

# INDUSTRIAL REVOLUTION 4.0 & EDUCATION IN ASEAN

IV4.0?  
Education4.0?  
Asean4.0?



8 DECENT WORK AND  
ECONOMIC GROWTH



4 QUALITY  
EDUCATION

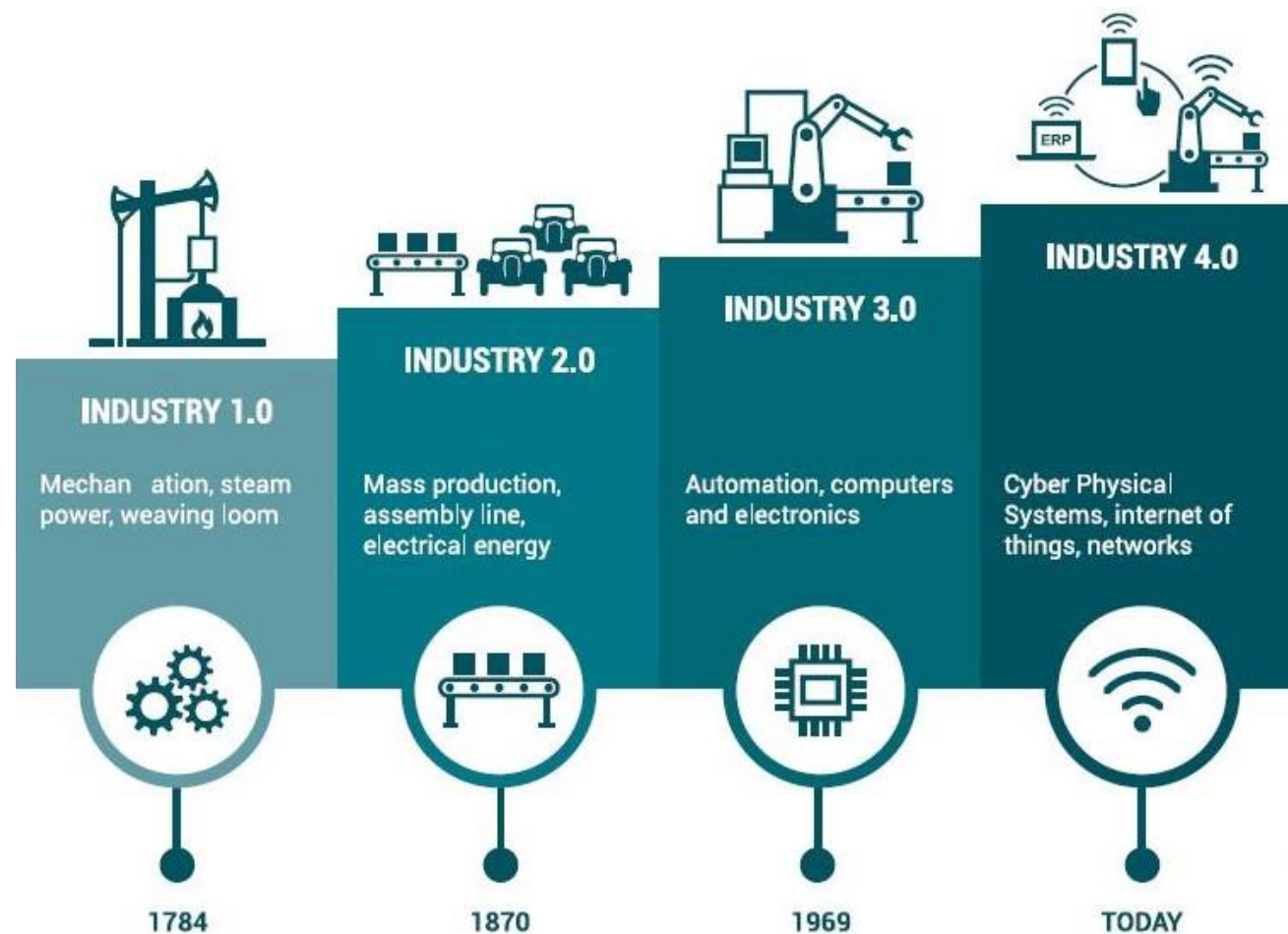
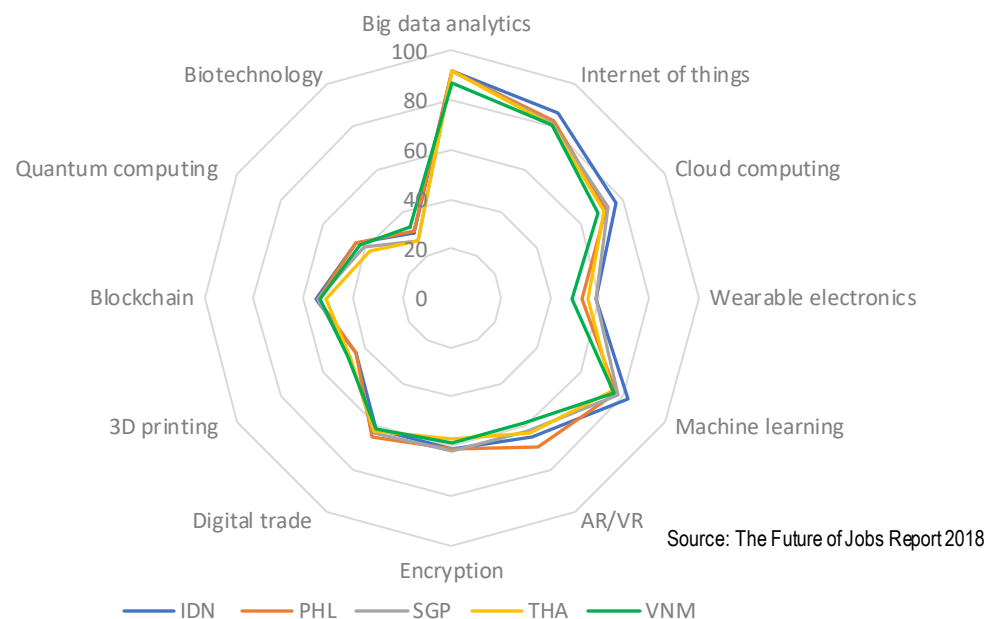


