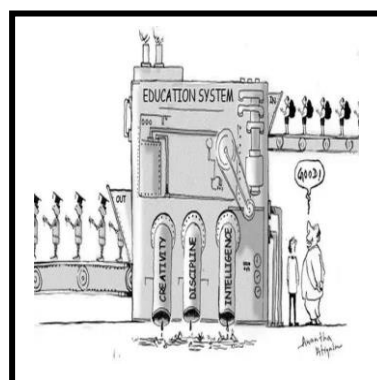# Youth & Education

Tampines Meridian Junior College
JC1 General Paper
2023
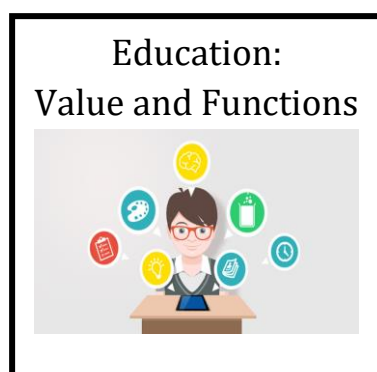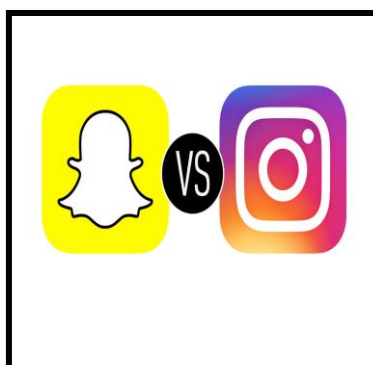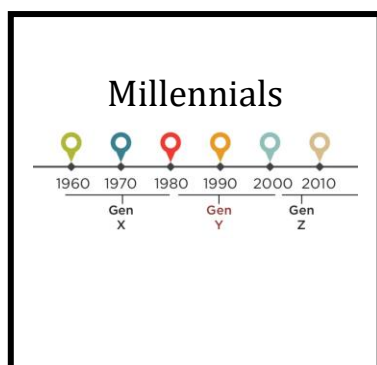
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• An Overview •

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Youth and Education

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Inquiry Questions:

1. Do young people enjoy a better life today?
2. Do young people have what it takes to succeed in the future?
3. Does education really improve people's lives?
4. Can education prepare students for today's economy?

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Conceptual Lens 2
Socialisation/Values
Inclusivity/ Diversity

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Conceptual Lens 3
Change/Continuity/Adaptability (System)

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Unit Strand 1
Youth & Identity

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Unit Strand 2
Value of Education

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Unit Strand 3
Evolution of Education

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Concept 1
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Concept 2
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Concept 3
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Topics 1
Characteristics, Attitudes, Values

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Topics 2
Job skills, Inequality, Meritocracy, Socialisation, Active Citizenry

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Topics 3
Technology, Job skills, Competition, Skills upgrading, Gig economy

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Generalisation 1:

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Generalisation 2:

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Generalisation 3:

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Inquiry Question:
✓ Do young people enjoy a better life today?
✓ Do young people have what it takes to succeed in the future?

Students should be able to:
✓ *Explain the improvements and opportunities young people enjoy today as compared to the past, as well as the challenges they face (education, workplace, family, relationships, etc).*
✓ *Explain the qualities/values/attitudes/ skills/knowledge young people need in order to succeed in the near future.*

● Youth ●

Reading Set 1

A generation is a group of people *born* around the same time. While every individual is different, people in this 'birth cohort' tend to exhibit similar characteristics, preferences, and values over their lifetimes because they experienced similar trends, cultural shifts or major events at approximately the same life stage and through similar channels (e.g., online, TV, mobile, etc.). Below is a look at the recent generations:

Baby Boomers	**Generation X**	**Millennials/Generation Y**	**Gen Z**
Born: Between 1946-1964	**Born: 1965-1980**	**Born: 1980-1995**	**Born: 1996-2010**
The defining experiences of this generation include being born during the post-World War II baby boom and before Singapore gained independence. In Singapore, those born in the 50s are known as the Merdeka Generation. They lived though the Independence struggle, racial riots and the fight against Communism.	The latchkey children of working families and divorced parents, Gen Xers are highly educated but much more cautious and pragmatic than their parents.	Born into the digital age, Millennials are technologically savvy, open-minded and more likely to accept different subcultures in society.	Gen Zs are considered digital natives or even reliant on technology, independent, politically progressive, creative and have shorter attention spans.

Note: Years are approximates and there can be overlaps because there is no standard definition for when a generation begins and ends.

The next two articles examine some of the characteristics, actual or imagined, of young people today (usually referred to as Millennials/Gen Ys). As you read the articles, fill in the table on page 8.

⇨ Concepts: Youth, Identity, Youth Culture

Article 1: How Singapore sees its millennials (and it's not a pretty picture)
By Derrick A Paulo, Sara Grosse and Tracy Marie Lee | CNA | December 22, 2020

SINGAPORE: They get their fair share of criticisms from the older generation, and now, a nationwide survey has found out what Singaporeans really think of millennials.

Impatient, overconfident and materialistic — these are among the top perceptions of those aged 19 to 36 years old. This demographic ranked the lowest — versus Generation X and the pre-independence generation — for being disciplined, loyal and taking ownership of work. Being cautious or hardworking are not seen to be millennial traits either. The stereotypes one hears most often are: Millennials are "entitled", "lazy" and lack respect for traditional institutions of power.

But Dr Janil Puthucheary, a Senior Minister of State, is worried it is a generation that feels neglected, with no voice in an ageing Singapore. He has also noticed "increasing divisions between the young and old". And while "no one's really explored" Singapore's generation gap, it is a fault line that cuts across race, religion and class, he highlighted.

IN THE MIND OF MILLENNIALS
In the door-to-door survey Dr Puthucheary commissioned, which he worked on with CNA, only 15 to 17 per cent of people thought millennials were disciplined or loyal, whereas 84 to 91 per cent thought so of the 55-72 demographic. Some 27 to 32 per cent saw millennials as taking ownership of work and being hardworking, traits the middle and older generations scored the highest on respectively.

But at local content creator SGAG, where the oldest employee is 38, its millennials disagreed, citing the overnight and weekend shoots or seven-day working weeks, for example, they sometimes have. "Everyone has a generalised view of the millennials, like how we seem to have a generalised view of the elderly," said SGAG senior content strategist Nadia Ongkowidjaja, 26.

The survey showed, however, that millennials think of themselves in a similar way. For example, only a fifth of them see their generation as disciplined, while 83 to 84 per cent agree that they are impatient and materialistic. "I love to buy things. I'm part of the 84 (per cent)," attested SGAG senior content strategist Ee Chiou Huey, 29. As for their impatience, she put it down to the "instant gratification" they can get today, for example from food delivery apps. "I don't even have to stand at the side of the road to flag for (a taxi), like how we used to," she said. Ms Ongkowidjaja added: "We always try to fit a lot of things into our schedules. We don't want to just do one thing … so we might seem a bit impatient in that sense."

There are bound to be "some differences in behaviour" and expectations of it, even between millennials and Generation X, owing to the "huge shift to digital disruption", said SGAG co-founder Karl Mak. "I see millennials as a generation in transition, from pre-internet living to basically being digital-first natives. I think that transition isn't necessarily one that the world has seen before," the 31-year-old said. "For example, dating is on the mobile phone: You swipe left, you swipe right. You don't need to go out and buy somebody a drink in a club to have a conversation. "The digital way that we approach every single area of life … is naturally going to cause a bit of conversation and a rift."

Singapore's most educated generation is, however, also the least socially gracious, according to surveys done by data analytics platform Milieu Insight. "For example, helping the needy cross the road, giving up seats to the needy on the train and greeting your neighbours. Millennials scored lower than the other generations," said the company's chief executive officer and founder Gerald Ang, 35. "Maybe millennials get lost in the digital world (in such a way) that sometimes they lose touch with the real world." The problem is "situational awareness", rather than negative intent, though he agrees that it "needs to be fixed".

DIFFERENT VIEWS ON SINGAPORE?
What worries private educator Tong Yee, on the other hand, is whether Singapore will become less "clear" and "intentional" as a society if there is a generational gulf in opinions about national issues. "If we have an entire generation of Singaporeans who truly believe that stability is the way to go, and another whole generation that believes in change-makers … imagine the impact on just the voting," he said. "What kind of leader becomes important for them? I think in the political sphere alone, we're looking at some level of fragmentation … It's deeply polarising."

It is a "dilemma" looming for 47-year-old Dr Puthucheary, who is part of the fourth-generation leadership. He pointed out that the majority of the population, and the largest voting bloc, are over 40 years old, who "naturally shape the status quo". And last year, a million residents were aged 55 and above. "But can we really afford to ignore a generation that will be the future of our country?" he questioned.

To find out what the generations disagree on, and their commonalities, the CNA survey explored views on issues like the environment, foreign talent, trade-offs, sexuality and politics. The result? There was much in common. Most people (87 per cent) would protect the environment even at some cost to economic growth. A majority (57.5 per cent) across generations also want a minimum wage for low-income workers, even if it means costlier goods and services. A minority (38 per cent), from young to old, are willing to pay more taxes (such as income tax and GST) to address inequality. Even work-life balance, which millennials are known to prioritise, is important across the age spectrum: The top job criteria for Generation Xers and the older generation.

Differences showed up most on two issues. The first is how people feel about lesbian, gay, bisexual and transgender (LGBT) issues. Millennials are the most accepting, as opposed to the pre-independence generation. Dr Puthucheary was not surprised at the finding, "considering the global push for those rights". The other issue was foreign talent. Three-quarters of the pre-independence generation felt that there are too many foreign talents here, about two-thirds of Generation X felt the same way, while 56 per cent of millennials agreed.

BY FORCE OF CIRCUMSTANCE
For three young overseas Singaporeans Dr Puthucheary reached out to, the question he had was whether they still felt connected to their homeland. There are 25 per cent more Singaporean millennials living overseas, compared with 10 years ago, and he wondered "how much of it is due to the double whammy of life stresses and how society treats them".

Mr Kevin Toh, 27, the founder of lifestyle membership app Sweego Vietnam, thinks Singapore is still the best place in the region to settle down because of its infrastructure and education, for example. Mr Jeriel Tan, 29, would return for something significant, like working with a "cutting-edge, pioneering company in the tech world that's able to compete on the global stage", and with "people who have great initiative (and) great technical capabilities". "In China, I get that through the energy that I find … in the young people here in the city and the country," said the communications specialist with an AI enterprise. "This is something that I find quite lacking in Singapore." A "shift in mindset" is what nurse Gina Fernandez in New Zealand hopes for, as "it's quite a rat race in Singapore" and she sees many ex-colleagues here being "burnt out". But she knows "that can't happen overnight". "Different types of jobs (and) successes need to be celebrated. I feel that we don't have to all fit into one box," said the 34-year-old.

While there are pessimistic observations about millennials, for example that they are coddled, Dr Puthucheary suggested that their "sense of entitlement" may be "a result of their circumstances". "An ageing population will mean a greater strain on resources, and a future that the next generation will have to bankroll," he explained. "The economic outlook is uncertain. They'll have to cope with a rising cost of living and, potentially, a greater level of debt." Amid the changing population dynamics, and as the "different generations' lives are increasingly converging", he described the current gap as an "overlooked, yet particularly urgent divide". "As retirement ages rise, workplaces are now more intergenerational than ever. In fact, compared to a decade ago, there are 10 per cent more workers (aged) 55 years old and above," he said. "The young and old will need to work together, not apart."

Although "age isn't an explosive fault line, so perhaps we don't talk so much about it", the gap is growing, he added. "We need to start paying attention and do something about it."

Article 2: 7 Unique Characteristics of Generation Z
By Oxford Royale

Discussions of the clash between generations are seldom out of the news at the moment.

In particular, much of our politics in several different countries is defined by the opposing views of baby boomers (born from the mid-1940s to mid-1960s) and millennials, their children or grandchildren (born from the early 1980s to late 1990s). The boomers are wealthier and more conservative, and worried about their house prices falling; the millennials are socially liberal and worried about ever being able to get on the property ladder. The generation in between, generation X, occasionally get a look-in. But the youngest generation, generation Z, are almost entirely ignored.

That's partly because they're still young: generation Z was born from the mid-1990s to the late 2000s, so the majority of this generation is still under the age of 18. That means that unlike older generations, their views of politics aren't often being analysed because most of them aren't yet allowed to vote. And often it's assumed that generation Z are enough like the older millennial generation that there's no point in looking at them separately. But that's a mistake, as we'll see in this article: generation Z is distinctive, different and not to be ignored.

