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# FLEXIBILITY IN CURRICULUM AND ASSESSMENT

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## Brief Introduction of myself

- 13 years university teaching
- 16 years in TVET Management
- 3 years University leadership (NUS)
- 6 years CEO of National Library Board, Singapore
- 3 years overseas engagement (UAE)
- World Bank and ADB Short-term consultant
- Running an Education consultancy partnership



# Background to Topic

COVID-19 has raised many questions about our current education system –

- What are students not learning when in not in school? How do we know?
- How important is it that students should be in school?
- What is education about? What is education supposed to achieve?
- How do we build resilience into education to cope with similar disruptions in the future?



# Impact of COVID-19

- 1.6B students (94%) could not attend school all over the world
- Huge learning deficit that has downstream impact on the whole education system and economy
- New ways of coping have been implemented (low-tech to high-tech)
- Unequal access to technology; inequalities exacerbated
- Is it even possible to catch up 4-6 months of no schooling for a whole cohort?



- Covid-19 has exposed our vulnerabilities and gaps.
- This is the perfect time to relook at what is studied, how it is studied and who is to be held accountable and how much authority to devolve downwards.
- NOW is a game-changing opportunity.





# What do we want from Education?

- Every child to “succeed” in life.
- But what is success?
- How do we measure it?
- Job? Wage? Career? Family? Happiness? Fulfilment? Finding Purpose?





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## Goal: To prevent the Learning Crisis becoming a Generational Crisis

- Build a resilient educational system
- Re-imagine education and change fixed ideas of teaching and learning
- Prepare for a future of disruptions (conflicts, natural disasters, climate change, pandemics, etc.)





# Outcome of School Education

- We want to develop a holistic person, with foundational skills and knowledge, with strong values and positive attitude.
- A resilient person who can cope with the changes the future will throw at him/her and family.
- A balanced person with problem-solving drive.
- A self-learner
- And employable with the right skills



## What we have today is

- A rigid school curriculum
- A rigid pedagogy
- A rigid assessment system

designed originally to train farmers' children for work in factories, as part of the industrial revolution. Focus was on literacy, numeracy, discipline, obedience and order.



# Don't agree with me?

**We can still see this in the classrooms of today –**

- Progression by age-cohort
- Standard rooms
- Teacher in front of class/power to punish
- Standard pedagogy
- Standard tests



# 1 Curriculum

- State-mandated set of learning outcomes for each grade of school to meet needs of the state, since schooling is mostly paid by the state
- Focuses on literacy, numeracy, civics, languages, physical development, sciences, religious education, national history and geography, arts and literature
- Each year is a foundation for the following year of school
- Mostly knowledge, some skills and some values



Assessed Curriculum

Learnt Curriculum

Enacted Curriculum

(pedagogy)

Delivered Curriculum

(time)

Planned curriculum



## Leading to

- Demotivated students
- High drop-out rates
- Unskilled youth
- High youth unemployment
- Social stresses



# Teach Less, Learn More (TLLM)

In 2005, PM of Singapore launched the Teach Less, Learn More (TLLM) movement.

- 25% across the board cut in content
- More streamlined syllabus
- Weeded out overlaps and unnecessary topics
- New teaching methods



# Objectives

- Improve student engagement in learning - increased interactivity
- Develop cognitive skills – such as inferring, estimating, extrapolating, analysing, imagining
- Exposes individual strengths/talents
- Give students flexibility and choice