Team Brocaplyse

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Industrial 4.0 is currently happening and ASEAN's economic growth is rising because of it.

### Technology adoption by 2022 (% of companies)



Source: IOTSENS



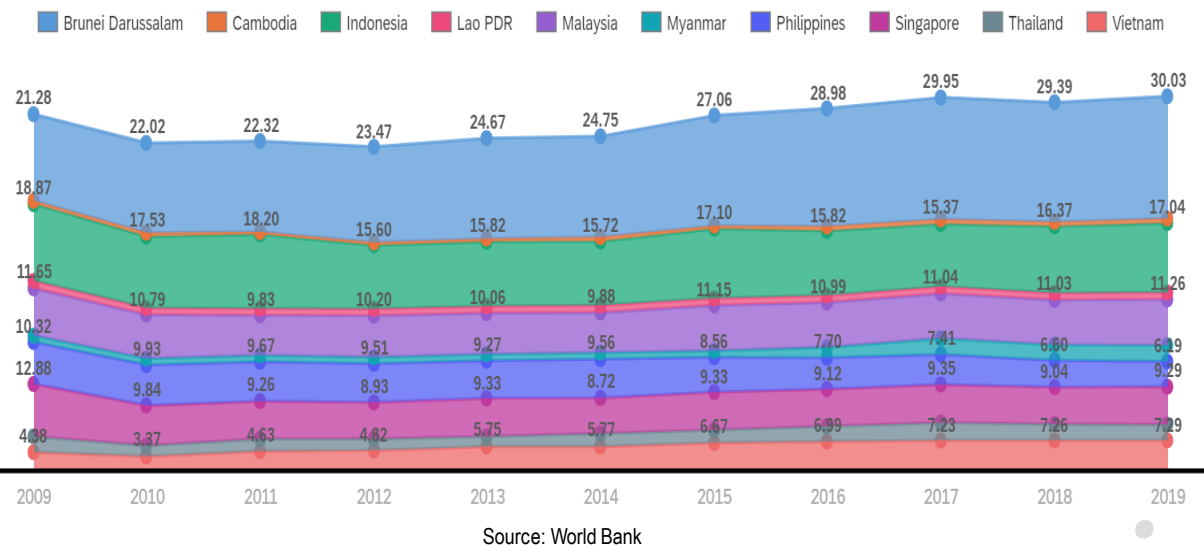
The world will invest **\$57.6B**  
on cognitive and AI systems in 2021.