1. They're digital natives

There are two key questions that separate millennials from generation Z, and the first is whether or not they recognise this sound (we'll come on to the second one shortly). Generation Z is the generation that never had to deal with dial-up internet or brick-shaped mobile phones. They have grown up with the knowledge that they can speak to anyone

around the world at a moment's notice, and through assorted social media networks, that's what they've been doing for their entire lives. For this generation, electronics that were a luxury to their parents and older siblings have always been a necessity for living in the modern world. This facility with technology has sometimes between used to describe the entire generation; as well as generation Z, they've also been called the neo-digital natives.

And the difference between them and their predecessors in this respect is stark. Every previous generation has seen a change from analogue to digital – take playing music, where the average millennial might just about remember taping songs from the radio, then burning CDs, then blue-toothing music files from one phone to another. For generation Z, music has always been consumed and shared digitally. And the same is true of many things, from maps to party invitations. Generation Z is the first generation for whom the extraordinary technological advances of the last 20th century are just a normal part of life. Undoubtedly they will see the same huge changes in technology in their adult lives as baby boomers, gen X and millennials have done in theirs – but with their early experiences, generation Z may well be better able to adapt and cope.

2. The world they live in has never felt safe

The second key question that separates millennials from generation Z is whether or not they remember 9/11. For the oldest of generation Z, it happened in their lifetime when they were too young to remember; for most, it's a historical event that happened before they were born. This kind of international terrorism on a massive scale, happening in Western countries, does not feel new to them; it's what they've always known. This helps to understand some apparent contradictions in generation Z's beliefs; they're keen to live and work all around the world, but they're deeply anxious and afraid of the terrorism, extremism, conflict and war that they might find. But to generation Z, this isn't contradictory – as far as they're concerned, while terrorism is frightening, living with it is the norm not the exception, and they feel just as likely to encounter it at home as overseas.

But it isn't just global terror that keeps generation Z from feeling safe. They were also born during or just before the 2007 financial crisis and resulting recession. For the unlucky members of this generation, their earliest memories might well include houses being repossessed, family members losing their jobs, and other signs of massive international financial upheaval. Contrast this with boomers and millennials, who were both born in times of prosperity and typically didn't have to face economic downturns and their consequences until they were well into their teens. No wonder that generation Z have a reputation for frugality and caution in comparison with the generations that preceded them.

3. They're accepting

The world didn't just become a more frightening place while generation Z were young children; it also became a more accepting one. The most obvious example is gay rights: while generation X and millennials in the UK will remember the fight to repeal Section 28 (a piece of legislation that banned the promotion – and effectively, the discussion – of homosexuality in schools), for generation Z that's distant history. While millennials cheered on the introduction of same-sex marriage in country after country, and the views of older generations slowly and steadily changed in favour, generation Z were more likely to be surprised that it wasn't legal yet in so many places.

To be tolerant of differences has always been the default position of generation Z – while their politics varies and can tend towards the economically conservative, they think that being socially liberal goes without saying and are often horrified that anyone could think otherwise. Partly this is motivated by the fact that generation Z are themselves a very diverse generation; they're the generation whose parents met people from all over the world through cheap flights and the internet, and as a result, they're more likely to be mixed race and hold more than one nationality than their predecessors. They're also more likely to know people – including their peers – who are openly transgender. Theirs is a heterogeneous generation, and that's the way they like it.

4. They're health-conscious

Our understanding of nutrition has advanced a lot from knowing how much fruit and veg a person should eat every day, to understanding that too much sugar, rather than too much fat, is what's really damaging to our health. Previous generations have grown up with assorted bad food habits: the fry-ups of the baby boomers, the yo-yo dieting of generation X and the sugar-filled frappuccinos of the millennials. These generations all learned bad food habits growing up (often based on what was seen as perfectly sound nutritional advice at the time). While nutrition isn't a flawless science, it's certainly moved on a lot and generation Z have reaped the benefits, growing up used to getting their five-a-day and with the chocolate and crisps that would have been in their predecessors' primary school lunchboxes replaced by snacks of nuts and fruit.

And as generation Z have become teenagers, they've continued this healthy streak. They're much less likely to take up smoking than previous generations, and far more of them drink no alcohol, not even in moderation. Part of this has

been put down to the fact that generation Z can socialise with friends online more easily than any previous generation, and so spend less time going out to parties than older generations did. But part of it is surely also that years of public health campaigns of various kinds, aimed to break older generations of their bad habits, have caused generation Z to start off by forming good ones.

5. They value their privacy

As the spate of politicians caught out by unwise forum comments, blog posts and Facebook discussions shows, earlier generations have frequently been caught on the hoof by bad management of their digital privacy – forgetting that on the internet, nothing ever really goes away, and that saying something on social media can be more like shouting it on the town square than whispering it to a friend. This isn't a danger for generation Z, who've grown up with a keen understanding of the line between public and private in online settings, and who guard their privacy carefully as a result. It's one of the reasons that generation Z has little interest in Facebook, preferring social media where they can more easily keep their interactions restricted to their closest friends, or present a carefully curated image when they do post for a wider audience, such as on Instagram.

That's not to say that generation Z are privacy-conscious at the expense of all else. They have, after all, grown up in a world where it's usual for their favourite brands to gather extensive data on them in order to tailor marketing communications to their specific wants. The difference is that unlike older generations, generation Z doesn't view this as an invasion of privacy, but instead an expected marketing technique of any company wanting to provide a good customer experience. It's not a contradiction; it's just that generation Z expect to keep their communications private, but not their customer preferences. In fact, they'll avoid brands that don't offer them a sufficiently personalised experience.

6. They're entrepreneurial and worried about their future prospects

Generation Z have grown up in a world that hasn't always made them feel financially secure, and they've taken that on board in their plans for their future careers. While the millennial generation were encouraged to dream big and aim to find fulfilment and wealth in creative and exciting careers (with corresponding disillusionment when those careers turned out to take more than determination to access), generation Z is more realistic. They dream of becoming entrepreneurs, building up their own businesses and never needing to answer to a boss. With all the resources of the internet at their disposal, they know that running your own business can be very hard work, but they're ready for it because they see it as a route to the financial security that they prioritise. And their goals are optimistic, but not impossible: they don't plan on becoming billionaires before they're 30, but they do dream of inventing an app that lets them graduate without debt.

While the millennial generation reached adulthood to be confronted abruptly with the loss of the financial perks that their parents had enjoyed – affordable housing and heavily subsidised university education above all – generation Z have grown up with the knowledge that they aren't likely to have it so good, and they've made their plans accordingly. That's not just reflected in their entrepreneurial streak, but in their inclination to prioritise working towards a well-paid career over chasing a pipe dream.

Application #1: Characteristics of today's young people

List some of the characteristics of young people today mentioned in the articles you have read in this section. Do you agree with these descriptions of young people today?

Characteristics	Elaboration	Reason	Example

Do young people today really enjoy a better life compared to their parents or grandparents? The next two articles explore if this is true. As you read these articles, fill in the table on page 13.

⇨ Concepts: Technology, Job Skills, Physical & Mental Well-being, Adaptability

Key terms: digital nomads, work-life balance, virtual learning, standard of living, gig economy, YOLO

Article 3: 7 ways millennials have it easier than their parents did (adapted)
Shana Lebowitz | Business Insider US | March 27, 2018

It's easy for millennials to complain that their lives are worse than their parents' and grandparents' were at the same age. And in some ways, they're right. But we're not letting millennials – the generation born from 1981 to 1996 – off the hook so easily. In many ways, life is *better* for young people today than it was 30 or 60 years ago. Relationships, health, and education have all been transformed.

Below, we've listed some key reasons the millennial life is a relative breeze.

1. *Millennials can stay in touch with family and friends on social media*

There's a lot of griping out there about how social media is ruining our attention spans, our ability to sit still, our self-esteem, and our lives in general. But one of its most basic functions is to keep us connected to people we may otherwise lose touch with – and that's pretty handy. Your mom may be lucky if she bumps into her old college roommate on the street one day, but you can message yours at any time, or even just like the person's photos. A 2015 study, published in the Journal of Experimental Psychology: General, found that "passive" Facebook use – think browsing your News Feed – can indeed undermine well-being. But "active" Facebook use – think posting status updates and commenting on other people's photos – can make us feel better.

2. *Millennials are meeting their partners online — and the resulting relationships may be stronger*

Online dating just wasn't an option when baby boomers and Gen X-ers were younger. But a growing body of research suggests that people who meet online have more satisfying relationships, are less likely to get divorced, and in fact get married more quickly than couples who meet IRL. That's most likely because people who sign up for dating services may be more interested in a relationship than, say, people at a bar who aren't specifically there to meet a serious partner. It's now easier than ever to find those relationship-oriented people. To be sure, having so many options to choose from can be overwhelming. But having *no* options – as might be the case if you lived in a small town 30 years ago – can be even more distressing.

3. *Millennials have more options around remote and flexible work*

Digital technology is a double-edged sword when it comes to the workplace. On the one hand, it's possible to be "always on," signing back in to your work email after you get home. On the other hand, today's young professionals can use this technology to their advantage. Companies like Remote Year are creating "digital nomads," or people who work wherever and whenever, rarely setting foot in a traditional office. As Business Insider's Áine Cain reported, even major companies like Amazon, Dell, and Hilton allow telecommuting for some positions. That can help employees create better work-life balance, especially if they're caring for kids or other family members. This isn't an opportunity most baby boomers and Gen X-ers ever had.

4. *Millennials are able to access health information more easily*

In the past decade or so, nutritional information has become easier to find. For one, as of 2010, restaurant chains were required to post calorie counts on all menu items. And in 2016, the Food and Drug Administration revealed an overhaul of nutrition labels that made calorie counts and serving sizes clearer, in addition to other changes. To be sure, some experts say it has gotten harder for people to lose weight, for reasons including less sleep and greater stress. But transparency about what exactly you're putting into your body has increased – it's up to consumers how they use it.

5. *Millennials are able to learn outside a traditional classroom*

Major educational institutions around the world now offer online courses and other kinds of virtual-learning opportunities. You can also sign up for online classes on topics from programming to personal branding. This shift has made a big impact on millennials: Business Insider previously reported on a poll that found 69% of people ages 18 to 34 said they thought they learned more from technology than from people. By comparison, only half of baby boomers said the same.

6. *Millennials face less stigma around mental-health issues*

In July 2017, a web developer's Twitter post went viral. In the post, she shared an email from her boss praising her for taking a day off to focus on her mental health. It's a prime example of how the stigma around mental health is gradually decreasing. In fact, in 2017, NPR reported that "self-care" is trendy among millennials in a way it wasn't among previous generations. It's worth noting, too, that mental help is easier than ever to access. Business Insider's Erin Brodwin reported on her experience using the chatbot Woebot, one of a number of therapy-related apps.

7. *Millennials have a better standard of living*

And finally, millennials have a better standard of living. Modern technology has ensured a more hygienic and sophisticated lifestyle with better sanitation, more sophisticated medical support as well as alternative solutions to conventionally time-sensitive issues such a reproduction. In developed countries, widespread vaccination has nearly eradicated traditional diseases that threaten the lives of young people and children such as polio, leukaemia and tuberculosis.

⇨ Concepts: *Technology, Job Skills, Physical & Mental Well-being, Adaptability*

Article 4: The Big Read: Singapore's oft-maligned millennials face their first crisis

By Justin Ong | The Straits Times | April 6, 2020

SINGAPORE: In February, final-year undergraduate Bianca Chua thought she was all set for the working world after starting her internship as a headhunter at a human resource (HR) firm. The Nanyang Technological University (NTU) business major secured the internship in December, and she had been told verbally and over email that she would be automatically converted to a full-timer when she graduated in May. At that time, the 23-year-old was over the moon at securing a full-time job before most of her peers did. "Everything went fine" for about a month after her internship began, she said. Then, things went pear-shaped quickly.

The COVID-19 outbreak, which originated in China and had rattled Singapore since January, has morphed into a full-blown pandemic. The coronavirus can lead to severe respiratory problems and even death. As it spreads its tentacles all over the world, leading to hundreds of thousands of cases, travel restrictions turned into border closures. In just a few months, the interdependent global economy has taken a pummelling.

With Singapore expected to go into a full-year recession, companies began to announce pay cuts and hiring freezes. Some, like Ms Chua's company, even began to lay off workers. On Mar 26, the firm told Ms Chua that it would be laying off "half the team", including herself and several full-timers. She was told to pack her things and leave on the day itself. "It feels bad ... suddenly my whole plan was derailed," she said. If Ms Chua is among those who have the misfortune of graduating amid a looming recession, the millennials who are working in industries which have been battered by Covid-19 are faring no better.

