



THE GLOBAL GOALS
For Sustainable Development

Accelerating Progress in Education: Challenges and opportunities

Jonghwi PARK

Head, Innovation and Education
Institute for the Advanced Study of Sustainability
United Nations University

24 April 2023

Geosciences Information for Teachers Workshop (GIFT)



THE GLOBAL GOALS
For Sustainable Development

Outline

- Background: MDG vs. SDG.
- SDG4 Quality Education
- Education for Sustainable Development
- Education for relevant skills

MDG vs. SDG



THE GLOBAL GOALS

 <p>1 ERADICATE EXTREME POVERTY AND HUNGER</p>	 <p>2 ACHIEVE UNIVERSAL PRIMARY EDUCATION</p>
 <p>3 PROMOTE GENDER EQUALITY AND EMPOWER WOMEN</p>	 <p>4 REDUCE CHILD MORTALITY</p>
 <p>5 IMPROVE MATERNAL HEALTH</p>	 <p>6 COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES</p>
 <p>7 ENSURE ENVIRONMENTAL SUSTAINABILITY</p>	 <p>8 GLOBAL PARTNERSHIP FOR DEVELOPMENT</p>

 <p>1 NO POVERTY</p>	 <p>2 ZERO HUNGER</p>	 <p>3 GOOD HEALTH AND WELL-BEING</p>	 <p>4 QUALITY EDUCATION</p>	 <p>5 GENDER EQUALITY</p>	 <p>6 CLEAN WATER AND SANITATION</p>
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	 <p>10 REDUCED INEQUALITIES</p>	 <p>11 SUSTAINABLE CITIES AND COMMUNITIES</p>	 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>
 <p>13 CLIMATE ACTION</p>	 <p>14 LIFE BELOW WATER</p>	 <p>15 LIFE ON LAND</p>	 <p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	 <p>17 PARTNERSHIPS FOR THE GOALS</p>	



THE GLOBAL GOALS
For Sustainable Development

Three main differences: MDGs vs. SDGs

- End poverty vs. sustainable development for all
- More complex world, more goals (8 vs. 17)
- Education as a key to achieve the other 16 SDGs



MDG: Education for All (2000-2015)

1. Expand early childhood care and education
2. Universal primary education
3. Provide life-skills
4. Improve adult literacy
5. Achieve gender equality (basic education)
6. Provide quality education



THE GLOBAL GOALS
For Sustainable Development

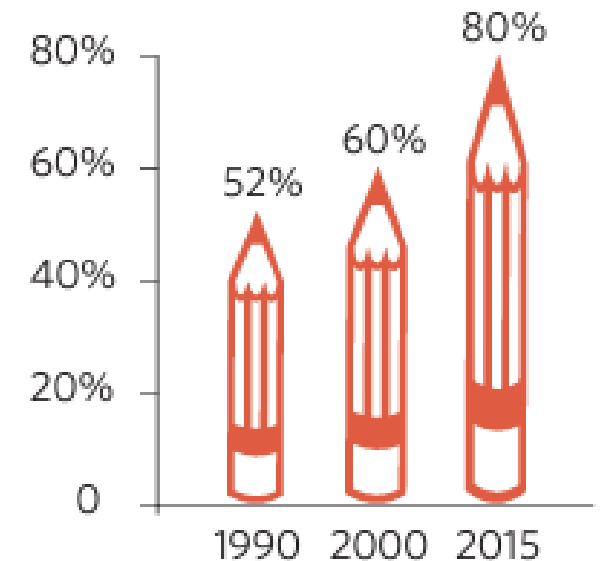
MDG: Education for All (2000-2015)



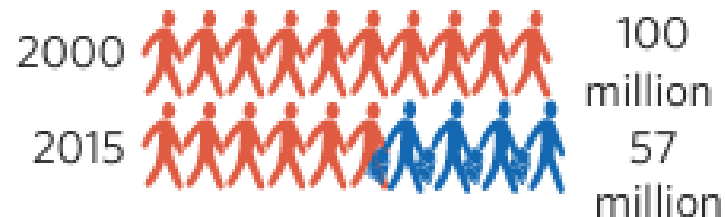
THE GLOBAL GOALS
For Sustainable Development