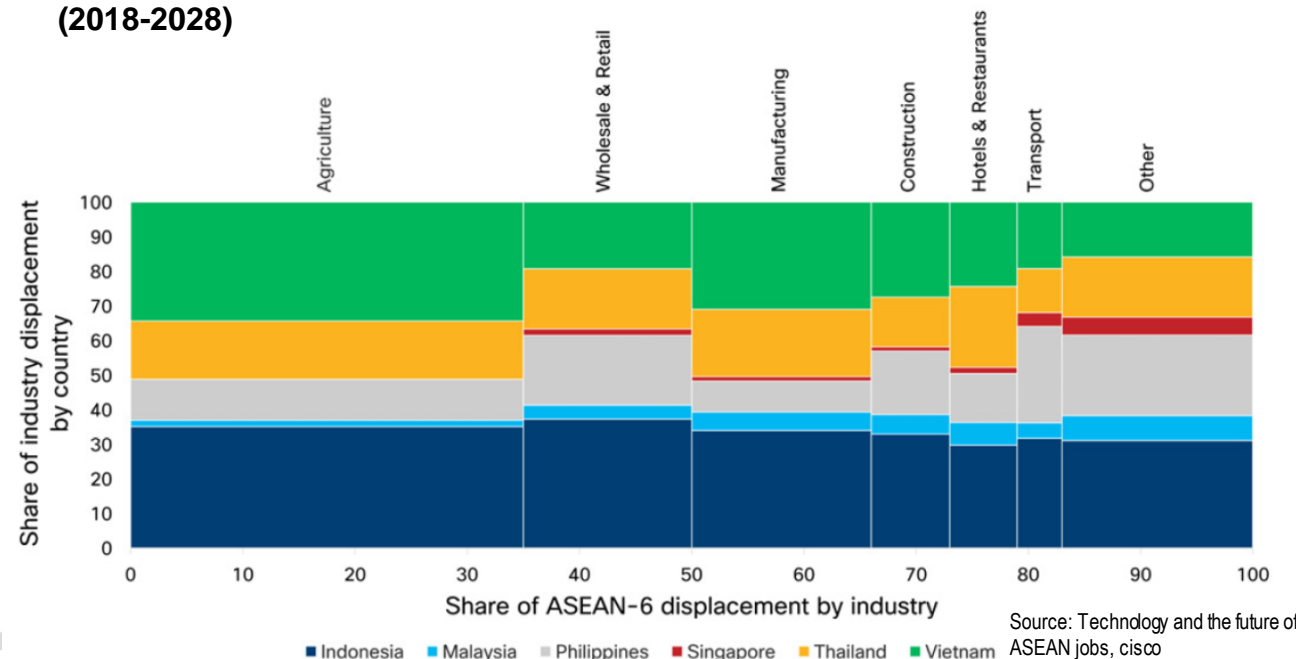
IV4 adoption in Asean increases net  
between **\$216 and \$627 billion**  
in economic gains annually by 2025.