A Singapore Airlines (SIA) air stewardess, who wanted to be known only as Ingrid, was last rostered on a flight in mid-March. Since SIA announced on Mar 23 that it would be cutting 96 per cent of capacity due to vanishing demand, she has been grounded, earning little more than S$1,000 a month in basic pay, about one-fifth of her usual salary. Ingrid then reached out to her aunt, who works at a hawker stall selling Muslim food, but was told that there were no vacancies. "Before this I went out on all my days off and would sit with my friends over brunch at overpriced cafes, but I can't afford to do that now," said the 25-year-old, who is currently cooped up at home scrolling through job-hiring sites.

Then there is Mr Dave Lim, a freelance photographer and videographer. Since Covid-19 has virtually wiped out large-scale corporate events across the island, he has seen his earnings fall by 50 per cent. The 26-year-old said that he is attempting to switch to filming advertisements, which remains in demand. However, he is finding this a challenge, as he is not as well-established in the advertising scene and has difficulty finding clients.

Like Ms Chua, Ingrid and Mr Lim, the majority of those in their early 20s to mid-30s — commonly referred to as millennials — are facing a crisis of global proportions for the first time in their adult lives. And as far as crises go, they do not come much bigger than what the world is currently experiencing.

With millennials often dismissed as the "strawberry generation" — easily "bruised" when faced with societal pressures or made to do some heavy lifting — will they be able to handle a crisis that has been dubbed as a "once-in-a-generation occurrence", and one that could turn out to be the worst global upheaval since the Great Depression in the 1930s?

Among the more than a dozen millennials, ranging from soon-to-be university graduates to workers in their mid-30s with families to feed, those who have lost jobs or business revenues in the past few weeks said the old adage of "saving for a rainy day" has acquired a new importance for them. While some used to lead lavish lifestyles which

included frequent shopping and dining at higher-end establishments, they have since stopped all unnecessary spending and started to save money for the tough times ahead. They have largely stayed at home (also partly due to social-distancing measures), go out less with friends, and will not be making any overseas trips anytime soon, especially with travel options almost non-existent. Instead, they have been cooped up indoors searching for jobs, or attending courses to learn new skills. Due to changing attitudes and the pervasiveness of the gig economy, many of those interviewed said they have no qualms about taking up odd jobs in sectors such as retail and food and beverage, should no other options be available. While these industries might be looked down upon by their older counterparts in higher-ranking jobs, the millennials said they do not mind biting the bullet to ride out the storm.

The younger millennials appear to be in a slightly better position — most are not yet expected to take care of their parents and do not have children of their own. In fact, some said that their parents would help them to stay afloat if there was no other choice. However, most are reluctant to depend on parental support, with one final-year student saying she "cannot fathom the thought" of living off someone else once she graduates. However, for some older millennials - those who have children and elderly parents to support - there is less of a safety net.

HOW ECONOMIC SITUATION DETERIORATED
In February, the Ministry of Trade and Industry (MTI) slashed Singapore's economic growth forecast for 2020 from between 0.5 and 2.5 per cent to between -0.5 and 1.5 per cent. At that time, the COVID-19 outbreak was still concentrated in China, with most of the cases occurring there. However, the uncertainty at that time was already enough for MTI to warn of a full-year recession. On Mar 26, the ministry further downgraded Singapore's economic growth forecast for the year to between -4 and -1 per cent. By then, the global situation was vastly different than the one in February, with the virus having infected hundreds of thousands across the globe, and at least US$12 trillion wiped off world stock markets. That same day also saw Deputy Prime Minister and Finance Minister Heng Swee Keat unveiling a S$48 billion Resilience Budget to help workers, businesses and households. This comes on top of the S$6.4 billion support package unveiled during the Budget in February.

In Singapore, though there have been no reports of widespread layoffs thus far, a few well-known companies, such as SIA, property developer CapitaLand and transport operator SMRT, have begun to slash wages or freeze the pay of its senior staff. With many companies following suit to implement such cost-cutting measures - most of the millennials interviewed said their employers had already taken similar steps - the National Wages Council (NWC) on Mar 30 issued guidelines on how they should cut wages responsibly. Among other guidelines, NWC recommended management teams of struggling companies to "lead by example" when considering wage cuts, and to keep the salaries of low-wage workers intact. While many industries are already suffering from the effects of the general downturn in the economy, the aviation sector is among the hardest hit as many countries have imposed travel bans. Singapore, for instance, has barred all short-term visitors from entering or transiting through the country.

OUT GOES THE S$10 SALAD BOWL
The YOLO (you only live once) attitude which characterises many millennials have led others to perceive them as having a cavalier attitude towards financial prudence. Millennials who had been less than thrifty with their money in the past said the COVID-19 pandemic has helped them realise the need to be more prudent from now.

Ingrid, the SIA stewardess, said that apart from frequenting higher-end cafes, she also has the expensive habit of taking ride-sharing services wherever she travels, even though an MRT station sits right in front of her residence. "I will be making a more conscious effort to take public transport when I go out," she said. While she saved only about 20 per cent of her salary in the past, she now plans to put aside "a good 35 to 40 per cent".

Another millennial, who wanted to be known only as Victoria, has already started to alter her spending habits amid concerns that she may be let go by a beauty retailer. While the 24-year-old had joined the company as a contract staff, she was told that after a year, she would automatically be converted to a full-timer. But at the end of March — on the day she was supposed to become a full-time staff — she was told that there would be a two-month contract extension instead, with no more promises of a conversion. Due to the uncertainty, Victoria has begun sending her resume to prospective employers in her free time, and has also been saving up in case she loses her job. She now eats S$2 lunches at hawker centres instead of indulging in S$10 salad bowls, takes public transport more often instead of cabs, and has cut down on unnecessary spending on shoes, accessories and cosmetics, Victoria said. While she did not set aside a fixed percentage of her income as savings before, Victoria plans to do so in the future with a savings account.

Mr Lim, the freelance photographer and videographer, said that while he has already been prudent with his spending pre-crisis - saving up to 60 per cent of his earnings, he will now be more willing to invest in himself. This includes buying equipment that would be useful for his craft, as well as signing up for workshops to learn new skills. "This will allow me to generate more income or jobs by diversifying the services I have to offer," he said.

CONCERNS OF OLDER MILLENNIALS
For 33-year-old Sarah Cheng-De Winne, her concerns about a floundering job market are compounded by the fact that - unlike many younger millennials - she has two children aged four and 13 to feed. Ms Cheng-De Winne, who with

her husband owns a brand design company called Relay Room, said that their revenue depends largely on whether they have a stable clientele. She recalled an incident where her teenage daughter dropped and broke her laptop recently, at a time when the company was still sourcing for new clients. "I looked at her and asked her 'where are we going to get S$215 (the repair cost) from? This is not a time to be careless'," she said. "We were in transition (between getting clients), and we did not know when the next project would be."

Such anxieties also bother Travis, 37, who declined to give his real name. Though he and his wife do not have children, he is an only child and has to support his elderly parents. With the pandemic hitting the hospitality industry hard, the employee at a regional hotel chain has seen his company lose much of its revenue. Capacity at some chains is as low as 10 per cent, he said. Travis, who is in middle-management, has taken a 20 per cent pay cut, and will not be receiving year-end bonuses. "(The crisis) does add to the anxiety but we have been saving for a rainy day, so we can weather a few months of unemployment without much difficulty," he said. Having been through the 2008/2009 financial crisis as a fresh graduate, Travis has this advice for his younger counterparts: Find different ways to contribute to their company and add value to it. "(Employers) will naturally remember that you actually contributed quite a bit during the tough period, and that would put you in a much better position when things get better," he said.

For millennials who find themselves out of work, HR experts said it was important for this group to keep busy while searching for employment. Ms Carmen Wee from the Institute for Human Resource Professionals said that while employment opportunities may be hard to come by, spending time doing odd jobs and volunteering at charities would be better than being idle at home. "Future employers will ask (what you did) when the market was slow," she said. "When you spend your time productively (during the downturn) and do something meaningful … It will demonstrate a lot of character traits and qualities that employers will look at, more than just a degree." Neither should one be afraid that employers may look down on odd jobs if one had to take them up to survive, she pointed out. "It's all about how you explain (to prospective employers) the economic necessity, and what you learned out of it," she said. "The ability to step down and be humble and pull through helps to build resilience and maturity, and that helps your career prospects."

While there is value in taking up gigs and odd jobs, career strategist Adrian Choo, founder of Career Agility International, cautioned against being over-reliant on them. "If it's a short-term thing spanning one or two years, it's OK, but if you want to be a permanent 'gigster', it's going to harm your career in the long run because you are not developing domain expertise and are not developing any particular skill," he said.

As the millennials go through what could be the defining crisis of their generation, they were confident that they would come through it stronger. "We have to adapt to this crisis. We have no other choice."

⇨ Concepts: Technology, Job Skills, Adaptability

Key terms: hard skills, soft skills

Article 5: Millennials need 'soft' skills to thrive in careers and adapt to changes
Richard Hartung | www.todayonline.com | 7 September 2020

As workplaces keep changing and analysts forecast that robots may replace jobs, having the skills to succeed is critical. Millennials need to figure out what skills will position them best for success and, critically, how to get them.

A survey by networking platform LinkedIn last year showed that statistical analysis and data presentation abilities were at the top of employers' lists, followed by technical design and development. As Facebook's vice-president of human resources Janelle Gale wrote, it is your skill set that matters most. "We actually value skills over experience in the grand scheme of things," she said. When you are looking for a job, "we're looking underneath the surface for what's really going to matter and that's what skills you can bring to the table". While having those hard skills is important, soft skills are going to matter as much as or even more in driving career success for people who want to progress upwards in their career. International recruitment firm Korn Ferry found that 92 per cent of human resource leaders see emotional and social skills as crucial in a globalising economy — even though millennials said that their education did not give them soft skills such as managing people.

Consulting giant PWC similarly says that the skills needed for the future are not just about science and technology. Soft skills such as creativity, leadership and empathy will be in demand, even as technological innovation changes the way work gets done. Employers are shifting their focus now as well, with LinkedIn finding from job listings this year that recruiters want to employ people with digital prowess, creativity and strong communication, favouring applicants with both hard and soft skills. LinkedIn's data showed that the top five in-demand soft skills in 2019 are creativity, persuasion, collaboration, adaptability and time management.

A key reason those soft skills are important, consulting firm Rohei says, is that the global workforce and the growing gig economy are changing the way organisations operate. Millennials will be part of organisations with increased

diversity of culture and ways of working, so they need to be able to thrive in adaptable environments and stay effective amid major workplace shifts.

Recruitment firm Manpower Group notes that the changing workplace also means that career success will increasingly be determined by a person's learnability — the desire and ability to grow and adapt their skill set to remain employable throughout their working life. Despite that shift, a recent survey in the United States by consultancy Hay Group showed that around 80 per cent of human resource directors struggle to find graduates equipped with the social and emotional skills to be successful in their careers.

While universities and company training programmes have plenty of courses to teach hard skills such as finance and accounting or coding and design, acquiring the soft skills that will lead to career success in the long term can seem harder. Moreover, a survey by online learning platform, Udemy showed that 68 per cent of companies rely solely on on-the-job training, and 72 per cent only provide training directly relevant to an employee's role. Millennials will need to be proactive to gain the soft skills they need. To start, identify the skills you need and figure out how to acquire them as well as how to use them alongside technology. One of the best ways to develop those skills is to work in different roles in your company, so you can manage in different environments and learn from various types of leaders.

Ms Feon Ang, LinkedIn's vice-president for talent and learning solutions in Asia Pacific, also encourages employees to be proactive in seeking out opportunities to learn additional skills by taking on new projects at work, seeking mentorship and taking up educational courses. One easy way to take those courses is to go online. Coursera, for instance, offers online courses such as High Performance Collaboration, Successful Negotiation, or Presentation Skills. Attending training courses in person can also be effective. SkillsFuture, for instance, has courses such as Leadership, Teamwork and Negotiation.

Noting that making time for learning isn't easy and attention spans are shrinking, talent management platform PageUp suggests that another solution can be micro-learning. Podcasts, blogs and videos offer bite-sized chunks of learning content, completed in three to five minutes, that makes learning easily digestible. LinkedIn Learning has a short module called Giving Your Elevator Pitch, for example. This micro-learning is also valuable for companies, as organisations that offer micro-learning showed a 63 per cent increase in revenue compared with their peers.

While having hard skills for your profession is important, gaining the soft skills you'll need to move up is what will likely take you beyond routine work. As you rise up and as the workplace changes, it is essential to make sure you develop those soft skills so that you can manage effectively in any situation.