1. Expand early childhood care and education
2. Universal primary education
3. Provide life-skills
4. Improve adult literacy
5. Achieve gender equality (basic education)
6. Provide quality education

Primary school net enrolment rate in sub-Saharan Africa



Global out-of-school children of primary school age

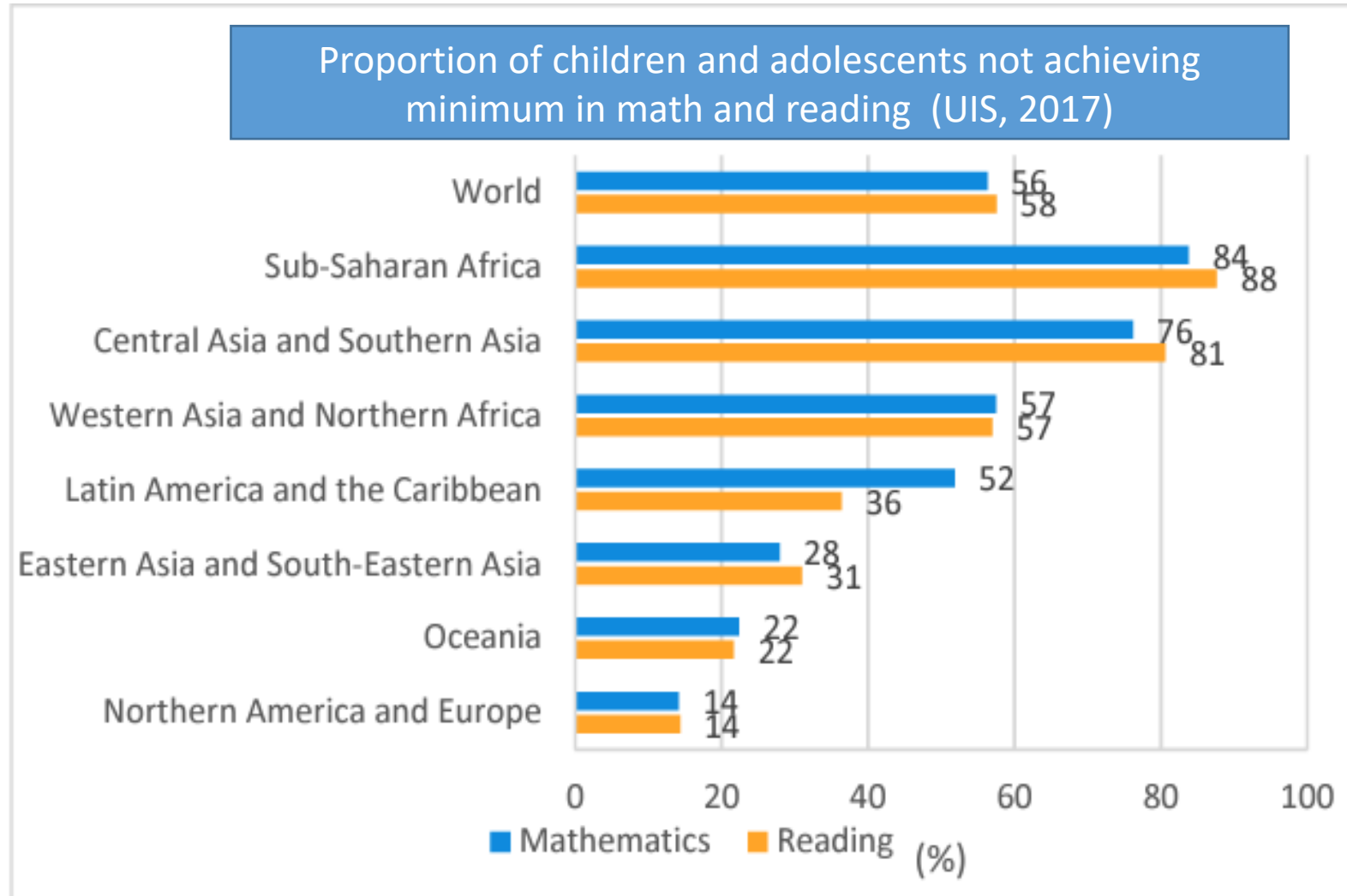


Side effects of MDGs



THE GLOBAL GOALS
For Sustainable Development

- Shortage of teachers
- Shortage of upper learning institutes (i.e. secondary schools and universities)
- Global learning crisis



Education in SDG: Education 2030 Agenda



THE GLOBAL GOALS
For Sustainable Development

“Ensure inclusive and equitable quality education and lifelong learning for all”

- Final big push for the unfinished EFA agenda
- Re-focus on “**Quality**” and “**Relevance**” of learning for **the 21st century**



New Targets (By 2030)



THE GLOBAL GOALS
For Sustainable Development

1. Free and equitable primary and secondary education of good quality
2. Universal pre-primary education
3. Relevant skills development for employment