# The shift to industrial 4.0 will bring much significant life changes.

Unemployment Rate of 15 Year Old and Over, 2009 to 2019



Proportion of displaced jobs by sector distribution to each ASEAN-6 country (2018-2028)



**6.6M** workers across the ASEAN-6 region, that will become redundant by 2028 .

**3.4M** net fewer skilled agriculture workers Across ASEAN-6 that will become redundant by 2028.

**75M** jobs globally, that may be displaced through adoption of technology by 2022.

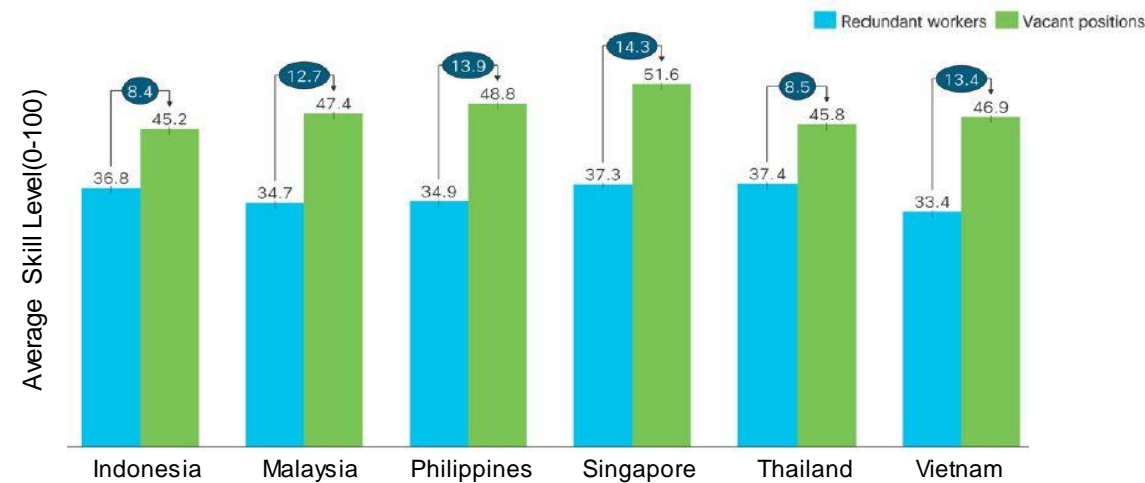
**12%** elementary workers Across ASEAN-6 could be displaced by technology by 2028.

# Employers need to prioritize their re and upskilling efforts on employees.

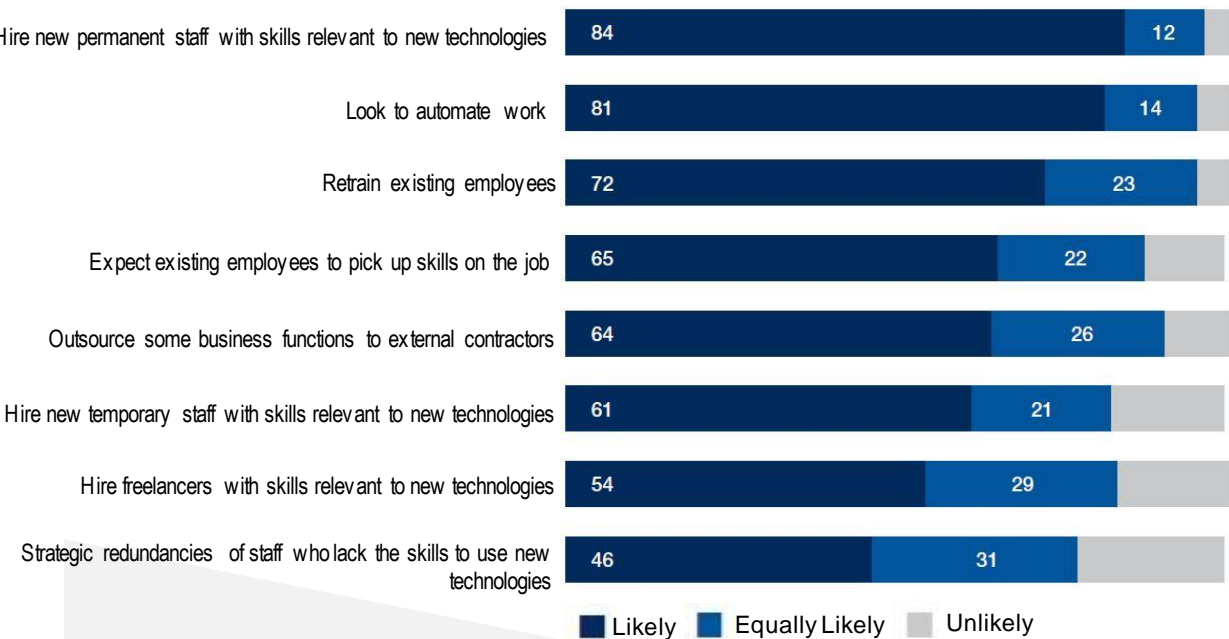
9.2% of ASEAN youths believe their current skills are already outdated.