Application #2: Better or Worse

Consider the question: "Are the lives of young people today better or worse?" and pen down your thoughts in the table below.

Better	Worse

Discussion Questions
1. Was life for young people in Singapore better in the past than it is today? (GCE2003Q9)
2. To what extent are the young people in your society prepared for life in a globalised world? (MJCJ1YEE2017Q3)

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Inquiry Question:
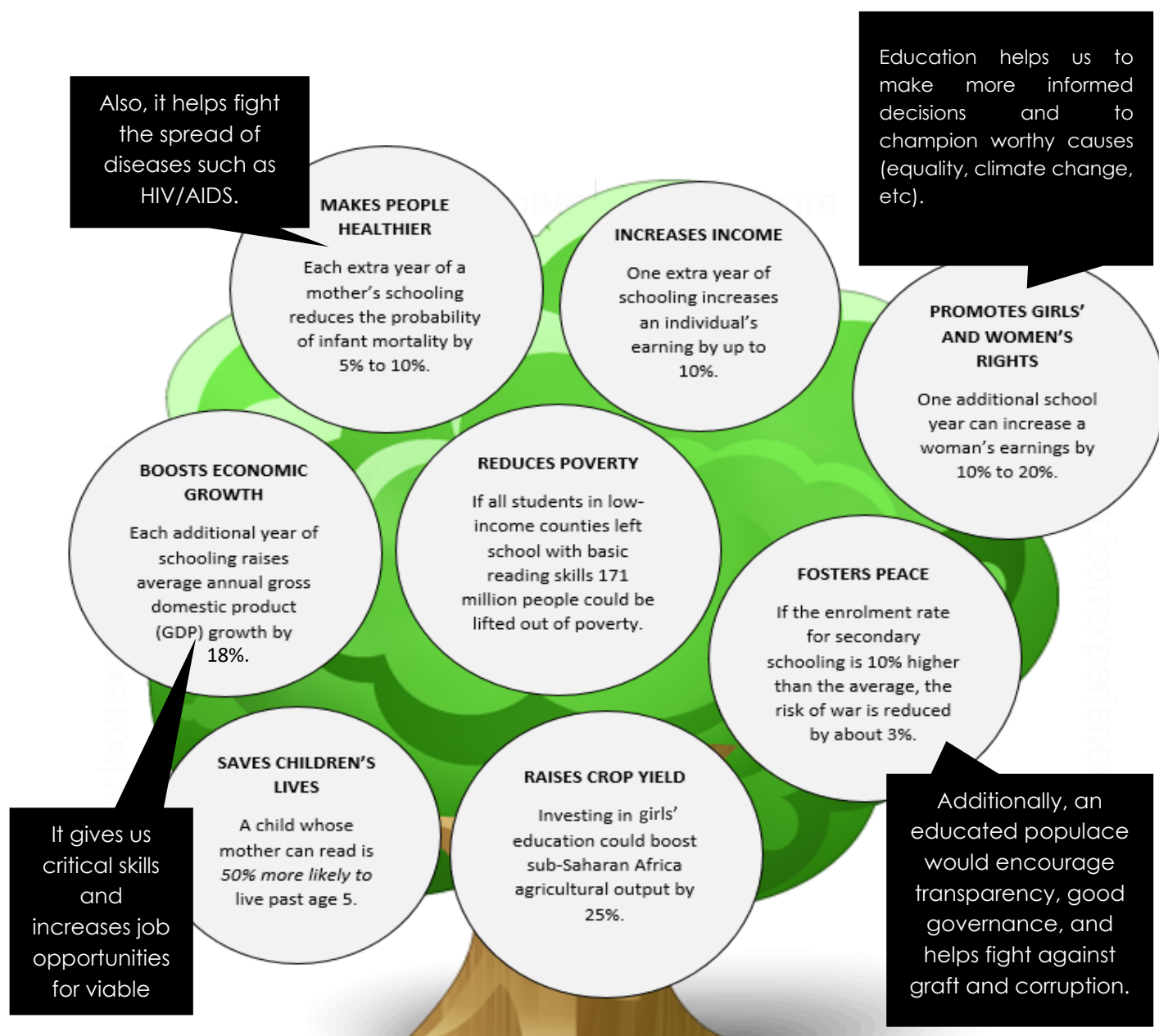Does education really improve people's lives?

Students should be able to:
✓ *Identify the functions/aims of education.*
✓ *Explain the benefits of education for the individual and the state (Both tangible and intangible)*

● Education ●

Reading Set 2

One of the major influences or institutions shaping the experiences, values and beliefs of young people today is education. In this section, we will be exploring the role of education in preparing young people for their future and its impact on their lives.

Also, it helps fight the spread of diseases such as HIV/AIDS.

Education helps us to make more informed decisions and to champion worthy causes (equality, climate change, etc).

MAKES PEOPLE HEALTHIER

Each extra year of a mother's schooling reduces the probability of infant mortality by 5% to 10%.

INCREASES INCOME

One extra year of schooling increases an individual's earning by up to 10%.

PROMOTES GIRLS' AND WOMEN'S RIGHTS

One additional school year can increase a woman's earnings by 10% to 20%.

BOOSTS ECONOMIC GROWTH

Each additional year of schooling raises average annual gross domestic product (GDP) growth by 18%.

REDUCES POVERTY

If all students in low-income counties left school with basic reading skills 171 million people could be lifted out of poverty.

FOSTERS PEACE

If the enrolment rate for secondary schooling is 10% higher than the average, the risk of war is reduced by about 3%.

It gives us critical skills and increases job opportunities for viable

SAVES CHILDREN'S LIVES

A child whose mother can read is *50% more likely to live past age 5.*

RAISES CROP YIELD

Investing in girls' education could boost sub-Saharan Africa agricultural output by 25%.

Additionally, an educated populace would encourage transparency, good governance, and helps fight against graft and corruption.

The Value of Education

Education performs many functions for the individual and society. Four of such functions include:

Creating social solidarity Schools make us feel like we are part of something bigger. This is done through the learning of subjects such as history and languages which give us a shared sense of identity. In Singapore schools, singing the national anthem and reciting the pledge every morning are examples of how schools create social solidarity.	**Learning specialist skills for work** An advanced industrial economy requires a massive and complex division of labour. At school, individuals learn the diverse skills necessary for this to take place. For example, we may all start off learning the same subjects, but later on we specialize at the tertiary level. At a broader level, education provides the economy and country with a productive workforce.
Teaching us core values In modern society, schools play the central role in the process of socialisation, taking over from the family. This is necessary because the family and the wider society work according to different principles, and children need to adapt if they are to cope in the wider society. Rules and laws are applied equally to all people irrespective of the unique character of the individual, which school gets us ready for.	**Role allocation and meritocracy** Education allocates people to the most appropriate job for their talents using examinations and qualifications. This ensures that the most talented are allocated to the occupations that are most important for society. This is seen to be fair because there is equality of opportunity – everyone has a chance of success and it is the most able who succeed through their own efforts – this is known as meritocracy.

Education plays a vital role in developing a country and increasing its productivity.

⇨ Concepts: Education, Success, Competition

Key terms: human capital, economic development

Article 6: Lessons of East Asia's Human-Capital Development
Jan 29, 2019 | LEE JONG-WHA | Project Syndicate

Given the effect of human capital on national productive and development capacities, developing countries should be placing a high priority on boosting human capital. The experience of East Asia's prosperous economies holds valuable lessons.

SEOUL – Nelson Mandela once said, "Education is the most powerful weapon which you can use to change the world." Education does not just enable individuals to improve their lot in life; it enriches an economy's human capital, which is vital to prosperity and social progress.

Nowhere is the value of human capital to development more apparent than in East Asia. The top four (of 157) spots in the World Bank's recently introduced "Human Capital Index" – a composite measure of survival, learning-adjusted years of schooling, and health – are occupied by East Asian economies: Singapore, South Korea, Japan, and Hong Kong.

The new index estimates that a child born today in Singapore will be 88% as productive when she grows up as she could be if she enjoyed complete education and full health. In Sub-Saharan Africa, by contrast, a child will be only 40% as productive. Globally, 57% of

all children born today will grow up to be, at best, half as productive as they could be.

Given the effect of human capital on productive and development capacities, developing countries should be placing a high priority – as East Asia's most prosperous economies have – on boosting human capital, as they pursue sustainable and equitable growth. What lessons can East Asia's experience provide?

From the early 1960s to the late 1990s, when many East Asian economies were undergoing rapid industrialization, the development of a well-educated and skilled labour force, combined with well-directed economic policies, was key to enabling the diversification and upgrading of export industries. In a virtuous cycle, rising incomes and industrial upgrading stimulated continuous investment in education and skills, which contributed to productivity increases,

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technological progress, and the achievement of equitable growth.

Public policy was central to this success, with East Asian leaders ensuring that economic-development plans and associated measures always accounted for human-capital objectives. In South Korea, each of the five-year development plans implemented from 1962 to 1996 contained action plans for manpower development, including education and training policies.

Such policies – designed and implemented in close coordination with industrial and trade policies – enabled East Asian countries to meet evolving economic demands in a cost-effective manner as the industrial structure continued to be upgraded. The key was a sequential approach.

Faced with a growing school-age population, weak educational infrastructure, and limited funding, owing to low levels of national income, the East Asian economies could not simply overhaul the entire system at once. So, early in the development process, as governments promoted labour-intensive industry, they focused on basic education. Later, when governments were promoting heavy manufacturing and technology-intensive industries, they focused on developing upper-secondary and tertiary education, vocational education, and training programs.

Another component of the East Asian economies' strategies for developing human capital was a gradual shift in focus from quantity to quality. At first, when primary education was the emphasis, policymakers sought to get every child in school, even if it meant accepting lower-quality inputs, such as large class sizes. They then began to invest more in boosting the quality of primary schooling, say, by reducing class size and improving resources, from books to teachers. When the focus shifted to secondary and tertiary education, the same sequence was followed.

Of course, even with this sequential approach, considerable – and expanding – financial resources had to be directed toward education and skill development. From the start, governments allocated large shares of their budgets to these objectives. As national income rose and birth rates dropped, total and per capita educational expenditures increased continuously.

In the earlier stages of human-capital investment in East Asia, countries also relied on foreign aid. External financial and technical assistance was a great help to South Korea and Singapore, for example, as they established their education and training systems.

Later, the private sector played a significant role in East Asia's educational and skills development, especially at the upper-secondary and tertiary levels. In South Korea, for example, about 60% of upper-secondary students were enrolled in private schools in the 1980s. The private sector was also encouraged to provide training: in Singapore, employers contributed to a skills-development fund to promote upskilling and retraining workers.

Learning from these experiences, developing countries today should move to invest a substantial and growing amount of the public budget – augmented by foreign assistance – into education and skills development, while working to attract private investment into higher education and skills training. They should take a more cost-effective sequential approach to upgrading their education and training structures, which complements their stage of development. And they should enshrine human-capital development in policy.

Many developing countries today boast rapidly growing young populations that could be a boon for economic growth and dynamism. But, to meet their potential, these young people need strong educational and employment opportunities. Without deliberate and practical human-capital strategies, that will be virtually impossible to deliver.

⇨ Concepts: Technology, Adaptability

Key terms: online learning, edtech, digital divide

Article 7: The COVID-19 pandemic has changed education forever. This is how.
Cathy Li & Farah Lalani | World Economic Forum | 29 Apr 2020

- The COVID-19 has resulted in schools shut all across the world. Globally, over 1.2 billion children are out of the classroom.
- As a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms.

- Research suggests that online learning has been shown to increase retention of information, and take less time, meaning the changes coronavirus have caused might be here to stay.

While countries are at different points in their COVID-19 infection rates, worldwide there are currently more than 1.2 billion children in 186 countries affected by school closures due to the pandemic. In Denmark, children up to the age of 11 are returning to nurseries and schools after initially closing on 12 March, but in South Korea students are responding to roll calls from their teachers online.

With this sudden shift away from the classroom in many parts of the globe, some are wondering whether the adoption of online learning will continue to persist post-pandemic, and how such a shift would impact the worldwide education market.