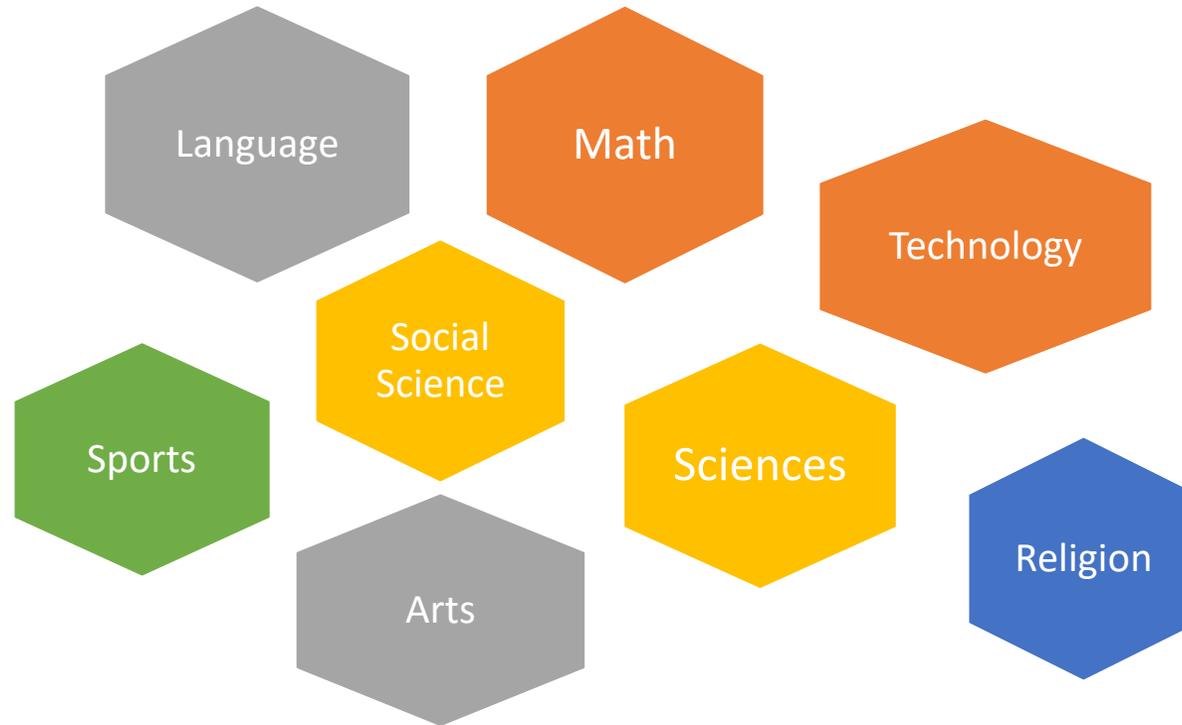


## Today, in 2020

- With the internet and search engines, TLLM is even more relevant than before.
- There is even more room to reduce content and focus on the process of learning
- Knowledge is available freely now; what is needed is the ability to sort out the truth from the fake, to verify, to validate and test



# How subjects are taught today



## Subject-based curriculum

- Artificial boundaries between subjects
- Human brain is not wired that way
- Also not the way work in real-life



## How to reduce the curriculum?

- Merge subjects
- Reduce subject coverage
- Focus on core competencies
- Replace with multi-disciplinary projects or problems

But key is to retrain teachers beforehand





# Leverage real-life experiences (out-of-school learning)

Scenario	Learning Opportunities
Farm	Agriculture, husbandry, irrigation, weather and rain-cycle, animal nutrition, water harvesting, seasons, climate, waste mgt, pollution, maximizing yields, multi-cropping, etc.
Informal industry	Problem-finding, work scheduling, mechanics, customer service
Informal retail	Pricing, promotion, book-keeping, inventory control, turnover, sales
Domestic	Sanitation, personal hygiene, food preparation, nutrition, economics
Covid-19	Understanding germs, bacteria and viruses, infection transmission, personal hygiene, family and public health,

**Children can be ambassadors of knowledge to parents and extended family**





## Focus on what's important

- Communication with empathy
- Values
- Realistic Problem-solving
- Practical skills
- Collaboration and teamwork

These will last a lifetime, even as knowledge advances at a rapid rate





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## 21<sup>st</sup> Century Competencies (MOE Singapore)





# Educate for

- Skills
- Inclusiveness
- Equity
- Sustainability
- Fulfilment
- Future

Mark Twain (American satirist):

*“Never let school interfere with your education”*



## Introducing flexibility – how?

- Develop a core curriculum based on future skills
- Allow schools/school districts to generate core curriculum-plus and methods of delivery
- Decentralise decision-making
- Develop partnerships, not control

[This will require some loss of central control, authority and power]



*“The assessment IS the curriculum”*

*- N Varaprasad*

Only what is tested is studied

If you want to change the curriculum, you  
have to change the mode of assessment



## 2 Assessment

- Current purpose of assessment is solely to determine fitness for next year of study
- Heavily based on academic criteria
- Dependent on high-stakes examinations on grounds of “objectivity”, “fairness”, “equity”.
- But it favours rote learning and memory, less on higher order skills.