54% of all employees will require significant re- and upskilling by 2022.

Skills Mismatch by country to each ASEAN-6 country



strategies to address shifting skills needs, by proportion of companies (%)



Source: The Future of Jobs Report 2018

41% of ASEAN-6 redundant workers are lacking the IT skills.

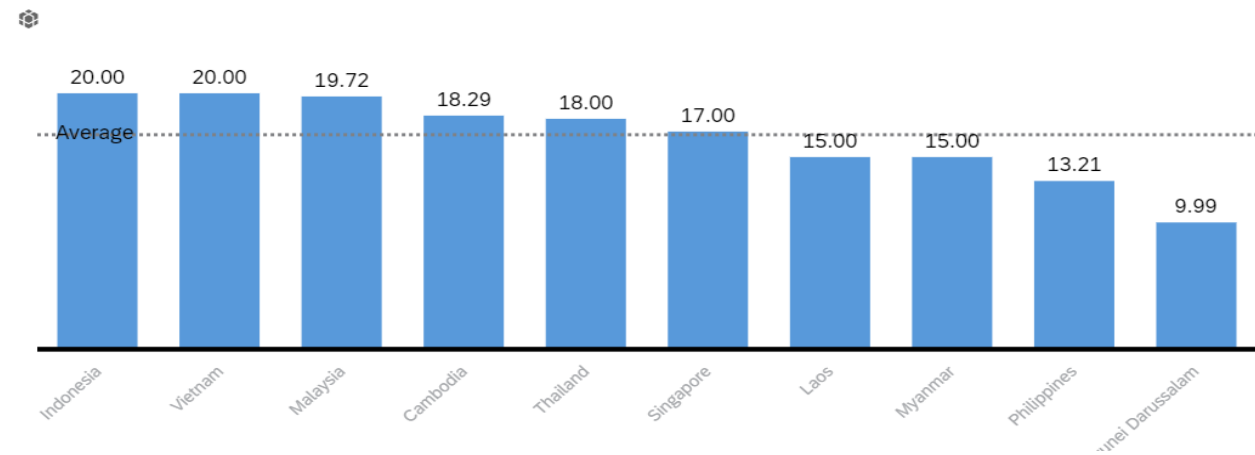
1.9 million more workers will need interactive skills.

1.7 million more workers will need foundational skills

Despite the disruption being technology-based in nature, the ASEAN workforce's most significant challenge is to upgrade its softer, foundational and interactive skillset.

# Education 4.0 is a response to the need for the Industrial Revolution 4.0, to meet the skill demands of the current workforce.