Even before COVID-19, there was already high growth and adoption in education technology, with global edtech investments reaching US$18.66 billion in 2019 and the overall market for online education projected to reach $350 Billion by 2025. Whether it is language apps, virtual tutoring, video conferencing tools, or online learning software, there has been a significant surge in usage since COVID-19.
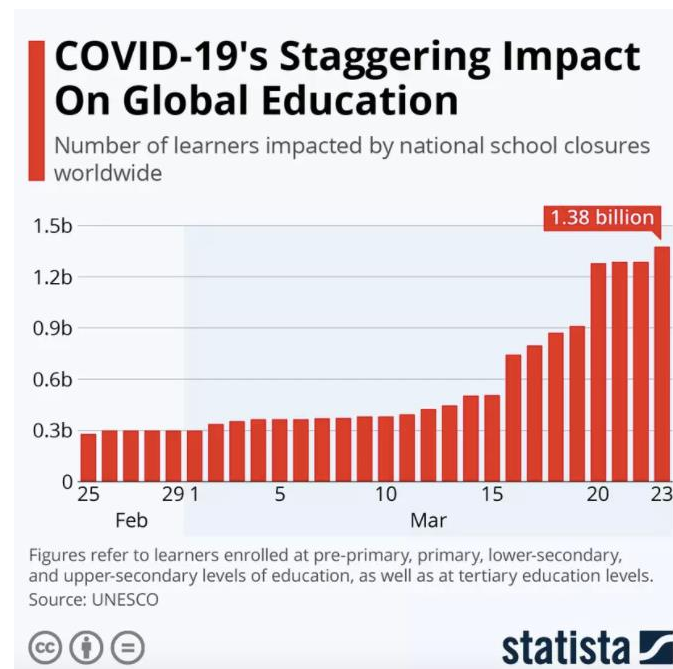
How is the education sector responding to COVID-19?

In response to significant demand, many online learning platforms are offering free access to their services, including platforms like BYJU'S, a Bangalore-based educational technology and online tutoring firm founded in 2011, which is now the world's most highly valued edtech company. Since announcing free live classes on its Think and Learn app, BYJU'S has seen a 200% increase in the number of new students using its product, according to Mrinal Mohit, the company's Chief Operating Officer.

Tencent classroom, meanwhile, has been used extensively since mid-February after the Chinese government instructed a quarter of a billion full-time students to resume their studies through online platforms. This resulted in the largest "online movement" in the history of education with approximately 730,000, or 81% of K-12 students, attending classes via the Tencent K-12 Online School in Wuhan.

Other companies are bolstering capabilities to provide a one-stop shop for teachers and students. For example, Lark, a Singapore-based collaboration suite initially developed by ByteDance as an internal tool to meet its own exponential growth, began offering teachers and students unlimited video conferencing time, auto-translation capabilities, real-time co-editing

of project work, and smart calendar scheduling, amongst other features. To do so quickly and in a time of crisis, Lark ramped up its global server infrastructure and engineering capabilities to ensure reliable connectivity.

COVID-19's Staggering Impact On Global Education
Number of learners impacted by national school closures worldwide

Figures refer to learners enrolled at pre-primary, primary, lower-secondary, and upper-secondary levels of education, as well as at tertiary education levels.
Source: UNESCO

statista

Alibaba's distance learning solution, DingTalk, had to prepare for a similar influx: "To support large-scale remote work, the platform tapped Alibaba Cloud to deploy more than 100,000 new cloud servers in just two hours last month – setting a new record for rapid capacity expansion," according to its CEO, Chen Hang.

Some school districts are forming unique partnerships, like the one between The Los Angeles Unified School District and PBS SoCal/KCET to offer local educational broadcasts, with separate channels focused on different ages, and a range of digital options. Media organizations such as the BBC are also powering virtual learning; Bitesize Daily, launched on 20 April, is offering 14 weeks of curriculum-based learning for kids across the UK with celebrities like Manchester City footballer Sergio Aguero teaching some of the content.

What does this mean for the future of learning?

While some believe that the unplanned and rapid move to online learning – with no training, insufficient bandwidth, and little preparation – will result in a poor user experience that is unconducive to sustained growth, others believe that a new hybrid model of education will emerge, with significant benefits. "I believe that the integration of information technology in

education will be further accelerated and that online education will eventually become an integral component of school education," says Wang Tao, Vice President of Tencent Cloud and Vice President of Tencent Education.

There have already been successful transitions amongst many universities. For example, Zhejiang University managed to get more than 5,000 courses online just two weeks into the transition using "DingTalk ZJU". The Imperial College London started offering a course on the science of coronavirus, which is now the most enrolled class launched in 2020 on Coursera.

Many are already touting the benefits: Dr Amjad, a Professor at The University of Jordan who has been using Lark to teach his students says, "It has changed the way of teaching. It enables me to reach out to my students more efficiently and effectively through chat groups, video meetings, voting and also document sharing, especially during this pandemic. My students also find it is easier to communicate on Lark. I will stick to Lark even after coronavirus, I believe traditional offline learning and e-learning can go hand by hand."

The challenges of online learning
There are, however, challenges to overcome. Some students without reliable internet access and/or technology struggle to participate in digital learning; this gap is seen across countries and between income brackets within countries. For example, whilst 95% of students in Switzerland, Norway, and Austria have a computer to use for their schoolwork, only 34% in Indonesia do, according to OECD data.

In the US, there is a significant gap between those from privileged and disadvantaged backgrounds: whilst virtually all 15-year-olds from a privileged background said they had a computer to work on, nearly 25% of those from disadvantaged backgrounds did not. While some schools and governments have been providing digital equipment to students in need, such as in New South Wales, Australia, many are still concerned that the pandemic will widen the digital divide.

Is learning online as effective?
For those who do have access to the right technology, there is evidence that learning online can be more effective in a number of ways. Some research shows that on average, students retain 25-60% more material when learning online compared to only 8-10% in a classroom. This is mostly due to the students being able to learn faster online; e-learning requires 40-60% less time to learn than in a traditional classroom setting because students can learn at their own pace, going

back and re-reading, skipping, or accelerating through concepts as they choose.

Nevertheless, the effectiveness of online learning varies amongst age groups. The general consensus on children, especially younger ones, is that a structured environment is required, because kids are more easily distracted. To get the full benefit of online learning, there needs to be a concerted effort to provide this structure and go beyond replicating a physical class/lecture through video capabilities, instead, using a range of collaboration tools and engagement methods that promote "inclusion, personalization and intelligence", according to Dowson Tong, Senior Executive Vice President of Tencent and President of its Cloud and Smart Industries Group.

Since studies have shown that children extensively use their senses to learn, making learning fun and effective through use of technology is crucial, according to BYJU's Mrinal Mohit. "Over a period, we have observed that clever integration of games has demonstrated higher engagement and increased motivation towards learning especially among younger students, making them truly fall in love with learning", he says.

A changing education imperative
It is clear that this pandemic has utterly disrupted an education system that many assert was already losing its relevance. In his book, 21 Lessons for the 21st Century, scholar Yuval Noah Harari outlines how schools continue to focus on traditional academic skills and rote learning, rather than on skills such as critical thinking and adaptability, which will be more important for success in the future. Could the move to online learning be the catalyst to create a new, more effective method of educating students? While some worry that the hasty nature of the transition online may have hindered this goal, others plan to make e-learning part of their 'new normal' after experiencing the benefits first-hand.

The importance of disseminating knowledge is highlighted through COVID-19
Major world events are often an inflection point for rapid innovation – a clear example is the rise of e-commerce post-SARS. While we have yet to see whether this will apply to e-learning post-COVID-19, it is one of the few sectors where investment has not dried up. What has been made clear through this pandemic is the importance of disseminating knowledge across borders, companies, and all parts of society. If online learning technology can play a role here, it is incumbent upon all of us to explore its full potential.

Singapore has been accelerating its adoption of online and digital learning, bringing forward its plan to equip all secondary school students with their own personal learning device by 2021 – seven years ahead of its original target. Schools will also start to implement blended learning in Term 3 of 2021.However, ensuring that every student has equal opportunities is not easy. Scan the QR codes below to read more!

	Blended Learning to Enhance Schooling Experience and Further Develop Students into Self-Directed Learners		**How home-based learning shows up inequality in Singapore - a look at three homes**

Inquiry Question:
Can education prepare students for today's economy?

Students should be able to:
- ✓ *Identify the skills required of workers in today's economy*
- ✓ *Identify the weaknesses and limitations of conventional schooling/education systems (across different countries, especially in SG)*

● Challenges in Education ●

Education is not perfect and concerns regarding inequality remain a challenge. As you read the following articles, fill in the table on page 22.

⇨ Concepts: Inequality, Meritocracy, Success

Key terms: socio-economic status, social mobility, education arms race

Article 8: Commentary: Can education fix inequality in Singapore? If not, what can?
By Linda Lim & Pang Eng Fong | Channel News Asia | 02 Jun 2019

Combating inequality has been declared a "national priority" in Singapore. This makes sense, given the pernicious effects that persistently high inequality can have on economic growth, political stability, social cohesion, quality of life, and even national security. Inequality itself also directly lowers economic growth through under-realisation of scarce talent, and weaker consumption demand — both are of particular concern to Singapore given our small labour force and market size. As an already mature, high-income and thus slow-growing economy, we can also no longer expect rapid growth to mask the economic effects and social challenges of rising inequality, as it did in previous decades. Instead we need to boldly confront the root causes of inequality, which lie in how our economic and social institutions actually work. Focusing on education policy as the main solution can actually worsen inequality.

How does education contribute to inequality?
In developed economies like the UK, US and Singapore, income inequality increases with average incomes because growth increasingly derives from the application of capital and skills, rather than labour, to production, as comparative advantage and technology shift in a capital- and skills-biased direction. This raises the returns to capital (profits and rents) and skills (PMET – Professionals, Managers, Executives, Technicians – salaries) more than it does the returns to labour (wages). Education, especially university education, contributes to the widening skills premium (excess of skilled over unskilled labour income), and parents and students naturally clamour for more of it.

This is where education and inequality are mutually reinforcing. Higher-income families invest more in private tuition for academic subjects, extracurricular enrichment activities, and parental attention. This enhances their children's school performance and chances of getting into "good" (elite, brand-name) schools and universities, thus achieving credentials that employers value and reward with "good jobs" and high salaries. Employers are known to use educational certification and school reputation as "screening devices" that differentiate between job candidates, and as proxies for behavioural characteristics and social networks they believe enhance employees' contribution to the enterprise.

Expansion of higher education has been accompanied by a widening "college premium" — or gap between graduate and non-graduate incomes — even as the supply of graduates increases. Recent studies in the US and UK suggest that this is due to losses to non-graduates, as well as gains to graduates, as employers start requiring degrees for work that did not need it 30 years ago. And as university degrees become more common, institutional reputation becomes more important, intensifying competition for places at the most selective institutions, and widening their graduates' salary premium over graduates of less selective institutions.

Can education reforms reduce inequality?

Policy-makers in developed countries have focused on reforms in education to reduce inequality. In some countries, particularly the US, unequal resource allocation between "rich" and "poor" school districts is a major factor contributing to unequal educational, employment and income outcomes. This is less of a problem in Singapore, given the Ministry of Education's worthy efforts to equalise the allocation of resources — including the "best" teachers and administrators — between "neighbourhood" and "elite" schools. But it is hard to improve already high-performing, well-resourced schools.

Recent, separate research by NTU associate professor of sociology Teo You Yenn, and NUS associate professor of social work Irene Ng, confirms the dominant impact of family circumstances on student performance in Singapore today. The PISA test which we regularly top shows that 15-year-old students in Singapore on average perform better than those in OECD countries, but here the gap between the top and bottom scorers is wider and the dependence on parents' socio-economic status higher. Another popular policy is to increase lower-income students' access to more selective schools, including through priority admissions, as Singapore plans to do in Primary One and post-PSLE student assignments to elite schools. Since school performance is heavily dependent on family resources, lower-income children could underperform relative to higher-income classmates in elite schools, reinforcing stigmatisation from priority admission, and lowering self-esteem which research shows is a major determinant of individual performance. Priority admission for lower-income children would also intensify competition among higher-income students for "fewer" elite school places, thus worsening the "education arms race".

> Some 82% of parents said they are paying for private tuition or have done so in the past, and four out of five parents have started making plans for their child's education even before the child begins primary school at age seven years
> (HSBC Report (https://www.todayonline.com/singapore/singaporeans-spend-twice-global-average-childrens-local-education-hsbc)

In the US, such competition has worsened inequality and increased social stratification by increasing home values (hence family wealth) in residential neighbourhoods in the top public school districts. Tweaking Singapore's education system will not reduce inequality because it does not change the underlying unequal socio-economic structure to whose incentives families of all income levels rationally respond. Parents naturally seek for their children entry into secure, well-paid employment in large corporate and government bureaucracies, and cartelised high-earning professions, which still use traditional academic credentials to screen candidates and remunerate employees.