4. Universal literacy and numeracy
5. More qualified teachers
6. Make higher education more accessible
7. Knowledge and skills for sustainable development (including global citizenship, conflict, climate changes, etc.)



THE GLOBAL GOALS
For Sustainable Development

New Targets (By 2030)

1. Free and equitable primary and secondary education of good quality
2. Universal pre-primary education
3. **Relevant skills development for employment**
4. Universal literacy and numeracy
5. More qualified teachers
6. Make higher education more accessible
7. **Knowledge and skills for sustainable development** (including global citizenship, conflict, climate changes, etc.)



THE GLOBAL GOALS
For Sustainable Development

Rethinking Education

Education for sustainable development



SDG4.7

- “By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through Education for Sustainable Development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development”



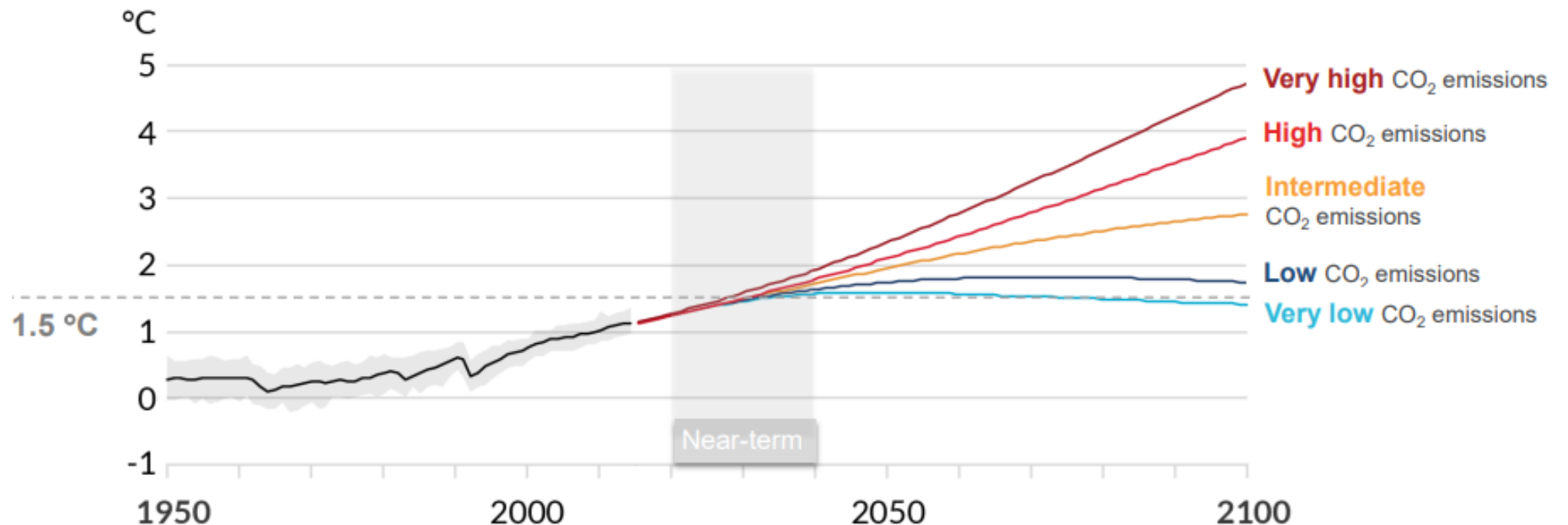
THE GLOBAL GOALS
For Sustainable Development

