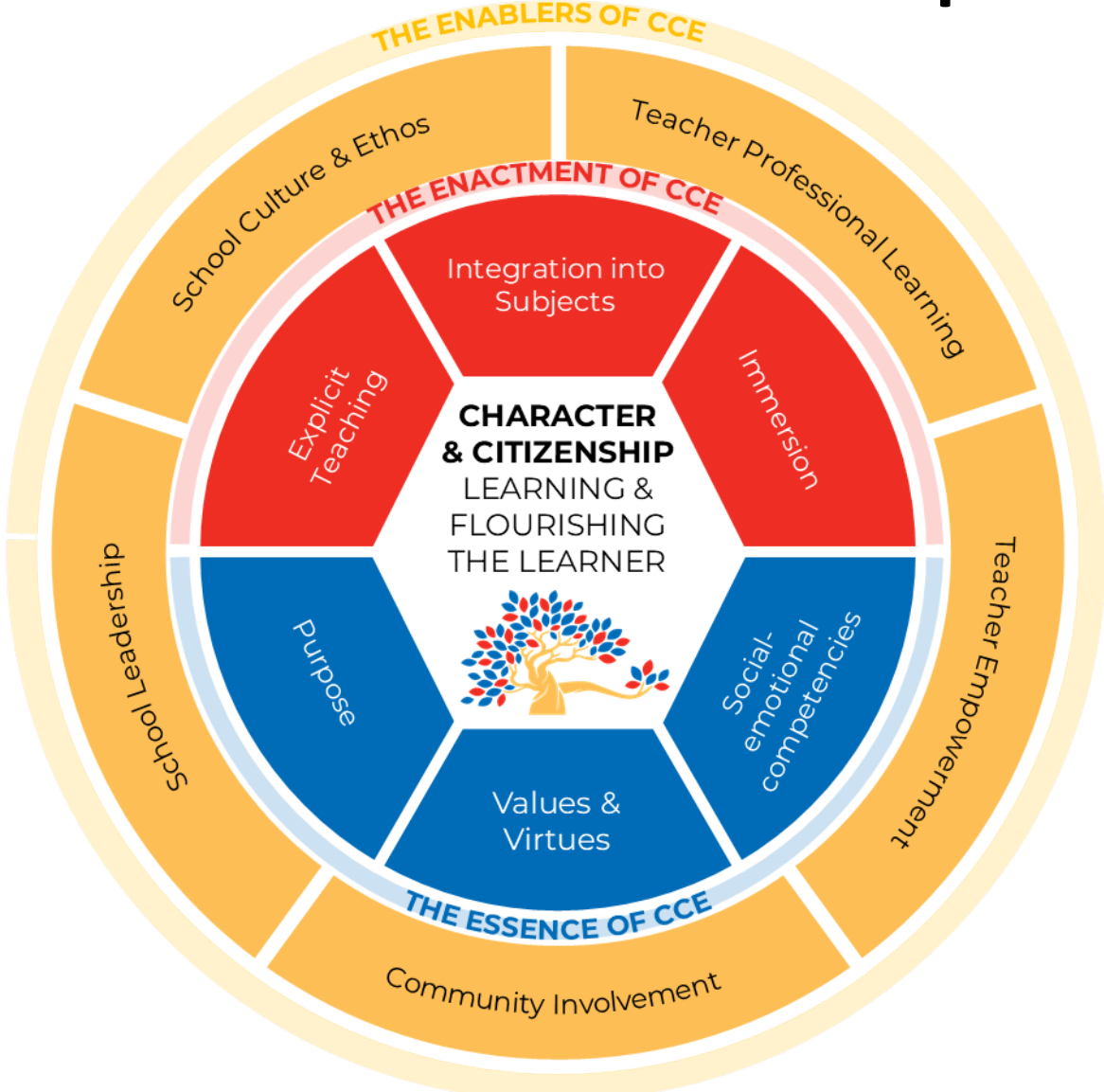
Thinking Again

(challenge assumptions and adapting)

Thinking Across

(alignment & coherence across breadth of sectors)

Singapore Centre for Character & Citizenship Education (SCCCE)



A Framework for Character & Citizenship in a Complex World

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Classification: Restricted

Areas of Adaptability: A Dynamic View of Curriculum

- In today's world, global and societal issues are complex and information around us is abundant. It is virtually impossible to put everything in the curriculum
- Focus shifts from outcomes, to **process** and **ecology**

In Summary our Principles for School Improvement Approach

- Future Readiness through Big Picture trend and Long-Term planning
- Alignment of developments with Overall National education goals in anticipation of societal, economics and technological changes
- Focus on Flexible and sustainable solutions
- Guided by technology-enabled and human-centred design strengthening student engagement, collaboration and well-being
- Holistic development for student voice and learner-centricity and personalization
- Equity and inclusion for diverse learners and needs

Prof Chua Bee Leng will share on infrastructural and ecology developments in the light of the recent school improvements.

Thank You



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