The impact of meritocracy

The Singaporean ideology that we are a "meritocracy" where economic success based on hard work and the right academic credentials justifies unequal returns, poses two problems. First, it entrenches hierarchy, and hence a systemic inequality to which social mobility can at best contribute slightly more diverse members at each level of the pyramid. Overall inequality does not decline, and at worst, those who fail to "make it" up the ladder are considered to "deserve" their inferior position on the social as well as income scale. Beginning with the competitive "streaming" of students by exam results at an early age, such stratification has stigmatising and demotivating effects which limit educational attainment and reduce intergenerational mobility.

Second, in the post-industrial society to which Singapore is inevitably transitioning, a laddered meritocracy and the social divide it subtends impede further economic progress. Innovation, and response to the disruption it causes, increasingly hinge on entrepreneurship rather than bureaucracy, risk-taking rather than risk-avoidance, diversity rather than similarity, collaboration rather than competition, imagination rather than instruction, contestation rather than conformity, and bottom-up rather than top-down initiative. In short, meritocracy as currently construed in Singapore, and served by the educational system, is arguably the problem, not the solution, for both economic development and inequality, as it is in other highly unequal rich societies. A UK study shows that students from higher-income families are more likely to go to university, and to more selective universities. They also earn more than students from lower-income families who graduate from the same institutions in the same subjects, and with similar other characteristics.

Reducing inequality through redistribution need not harm growth

We need to look outside the education system for policies that do work to reduce income and wealth disparities. They include higher tax rates on high income earners, levies on capital gains, estates and inheritance, and a stronger social safety net — all of which Singapore has eschewed, believing these would reduce the incentive to work hard, save and invest, and thus harm economic growth. But high-income Scandinavian countries, Switzerland and Germany, have reduced inequality over decades through progressive universal tax-and-transfer systems that included labour market policies, spending on healthcare and social protection while growing at respectable rates and ranking high on productivity and innovation indices — some even while maintaining budget surpluses and strong currencies. Some high earners may resent high tax rates, but all citizens benefit from subsidised public services, including health and education and receive unemployment insurance and retirement pensions. Besides reducing economic and social divides, these policies may also encourage savings for growth-enhancing investments in business enterprises (rather than housing consumption, as in Singapore).

Recent improvement in Singapore's still-high Gini coefficient (definition on the right) also results not from

educational policy, but from increased social transfers to vulnerable groups — subsidies for low-wage workers, the elderly and elderly poor. But these have been insufficient to narrow the cumulative wide income and wealth gaps created by past policies and market forces. Our post-tax-and-transfers Gini still ranks with the highest among developed countries (lower than the US but similar to the UK), is much higher than those of other small high-income economies (in Scandinavia), and is unlikely to be fiscally sustainable. However, we have run large budget and current account surpluses for decades, piling up huge foreign exchange reserves that have been well-invested by our sovereign wealth funds. More of these could be converted into social spending that could both increase productivity and reduce inequality.

Reforming the education system — by equalising resources, eliminating streaming, increasing curricular flexibility and minimising social segregation — can reduce inequality and social stratification, and foster the

innovation and entrepreneurship required for post-industrial economic growth, only if the deep-seated institutional roots of inequality are addressed. The political will to do this is what matters in the struggle for a more just and equal society that will benefit all of us.

> The Gini Coefficient is used as a gauge of economic inequality, measuring income distribution or, less commonly, wealth distribution among a population. The coefficient ranges from 0 to 1, with 0 representing perfect equality and 1 representing perfect inequality.

Inclusivity in Singapore's education system

In a world where there is an increasing acknowledgement and understanding of different learner aptitudes and profiles, education systems are gradually adapting to better suit learning needs so that everyone has

> **Recommended:** "Meritocracy and the paradox of success" by Education Minister Ong Ye Kung, 25 Oct 2018, The Straits Times *(Scan QR code to read article)*

an equal opportunity to succeed. Take a look at the infographic to see what is being done to make education more inclusive for all in Singapore.

Special Education Needs (SEN) in Singapore

↓

Compulsory Education Act: All children with special needs who are above 6 years old and below 15 with moderate-to-severe SEN are required to regularly attend a Government-funded SPED school, unless they are granted exemption.

Mainstream schools: Mild SEN, adequate cognitive abilities and adaptive skills for learning in large groups.

Supported by:

-Allied educators (learning & behaviour)
-Social workers
-Therapists & Psychologists (Allied health Professionals)

Special Education Schools: Require more intensive and specialised assistance in their education.

9 Government funded SPED schools run by **12** Social Service Organisations (SSOs)

-**Mild-moderate Severe Autism** (e.g. Pathlight, AWWA, MINDS)
-**Multiple disabilities** (e.g. Cerebral Palsy Alliance Singapore School)
- **Hearing loss** (e.g. Canossian School)

Challenges:
-Quick burnout of professionals due to the high physical and emotional strain of the job
-Unattractive salaries and benefits
-Shortage of manpower and resources for teachers
-Pressure for SEN students to keep up with others in the mainstream curriculum for standardised tests

Full Subject-Based Banding (SBB)

Full Subject-Based Banding (SBB) is part of MOE's ongoing efforts to nurture the joy of learning and develop multiple pathways to cater to the different strengths and interests of students. Under Full SBB, students will no longer be separated into Express, Normal (Academic) and Normal (Technical) streams. Instead, students will learn each subject at the level that best caters to their overall strengths, interests and learning needs. Students will also be in mixed form classes where they can interact with peers of different strengths and interests. Full SBB will take place in all secondary schools from 2024.

Scan the QR code to find out more about Full SBB:

Application #3: Inequality in Education

After reading the above articles in Reading Set 3, consider how education contributes to inequality and what can be done to tackle inequality in education.

Inequality in Education	
Ways in which education contributes to inequality	Possible ways to tackle inequality in education

Another challenge in Education today is staying relevant, as more people begin to question the value of the paper chase. As you read the following articles, fill in the table on page 27.

⇨ Concepts: Job Skills, Adaptability, Technology

Key terms: degrees, lifelong learning, soft skills

Article 9: The Rise Of Skills-Based Hiring And What It Means For Education

By Tom Vander Ark | Forbes | 29 Jun 2021

The pandemic broke some old conventions and accelerated other trends. One convention that, for many tech employers, fell by the wayside was requiring degrees for every position. A trend that accelerated during the pandemic was skills-based hiring.

For decades, degree requirements have been added to more and more jobs. The degree ratchet increasingly screened out skilled applicants, expanded the opportunity gap and made upward mobility more elusive.

For six years, former McKinsey partner Byron Auguste has been arguing that degrees are a bad proxy for critical skills. He founded Opportunity@Work to connect employers to "a huge, largely invisible talent pool of capable people" they call STARs – workers who are Skilled Through Alternative Routes, rather than through four-year degrees. STARs have skills picked up through community college, workforce training, bootcamps, certificate programs, military service or on-the-job learning, but are often overlooked by employers and are blocked by arbitrary degree requirements.

"Companies are missing out on skilled, diverse talent when they arbitrarily 'require' a four-year degree. It's bad for workers and it's bad for business. It doesn't have to be this way," says Auguste. "Instead of 'screening out' by pedigree, smart employers are increasingly 'screening-in' talent for performance and potential."

While the pandemic accelerated inequity, it may have broken the ratchet of degree inflation and caused major employers to get serious about identifying job critical skills and "screen in" talent by verifying skills.

Job Boards Accelerate Skills-Based Hiring

In March, LinkedIn launched Skills Path, a skills-based hiring initiative aiming to connect employers and job seekers by identifying the core skills for open roles and then matching qualified candidates to those roles. Skills Path combines learning courses and skills assessments to match non-traditional candidates with job interviews. More than a dozen companies are already participating in the pilot program.

"We believe that by taking a skills-based approach to opportunity we can remove barriers for candidates that might not have the degree or network, while also increasing the size of employer talent pools, often letting them pinpoint quality applicants for hard-to-fill roles," said LinkedIn VP of Product Hari Srinivasan. Other leading job sites including Indeed and Ziprecruiter have also grown more sophisticated about skills matching.

Building and Credentialing Skills

Putting America Back to Work, a new fund announced today, seeks to put 100,000 Americans into good tech and healthcare jobs. "Our goal is to catalyze more pathways to good jobs that provide learners a real-world experience and relevant job skills aligned to the evolving labor market," said fund investor Ben Walton. "The apprenticeship model encourages companies to prioritize hiring based on skills and competencies which, in turn, increases opportunity for economic mobility."

Two years ago, IBM, a leader in digital credentials launched the SkillsBuild initiative to connect learners to job pathways. In June, IBM announced a new collaboration with 30 global organizations focused on helping underserved populations improve their skills and employability. They hope to upskill a half a million people by the end of the year.

Amazon, Google, Microsoft, Salesforce, Verizon, JPMorgan, and Accenture created new programs to upskill their workforces and extend onramps to others. All these initiatives offer modular learning experiences back-mapped from job competencies with credentials that capture and communicate learning. These corporate giants have created a parallel postsecondary universe that complements or could even replace traditional higher education for many learners.

Signalling Skills

Skills-based hiring focuses not only on priority technical skills, but foundational and transferable skills. Conducted with Kansas City partners, the DeBruce Foundation sponsored the Essential Skills Report which outlined six competencies most important to enter and succeed in the world of work:

- Communication: interact with clients, co-workers and collaborators;
- Collaboration: teamwork that leverages skills of colleagues;
- Critical thinking: problems solving that synthesizes information;
- Interpersonal skills: treating others with empathy, building trusting relationships;
- Proactivity: taking initiative, acting on opportunities to add value; and
- Executive Function: manage work independently, deal with ambiguity.

The report concluded, "Because these skills are valuable across sectors and durable over time, it is important that education institutions, out-of-school experience providers, and employers invest in the development of Essential Skills."

What Skills-Based Hiring Means for Education

Discipline-based courses have been the standardized measure for units of secondary and postsecondary learning for 130 years. But it's becoming widely appreciated that course credits and degrees are weak proxies for developed human capability. For 20 years, around the edges, there has been steady progress moving away from seat time to competency-based learning—a combination of individual path and pace,

the time and support to master competencies, and credentials that signal new capabilities.

The surge in skills-based hiring means high schools and postsecondary education institutions should design experiences around priority skills, assess those skills and help learners community those skills. Where courses remain the organizing construct, they should be a series of experiences aiming at a bundle of competencies.

Skills should be demonstrated in authentic ways and can be captured and communicated in digital credentials that, over time, will replace course lists and grades as the priority reporting mechanism.

High school and postsecondary learners should have the opportunity to build profiles (a wallet of digital credentials) and portfolios (artifacts representing personal bests) that communicate capabilities.

Schools have an expanding opportunity to incorporate some of the corporate skill building and credentialing programs into their courses of study.

The work starts with community conversations about new learning priorities—particularly skills key to entering and succeeding in the new economy. It continues with learners having multiple opportunities to develop and demonstrate new skills. And it ends with learners hired based on what they know and can do.

2022 Skills Outlook. Source: Future of Jobs Report 2018, World Economic Forum	
Growing	Declining
1. Analytical Thinking and Innovation	a. Manual Dexterity, endurance and precision
2. Active learning and learning strategies	b. Memory, verbal, auditory and spatial abilities
3. Creativity, originality and initiative	c. Management of financial, material resources
4. Technology design and programming	d. Technology installation and maintenance
5. Critical thinking and analysis	e. Reading, writing, math and active listening
6. Complex problem solving	f. Management of personnel
7. Leadership and social influence	g. Quality control and safety awareness
8. Emotional intelligence	h. Coordination and time management
9. Reasoning, problem-solving and ideation	i. Visual, auditory and speech abilities
10. Systems analysis and evaluation	j. Technology use, monitoring and control

Staying Relevant Through Lifelong Learning

The following article, an edited excerpt of Finance Minister Heng Swee Keat's speech to the Economic Society of Singapore, outlines the emphasis placed on lifelong learning in Singapore to give students and workers an advantage over others in the future economy.

The reconfiguration of global supply chains, shifts in consumption patterns and technological advances are changing the nature of jobs and the skills we need for work, along with how businesses operate. These changes will affect what we learn, how we learn and when we learn.

Soft Skills and Technology that add value
First, what we learn should help us realise our potential, and build foundations for further learning. Part of this involves learning skills that are relevant to society and the economy. Along with domain-specific skills, some general ones, like

the ability to work with **digital tools and data**, will increase in economic significance. Others, like **social skills and emotional intelligence**, will remain important in making us effective members of society. We should harness technology to create more value. If we can use artificial intelligence (AI) to automate more routine cognitive tasks, for instance, we can then focus on developing the uniquely human skills, like creativity or open-ended problem-solving that will enable us to do higher-value work.