30 years of ESD



THE GLOBAL GOALS
For Sustainable Development

- Education for Sustainable Development first recognized in 1992 at the UN Conference on Environment Development in Rio de Janeiro.



Source: IPCC, 2021: Summary for Policymakers.

Jonghwi Park, UNU-IAS, KSEASG 2021

https://www.ipcc.ch/report/ar6/wg1/downloads/outreach/IPCC_AR6_WGI_Press_Conference_Slides.pdf

Climate change education

- Globally, 56% of countries include climate change education in national school curriculum.
- [UNESCO/UNFCCC short guide for countries to integrate action for climate empowerment into NDC](#)

Integrating Action for Climate Empowerment into Nationally Determined Contributions






A short guide for countries



Why contextualize?

- Global data on sources of CO2 emission (2023)
- Indonesia: Deforestation (agriculture)
- Germany: Electricity by coal
- Austria: Industry and transport
- Switzerland: Transport and building (heating & cooking)

Global agenda into the local context is a key!!

Overview	Sectors		
Emissions per sector:			
	Energy Systems	20.9 GT	>
	Industry	13.8 GT	>
	Agriculture	12.1 GT	>
	Transport	8.4 GT	>
	Building	3.2 GT	>

Source: <https://worldemissions.io/>



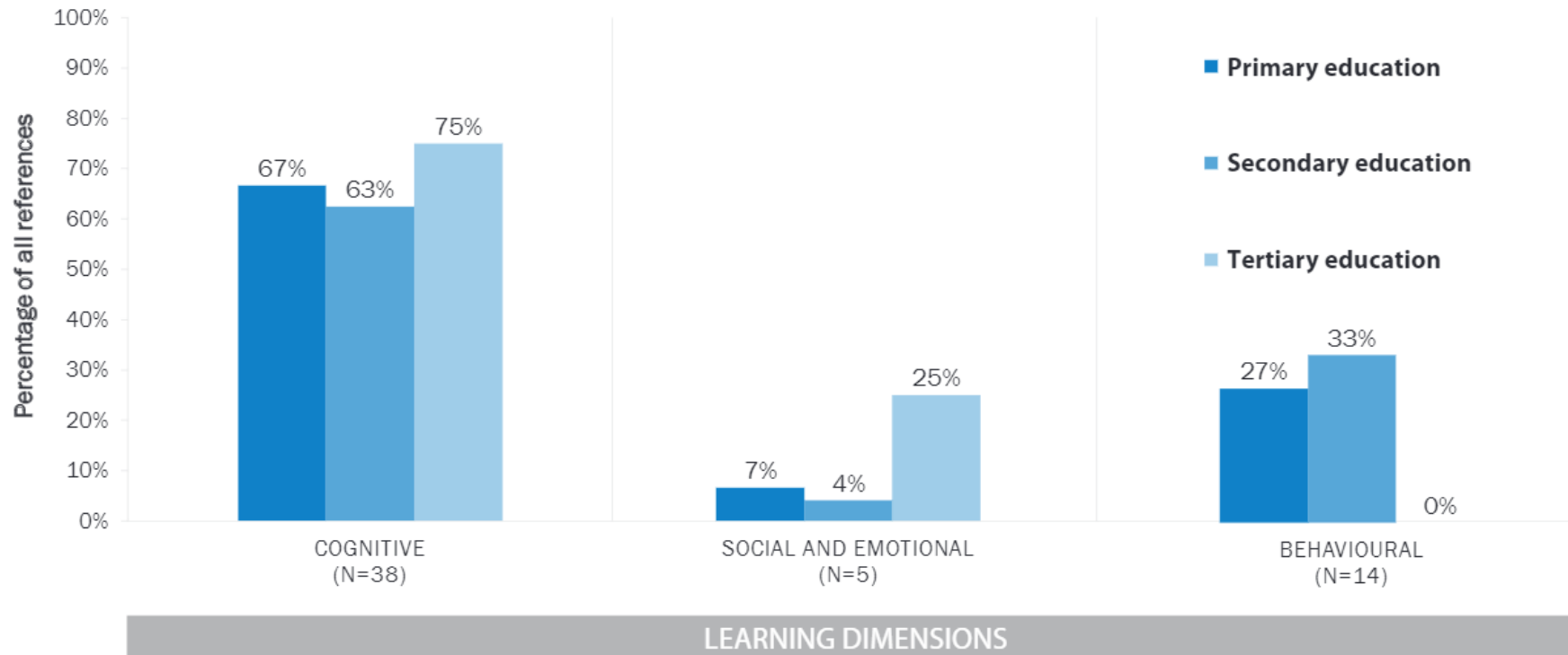
THE GLOBAL GOALS
For Sustainable Development