Expenditure on Education as (% of Total Government Expenditure) by 2019



Source: World Bank

**Average Teacher : Student Ratio**

1:19.91

ASEAN




1:24.31

GLOBAL

**Average Adult Literacy Rate**

92.11%

ASEAN



85.10%

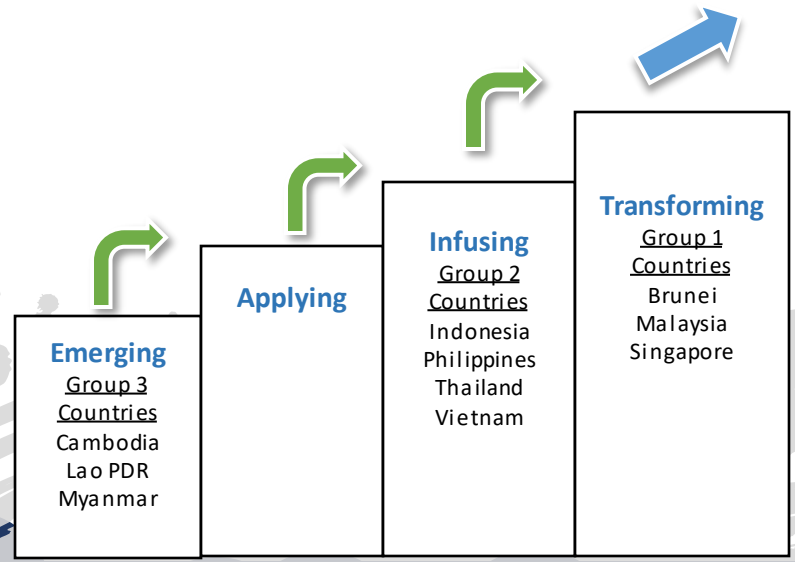
GLOBAL

**Key Takeaway:**

ASEAN outshines the world in terms of **quantitative measures** , but in terms of quality education, it is  **sorely lacking**.

## Strength of Education 4.0

- 1. Creates an Opportunity for Educators to Engage in **New Technology Tools**
- 2. Development of Technology Classroom Into **The 21st Century Skills**
- 3. Opportunity to Experience a more **Practical Based Learning**
- 4. Shift in **Exam & Assessment Patterns**