## Covid-19 responses to high stakes exams

- Maintain examinations with safe distancing (22 countries)
- Cancel altogether and use school grades and teacher assessments (11)
- Postpone/reschedule exams (73)
- Move exams online (11)
- Alternative strategies (23)



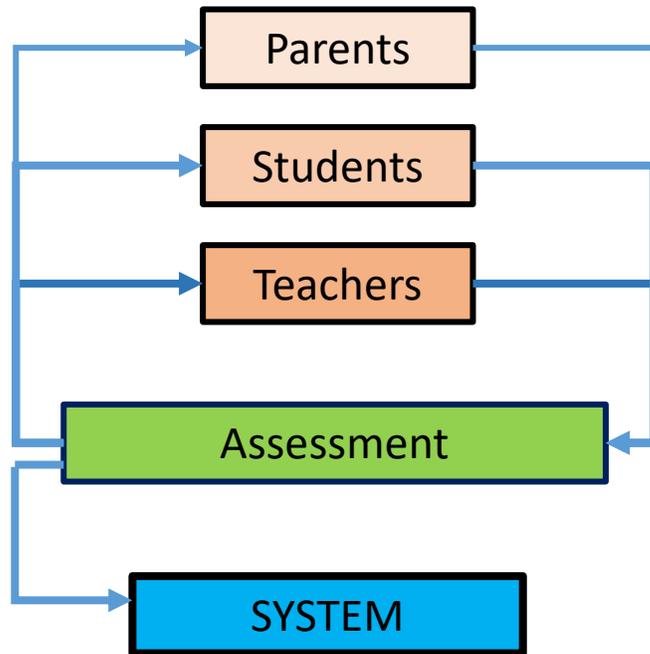
# Alternative Strategies

- Reduce number of papers
- Use Portfolios
- Assign Research projects
- Tests and quizzes instead of exams
- Merge exams (eg school exams with UE)
- Change of exam cycle



# Types of Assessment:

Timely,  
Constructive,  
Valued by all  
parties



Stressful,  
Life-defining  
High risk

**Formative Assessment:**  
Learning assessment as  
a feedback loop to  
teachers, students and  
parents.

**Summative Assessment:**  
Not a feedback loop  
High-stakes



## However in the real world,

- There are no correct answers, only optimal ones, based on available information;
- Ability to analyse and think is more important than the answer itself;
- Systems-based thinking (cause-effect, feedback loop);
- We solve real-life problems, not repetitive ones.





# Building Flexibility in Assessment

- Understand that academic exams are not fair nor equitable. Ask yourself, fairness to whom?
- Develop a holistic approach to assessment, not tilted towards academic performance only
- Find a “whole of person” view, including curiosity, initiative, self-directed learning
- Give more weight to continual teacher assessments (moderated and verified by regular quizzes)



# Flexibility in Assessment

- Time to give more weight to formative assessments in the final weighting of grades
- Move from marks to grades / bands
- More emphasis on “what can you do (skill), not what you know (knowledge)”
- Teacher colleges need to do more to prepare teachers for this change in thinking.





# What creates value?

We are not paid for what we know.

We are paid for what we DO with what we know.

We learn from doing, then doing it better



# Resilience for Innovation

- Anything that is expected to succeed first time is not innovation
- Only one in ten new ideas succeeds in the marketplace
- Key to success is therefore resilience and ability to recover and learn from failure



- Covid-19 responses to assessments has shown that it is possible to change when under pressure
- It is preferable to change in a planned way rather than reactive way
- Engage all stakeholders along the way – local school districts, teachers, students, parents.
- Professional development of teachers will be key as many will be reluctant to change.
- Need to modify College entry requirements to acknowledge different talents, skills and aptitudes.





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Thank you for listening!

Time for Discussion

(please use raise hand feature to ask)