Learning out of the classroom
How we learn should expand to include learning from all sources and in different settings. **Learning does not have to happen in a classroom** - it can also happen via new technologies, like online platforms, or new modalities, like on-the-job training or overseas attachments, which can help to integrate theoretical understanding with practical application.

Lifelong learning - In Institutes, On-the-job, Abroad
Third, when we learn need not be confined to the first two decades of our lives. As we all live and work longer, we should learn throughout life, through on-the-job experience interspersed with bouts of more intense, modular full-time training.

SKILLS*future* SG

To encourage individual ownership of skills development and lifelong learning, all Singaporeans aged 25 and above will receive an opening credit of S$500 from January 2016 under the SkillsFuture Movement. (www.skillsfuture.sg)

If we are to change what, how and when we learn, individuals, institutes of learning and industry must change our habits and practices significantly. Individuals will have to shift from "learning, then doing" to "lifelong learning and doing". Instead of just learning before starting work, we should **embrace a lifelong cycle of learning and doing**. Throughout our careers, we learn the skills that we need for our jobs, hone them by using them at work, and then, as the economy evolves, learn a new set of skills and in turn put those to use. This is what the SkillsFuture movement is about. We should also take up opportunities to broaden our experience beyond our shores. Initiatives like the Global Innovation Alliance, for instance, can help us to understand overseas contexts better.

How institutes of learning play a part
- **Ministry of Education (MOE)'s 21st Century Competencies Framework**: Developing responsible decision making and critical and inventive thinking to nurture self-directed learners. (E.g. Applied Learning @ Secondary Schools, SkillsFuture Earn and Learn Programmes in polytechnics and the Institute of Technical Education.
- **Singapore Institute of Technology's Integrated Work-Study Programme**: Real-world experience through 8 to 12 months of on-the-job training with partner companies. Encourages collaboration between educational institutions and industry partners, helping employers to assess potential employees and give a head start for students in work.
- **Overseas exposure in education:** (e.g. National University of Singapore's Overseas Colleges, polytechnics' Overseas Student Internship Programme, and ITE's Global Education Programme.)
- **Education institutes offering online courses:** (e.g. Nanyang Technological University committing to launch 1,500 courses in 5 years, NUS partnering Coursera to launch Massive Open Online Courses, MOE's Student Learning Space utilising latest digital tools and modalities of learning)

Encouraging industry players to build human capital as an investment
- Panasonic upgrading employee's skills to remain relevant in a smart factory, median salary of local staff increased by 35 percent.
- **"**In-house approved training organisations" providing industry-validated training for staff (e.g. Wing Tai, SATS, MacDonald's).
- Encouraging companies to collaborate together to train professionals in the industry (e.g. Ascott, PBA Group).

Scan the QR code to find out more about Skillsfuture.

The world is facing major structural changes. Singapore is well placed to manage these changes, and make the most of the opportunities they bring - we have strong tripartite relations, sound macroeconomic and microeconomic foundations, and strong physical and virtual connections to the world. If our companies and our people continue to build strong capabilities, we can make the most of these advantages, to create unique value for the world and our people. What we need is the right mindset - to be proactive, dare to take risks, and learn from our failures, and recognise that this is a continuous journey of upgrading.

Key terms: *stress, multiple pathways, academic achievement*

Article 10: Belief in single pathway to success a major cause of students' stress, says Indranee

Seow Bei Yi | The Straits Times | JUL 11, 2018, 9:53 PM SGT

SINGAPORE - The stress Singapore students face is caused largely by the belief that there is a narrow gateway and one path to success. And despite moves to reduce stress and create a more supportive environment, the thinking persists because changing mindsets is not easy and takes time, said Second Minister for Education Indranee Rajah on Wednesday (July 11).

She was responding to concerns expressed by MPs on students' stress and an over-emphasis on grades during a wide-ranging discussion in Parliament on education for the future. The MPs include Mr Louis Ng (Nee Soon GRC), Mr Daryl David (Ang Mo Kio GRC) and Nominated MP Kok Heng Leun.

To allay their worries, she set out how Singapore's education system has evolved in response to challenges over the years, moving from the focus on ensuring mass education for a young population in the initial post-independence years to introducing greater choice and flexibility in schools and programmes in the 2000s.

Today, the focus is on developing each individual and creating multiple pathways to success but always with the student at the core of the education philosophy, she said. Other factors the Education Ministry considers in its approach include character development, as well as social and emotional skills that students need to navigate the world.

"We now put a lot more emphasis on developing the whole child - not just their academic achievements," she said.

Book knowledge alone is not enough. The churn and change caused by technology and other disruptive factors means that learning has to continue well into adult life, she said.

"The ability to learn, un-learn and re-learn will be key," she stressed.

This is because the future economy will be much more diverse, and an estimated 85 per cent of jobs in 2030 have not even been invented yet, according to a report by Dell Technologies. A paper by the Organisation for Economic Cooperation and Development this year also noted that future-ready students will need practical skills, like the ability to use new technology - on top of broad knowledge.

"For that, you cannot have a system that is one-size-fits-all," she said, adding that there is no longer a single measure of success either, and learning will be lifelong.

Recognising this, different types of schools - like the Singapore Sports School - and programmes have been introduced to cater to the strengths of each individual. There are also more pathways that students can take, like the ITE Work-Learn Technical Diploma, which allows students to undergo apprenticeships while studying at the same time, she said. There are multiple ways to reach an ultimate goal as opposed to only one academic route from secondary school, to junior college and university, she noted.

Ms Indranee urged parents and students to explore what is available and choose what works best for them. She also assured the House that her ministry is committed to improving the lot of students from lower-income homes.

"We too are concerned about the widening income gap even as the middle class are uplifted and do better over time," she said.

The solution, she added, is to help those at the lower end and close the gap without "chopping the top" and holding back individuals who do well.

"Our system has enabled people to rise from disadvantaged circumstances and to do well," she said. "With the creation of the multiple pathways, it means that there are many opportunities with potential for good outcomes - not necessarily the same outcomes - but good outcomes for all."

Application #4: Usefulness of Degrees

After reading articles 9 and 10, consider the worth of a degree and fill in the table below.

Usefulness of Degrees	
Why is the future of work no longer about degrees?	How is Singapore dealing with the changing job landscape?

Discussion Questions

Education should only be concerned with what is useful in life.' Discuss. (A Level 2013 – Q11)
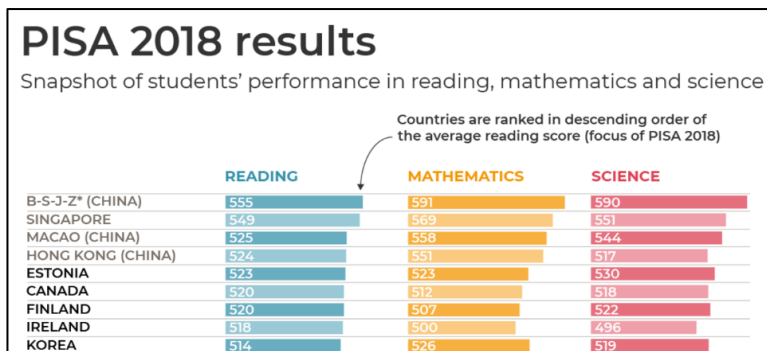
● Snapshots of education systems around the world ●   Reading Set 4

The Organisation for Economic Co-Operation and Development (OECD) conducts the **Programme for International Student Assessment (PISA)** for 15 year olds around the world, testing numeracy, literacy and science. The Pisa test results are highly respected, enabling politicians and policy-makers to assess how different countries' education systems compare.

However, many have criticised PISA's assessment methods as emphasising on a narrow range of measurable aspects of education (maths, science and reading), and taking attention away from the less measurable educational objectives like moral, civic, creative thinking and artistic development.

PISA 2018 was presented on 3 December 2019, with results for around 600,000 participating students in 79 countries, with China emerging as the top performer across Math, Science and Reading. Singapore slipped from its previous No. 1 position in 2015, and was ranked second (below).

PISA 2018 results
Snapshot of students' performance in reading, mathematics and science

Countries are ranked in descending order of the average reading score (focus of PISA 2018)

	READING	MATHEMATICS	SCIENCE
B-S-J-Z* (CHINA)	555	591	590
SINGAPORE	549	569	551
MACAO (CHINA)	525	558	544
HONG KONG (CHINA)	524	551	517
ESTONIA	523	523	530
CANADA	520	512	518
FINLAND	520	507	522
IRELAND	518	500	496
KOREA	514	526	519

For a more detailed analysis of PISA 2018 results, visit **http://www.oecd.org/pisa/**

B-S-J-Z (China): Beijing, Shanghai, Jiangsu, Zhejiang

Nevertheless, just as there are strengths to these high-performing education systems, there are weaknesses too. Furthermore, the context in every nation differs and has much impact on the success of the education system.

The following articles and related video documentaries give a brief analysis of four different countries' education systems. As you read the articles and watch the documentaries, take note of these four countries' strengths and weaknesses, and fill in the graphic organiser on page 32.

⇨ Concepts: *Physical & Mental Well-being, Success, Competition, Adaptability, Inequality*
Key terms: Upward mobility, educational reform, holistic education, gender gap

Article 11:
South Korea's schools: Long days, high results

For many years, South Korea has been one of the highest achievers in the PISA tests. But it means long hours of study.

Hye-Min Park is 16 and lives in the affluent Seoul district of Gangnam, made famous by the pop star Psy. Her day is typical of that of the majority of South Korean teenagers. She rises at 6.30am, is at school by 8am, finishes at 4pm, (or 5pm if she has a club), then pops back home to eat. She then takes a bus to her second school shift of the day, at a private crammer or hagwon, where she has lessons from 6pm until 9pm. She spends another two hours in what she calls self-study back at school, before arriving home after 11pm. She goes to bed at 2am, and rises in the morning at 6.30am to do it all over again. She says she would like to get more sleep but it's her job to overcome it. To get the qualifications to follow her dream career as a teacher she has to work hard she says, and besides she likes studying, and learning new things.

Extra Tuition
Hye-Min is not alone. For South Korean teenagers, a double shift of school, every weekday, is just a way of life. South Korean parents spend thousands of pounds a year on after-school tuition, not a private tutor coming to the home once or twice a week, but private schooling on an industrial scale.

There are just under 100,000 hagwons in South Korea and around three-quarters of children attend them. Hye-Min's mother Yoon-Gyeong Hwang says she worries about her daughter, but they have no choice when it comes to having to compete.

> **For South Korean teenagers a double shift of school, every weekday, is just a way of life.**

"Korea has few natural resources, we don't even have much land, the only resource we have is people. So anyone who wants to be successful really has to stand out." This relentless focus on education has resulted in formidable exam performers.
Pig Mums and Emphasis on Higher Education
While Finland is considered a non-competitive system of education, South Korea's is often described as very stressful, authoritarian, brutally competitive and meritocratic. It emphasises high pressure and high performance, particularly for the

South Korea women pray for their children's success in the annual college entrance examination.

28

640,621 students who took the eight-hour long suneung (College Scholastic Ability Test) nationwide in November 2014.

This event is critical in the life of South Korean families - entry to one of the three most prestigious "SKY" universities (Seoul National, Korea and Yonsei) will basically determine social status for most of their lives and will secure a highly-paid job in one of the chaebols (family-owned business conglomerates).

Education at all levels and particularly in science and engineering, is viewed as a key to upward mobility in the still highly stratified Korean society. As a consequence, a new phenomenon has emerged in recent years: Dwaeji Omma, or "Pig Mums".

A Pig Mum does her research thoroughly and keeps her eyes on the ultimate target: a Korean Ivy-league university for her child and her "adopted" children (those belonging to her Pig Mum network); she plans every step of her child's educational journey and all the extracurricular (studying) activities, attends all the best schools' open days, organises strategic planning reunions, bullies, lobbies and even bribes private schools and private teachers to skip admission lines if necessary.

The huge investment and emphasis in education has also resulted in an economy that's grown at an astonishing rate since the end of the war with North Korea 60 years ago. Brands like Samsung and Hyundai, Daewoo and LG are internationally known. The country has built itself up through the sheer hard graft of its people.

> **The country has built itself up through the sheer hard graft of its people.**

But it came at a big cost.

High Suicide Rates
Korea is known to have the highest suicide rate of industrialised OECD countries. The most common form of death for the under-40s is suicide. The government understands the pressure, and in 2008 a curfew of 10pm was imposed on hagwons in Seoul. The Education Minister Nam Soo Suh said the government was trying to redress the balance.