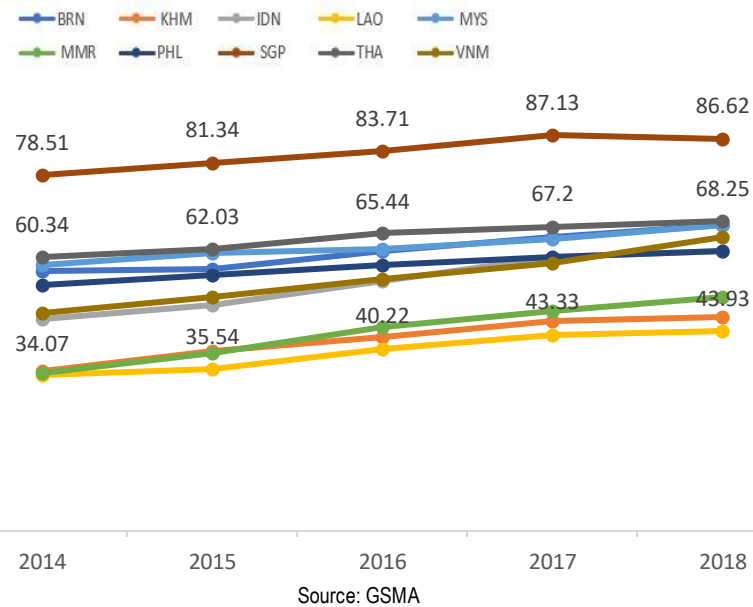


Source: SEAMEO 2010

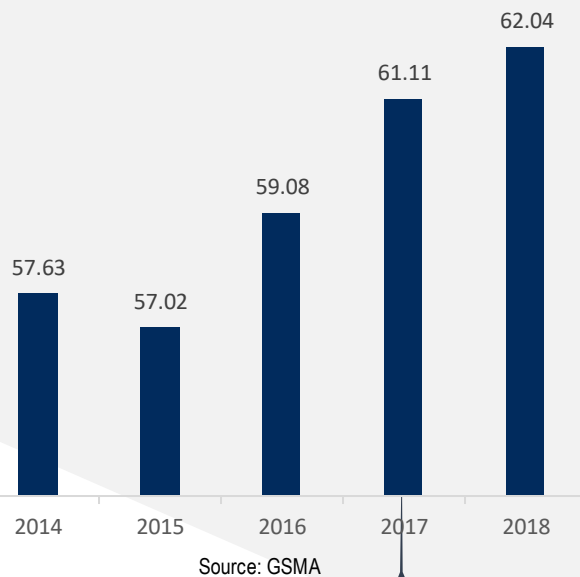
Asean countries according to their stage of ICT integration in Education

# Usage of technology greatly benefits education in various subjects and areas.

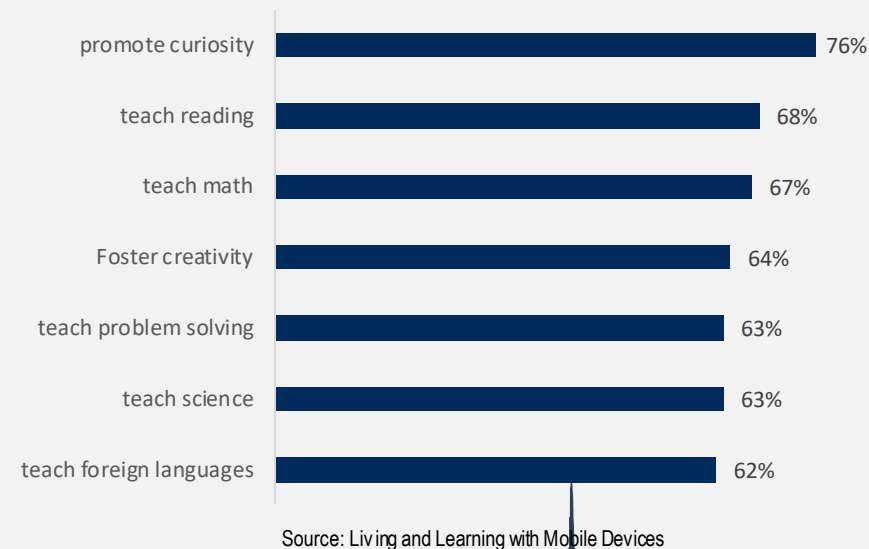
## Mobile Connectivity Index



## Mobile Affordability Index



## % of respondents who Agree/Strongly Agree when asked how mobile technology benefits learning, through the schooling years



People in ASEAN countries are already predisposed to **high mobile usage** and familiarity with phone mobile technology compared to the rest of the world.

**85%** of students agree that mobile and apps can make learning fun.

**68%** of students agree that digital learning technology is helpful in research for class.

## Leverage Existing Private Sector Resources



To develop a better understanding of the demand for skills and competencies.

## Promote Policy Co-Creation Workshops



To formulate strategies and recommendations for skill shortages.



**Exploit Private Sector Partnerships to Develop New Models of Upskilling**



**To bridge the Asean workforce skills gaps.**

**Promote Lifelong Learning as an Education Principle in Partnership with Business**



**To incentivize businesses to upskill their workers as well as ways to incentivize workers to seek training opportunities.**

**Improve Accessibility and Discoverability of Resources with Special Focus on Women**



**To advance further within high-growth fields such as STEM.**



### Reform Curriculum



To Address the Changing Nature of the Workforce.

### Invest further in mobile communications infrastructure



To improve mobile coverage across the ASEAN region.

### Encourage educational institutions or private companies



To produce more online courses in local languages.

# Reference

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