Prof JuHo Lee, a former education minister, says intensive education may have been right while Korea was growing its economy, but now it's time for a new strategy. "Test scores may be important in the age of industrialisation, but not anymore. So we look into the ways to reform our education system, not based on test scores, but based on creativity and social and emotional capacities," says Prof Lee.

South Korea's success is built on an extraordinary work ethic that has delivered rich economic rewards, but that's exacted a heavy price from its people and particularly its children. It's a price the country is now gradually starting to weigh up.

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Article 12:

OECD education report: **Finland's** no inspections, no league tables and few exams approach

In Finland there are no school inspectors, no league tables, and no exams until the age of 16. Since they instigated wide-ranging reforms 40 years ago, children are not sorted into sets, nor do they spend their evenings in intensive cramming sessions – there is no private tuition industry, and charging school fees is illegal. Homework, even for a 15-year-old, is limited to 30 minutes. Compulsory schooling begins at the age of seven, with only a broadly-outlined national curriculum, and students wear their own clothes and call the teachers by their first names.

Good Funding
Education is also free at all levels from pre-primary to higher education. Adult education is the only form of education that may require payment. To ensure the opportunities to study for everyone there is a well-developed system of study grants and loans.

Large degree of autonomy for students and teachers
The Finnish model attracts a huge amount of attention. It is also highly effective. The difference between Finland's weakest and strongest students was the smallest in the world. Children don't begin school until the age of seven so when they go to school they are really thirsty to learn. Teachers are given a large degree of independence – but so are students. "Independence is very important here, as is the concept of leaving people alone to get on with it – if your child falls down on the ice in Finland, parents will let the child get up onto its feet again alone. So self-reliance and autonomy are greatly valued."

Highly-Educated Teachers
Teaching is such a popular profession that there are 10 applicants for every place on a primary education

course, even though the starting salary for a primary schoolteacher, at $30,587 (£18,691), is only just above the OECD average of $28,854. In Britain the equivalent is $30,289. But in Finland, only 10-15 per cent of teachers abandon the profession. They have to be educated at least to Master's level, even for primary school teachers, and are thoroughly immersed in educational theory. They teach only four lessons daily, with two hours a week devoted to "professional development" – and their professional autonomy is sacrosanct.

The composition of Finish society, Mr Welch adds, is also greatly significant. The country has only 5.4 million people and is much more culturally homogenous than Britain. He argues that it is not just Finland's teachers that make its system world class, but also the environment. "The freedom to teach without the constraints of standardised curricula and the pressure of standardised testing; strong leadership from principals who know the classroom from years of experience as teachers; a professional culture of collaboration; and support from homes unchallenged by poverty."

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Article 13:

What other countries could learn from the **Polish** education system

Twenty-five years ago, Americans like economist Jeffrey Sachs were running around Poland helping to turn moribund socialism into a vibrant market economy. Now, Poland has, in the past decade moved sharply forward from the rear of the international pack and beats the U.S. on most performance measures. And it didn't even spend a lot money to get there.

Poland now has the fourth-highest number of higher education students in Europe, behind the U.K., Germany and France. And being consistently ranked high in math on a survey by the Organization for Economic Cooperation and Development (OECD) has helped it produce some of Europe's brightest talent in the technology field.

> *"Our curriculum is mostly based on the effects of education — not just what students know but what they can do, and how they can use their knowledge practically."*

"Our curriculum is mostly based on the effects of education — not just what students know but what they can do, and how they can use their knowledge practically," Ewa Dudek, Poland's undersecretary of state for education, says. Dudek believes Poland's success comes from allowing students more scope for feedback on their education.

In 1998, almost a decade after the fall of communism, deregulation and privatization has made Poland's economy one of Europe's fastest growing, but its schools lagged far behind and continued to rely on course materials barely changed since the Stalinist 1950s. Leaders in the capital, Warsaw, saw a growing generation of underserved and uninspired students as an economic bear trap. "We have to move the entire system — push it out of its equilibrium," urged then-Education Minister Mirosław Handke.

Handke got his green light. The demagoguery was ditched and in came a new form of general education that resisted specialization. Just a year after that, in 2000, Poland began to leap up the international league tables. By 2012, Poland was one of the best teaching countries on earth.

How did Poland do it?

Back in 1998, Polish children went to primary school for eight years before being funnelled into vocational training at age 14.

More Holistic Curriculum and Focus on Knowledge
Under the revamped system, primary school lasts six years, followed by three years of a new comprehensive lower secondary school, before a decision is made on whether to send a student to vocational training. Knowledge — reading, writing, arithmetic — is valued above technical skill. Foreign language — especially English — became a key component. In 2000 only 1 percent of kids received four hours or more of language classes. By 2006 that figure was 76 percent.

Low Costs and Attitudes of People
And it's not about money. Poland spends around $5,000 per student annually from primary through tertiary education, but outperforms the United States, which spends around three times that amount. Poland has its socialist past to thank for the rapid progress, says Izabel Olchonowicz, an education consultant: "People were very eager to modernize; they were waiting such a long time," she says. "Right now is the result of that."

Challenges Moving Forward
Teachers might disagree. Poland remains a low payer — around $650 a month for teachers compared with the national average for all workers of $945. Slawomir Broniarz, the country's most senior teacher unionist, warns that low

pay might put Poland's trajectory in doubt, primarily because of slipping standards of training. "We've asked many times for the reform of teacher training, because they are not good enough for these times. We need new attitudes, programs and better preparations for future challenges."

Poland's rapid development of foreign language training may also have a negative side effect. Many Poles are leaving home to gain skills abroad. While that helps the technology sector if they return, many don't. But despite the cracks, Poland's educational system is an example to most other countries, and proof that it's not just money that makes good students.

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Article 14:

India's educational landscape

With 1.2 billion people and the world's fourth-largest economy, India's recent growth and development has been one of the most significant achievements of our times.

On the educational front, the United Nations in its annual report said that India had made significant inroads into the primary education sectors. As per the Annual Status of Education Report (ASER) 2012, 96.5% of all rural children between the ages of 6-14 were enrolled in school. 83% of all rural 15-16 year olds were enrolled in school. This was a notable achievement because fifteen years back, less than a quarter of India's children were schooled.

The three key characteristics of the India education system are:

- **Guaranteed places for the Disadvantaged:** In the India education system, a significant number of seats are reserved under affirmative action policies for the historically disadvantaged Scheduled Castes and Scheduled Tribes and Other Backward Classes. In universities/colleges/institutions affiliated to the federal government there is a minimum 50% of reservations applicable to these disadvantaged groups, at the state level it can vary. This is a special reservation system meant for the "Scheduled Tribes", the 8% of India's population who lived in the most remote or forested corners. It is also reserved for the "Scheduled caste" the Dalits who were more repressed for the centuries in which Hinduism's noxious caste practice has prevailed and were labelled as the "untouchables".

- **The Midday Meal Scheme:** The midday meal scheme, which costs India's government about $2 billion a year, with additional funding coming from state governments – feeds 120 million schoolchildren in more than a million primary schools across the country. By providing free and balanced nutrition to schoolchildren, it has provided a powerful incentive to poor families to send their children to school and, equally important, to keep them there throughout the day. Indeed, thanks to the scheme, school-attendance rates have improved, sometimes by as much as 10%, and dropout rates have declined. And obliging children of different castes to eat the same meal at the same time in the same place has broken down social barriers in a highly stratified society. Children whose families could not afford to feed them properly have benefited significantly. In drought-affected areas, the midday meal scheme has allowed children who otherwise would have starved to overcome malnourishment.

- **Reservation quota for female leaders raises educational attainment for girls:** The system designating female leaders for selected village councils in India has resulted in substantive gains for girls in those villages — both in terms of aspirations and educational outcomes. The data gleaned from more than 8,000 surveys of adolescents and their parents in almost 500 villages, a third of which were randomly selected to reserve a seat for a female leader on the village council. The data showed that compared to villages that were never reserved, the gender gap in aspirations closed by 25 percent in parents and 32 percent in adolescents in villages assigned to a female leader for two election cycles." Between 2001 and 2009, India's Education for All Program enrolled some 20 million out-of-school children, especially girls and children from socially disadvantaged families. World Bank support for vocational training programs in select institutions has helped more graduates to find jobs, with their numbers rising from just 32% in 2006 to over 60% in 2011.

Moving Forward

The focus is now on improving the quality of learning, retaining children in school, and ensuring that more children are able to access and complete secondary education. Additionally, there is a need to empower the large numbers of India's youth, especially in rural areas, with skills that are better matched with the demands of the labour market to help them find jobs in the urban areas where better-paid work is more readily available.

Application #5: Summary

Now that you have read pages 27– 31, summarise the strengths and weaknesses of Poland, Finland, India and South Korea's education systems below!

Key Features:

Pros: Cons:

Key Features:

Pros: Cons:

Key Features:

Pros: Cons:

Key Features:

Pros: Cons:

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● Case Study on Myanmar ●

Myanmar once had a prestigious education system in the 1940s, and was believed to be on its way to become the first Asian Tiger in the region, before its military rule eroded the education sector. After the overwhelming victory of the National League for Democracy (NLD) in the November 2015 election, the NLD's chairperson, Daw Aung San Suu Kyi, often highlighted the importance of revitalising the local education landscape. With an increasing need for human capital, the government of Myanmar has made the overhauling of the education system a national priority. With an enlarged budget, a new national education law and the removal of public school fees, major reform of the entire education sector is well under way. However, significant challenges remain:

The majority of public schools have limited access to textbooks and supplies, and teaching styles are based on rote learning. On top of those constraints, much of the school infrastructure is inadequate, there is a shortage of teachers and classrooms are overcrowded.

Discrimination against ethnic minorities also remains a problem for the education system. Community-based schools have a history of being closed by the government, which only serves to aggravate conflict between rebels and the Myanmar army. In the absence of these schools, minorities are forced to choose state-run schools that do not teach in their native tongue.

School attendance has traditionally been a problem. While basic education at public institutions is free, tens of thousands of children are sent to work on farms and tea shops to support family income. To make matters worse, the military's February 2021 coup prompted many teachers to leave their jobs and join the anti-junta Civil Disobedience Movement. Many parents also said they would continue to boycott junta-run schools. Attacks on schools, teachers and students have surged over the past year due to the conflict, leaving many of them scared to return to the classroom. Consequently, the number of children out of school has more than doubled in two years, with about half of the country's children now missing out on a formal education due to COVID-19 school closures and political insecurity.

In view of these issues, which system do you think offers the best practices that will help improve Myanmar's education system?
   A. Finland
   B. Poland
   C. India
   D. South Korea

Jot down your thoughts in the box below

Discussion Questions

To what extent does the education system in your country prepare you for the demands of an increasingly uncertain world? (MJC JC2 MYE 2016 – Q5)

● Essay Questions on Youth & Education ●

YOUTH

1. 'Religion is an important part of the lives of young people today.' Consider whether this is true in your society. (2019 – Q7)
2. When a government's finances for social welfare are limited, should they be directed towards the young or the old? (2015 – Q11)
3. To what extent do young people in your society take an interest in politics? (2006 – Q8)
4. How far do magazines or television programmes aimed at young people in Singapore have a positive effect (2005 – Q12)
5. To what extent are the young in Singapore favoured at the expense of the elderly? (2004 – Q1)
6. Was life for young people in Singapore better in the past than it is today? (2003 – Q9)
7. 'My life, my choice.' Is this good advice for the young people in your society? (TMJCJC2PE20Q2)
8. 'Young people today are better educated than their parents, but no wiser.' Is this a fair statement? (SAJCJ2PE14Q4)
9. 'It is tough being a teenager today.' Comment. (MJCJC1PE10Q1)
10. Assess the extent to which different age groups in your society are valued equally. (2022 – Q4)

EDUCATION

11. 'An appreciation of music is vital for a fully rounded education.' How true is this of your society? (2020 – Q10)
12. 'Practical ability is just as important as intellectual skills.' How far is this true in your society? (2017 – Q10)
13. 'Education should only be concerned with what is useful in life.' Discuss. (2013 – Q11)
14. 'Only educated people should have the right to vote in elections.' What is your view? (2009 – Q2)
15. 'The word *failure* should never be used in education.' Discuss. (2007 – Q12)
16. 'Conformity should be the main aim of all schools.' How far is this true? (2002 – Q2)
17. To what extent does education prepare the young for a world that is constantly changing? (ACJC2017PE)
18. Consider the view that most students these days could, and should, be educated from home. (MJCJ1PE14Q2)
19. The solution to the problem of crime is education.' Discuss. (VJCJ2PE14Q5)
20. Consider the view that an education is no longer necessary for success. (DHSYr6PE12Q7)
21. To what extent can education improve the lives of people? (PJCJ2MYE10Q3)