Overemphasis on cognitive skills



THE GLOBAL GOALS
For Sustainable Development

Figure 5: Learning dimensions in formal education



Note: Percentages sum to 100% across each level of education.



Community-based ESD: Regional Centres of Expertise on ESD (RCEs)

- A network of formal, non-formal and informal education institute for localizing ESD
- 185 members as of April 2023
- www.RCEnetwork.org

RCEs in Europe

ALBANIA

RCE Middle Albania

AUSTRIA

RCE Graz-Styria

RCE Vienna

BELARUS

RCE Belarus

CZECH REPUBLIC

RCE Czechia

DENMARK

RCE Denmark

FINLAND

RCE Helsinki Metropolitan

FRANCE

RCE Bordeaux Aquitaine

RCE Brittany

RCE Paris Seine

GERMANY

RCE Hamburg

RCE Munich

RCE Nuremberg

RCE Oldenburger Münsterland

RCE Ostwürttemberg

RCE Ruhr

RCE Southern Black Forest

RCE Stettiner Haff

GREECE

RCE Central Macedonia

RCE Crete

IRELAND

RCE Dublin

ITALY

RCE Euroregion Tyrol

LITHUANIA

RCE Vilnius

NETHERLANDS

RCE Fryslân

POLAND

RCE South Poland

RCE Warsaw Metropolitan

PORTUGAL

RCE Açores

RCE Crelas-Oeste

RCE Porto Metropolitan Area

REGIONAL

RCE Basque Country-Navarre

RUSSIA

RCE Nizhny Novgorod

RCE Samara

SERBIA

RCE Vojvodina

SPAIN

RCE Galicia

SWEDEN

RCE North Sweden

RCE Skane

RCE Uppsala-Gotland

RCE West Sweden

SWITZERLAND

RCE Zurich

UNITED KINGDOM

RCE East Midlands

RCE Greater Manchester

RCE London

RCE North East

RCE Scotland

RCE Severn

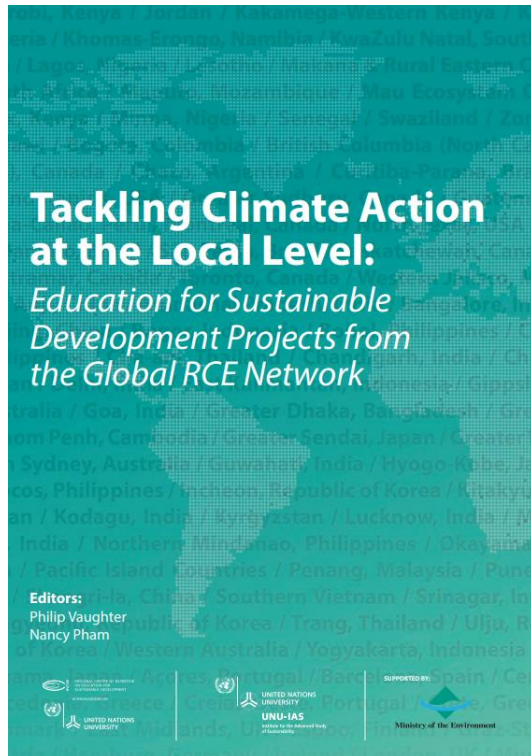
RCE Wales

RCE Yorkshire & Humberside

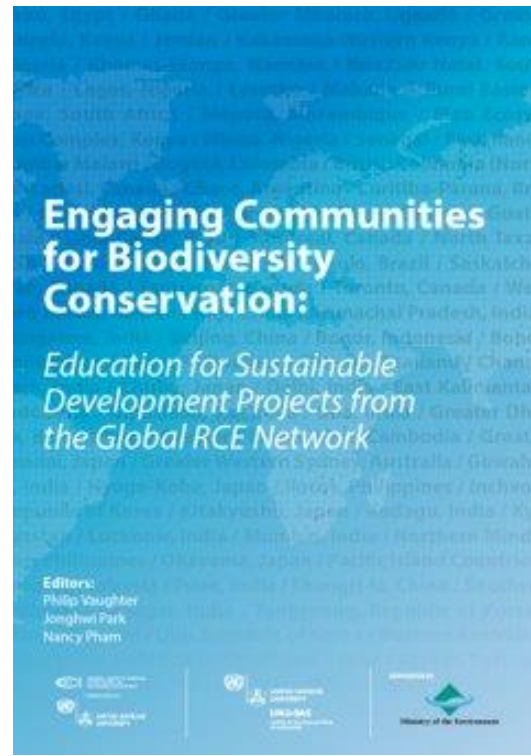
RCE Projects: Global agenda into local actions



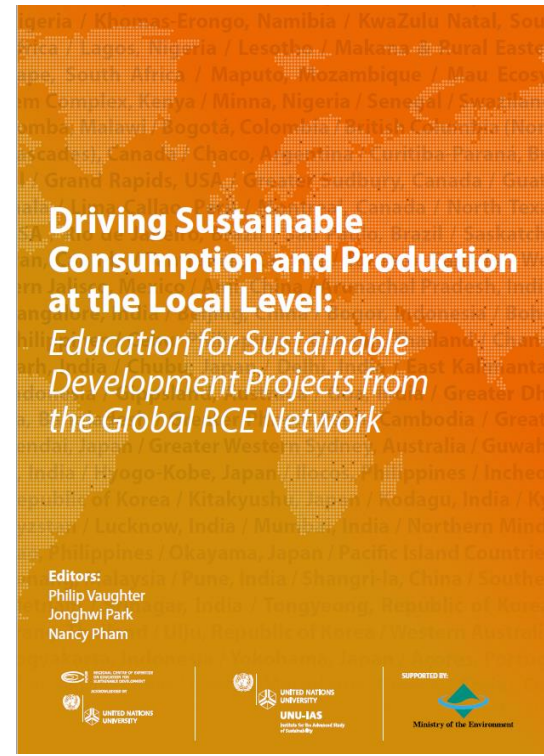
THE GLOBAL GOALS
For Sustainable Development



UNU-IAS (2021)



UNU-IAS (2022)



UNU-IAS (2023)





THE GLOBAL GOALS
For Sustainable Development

Rethinking Education

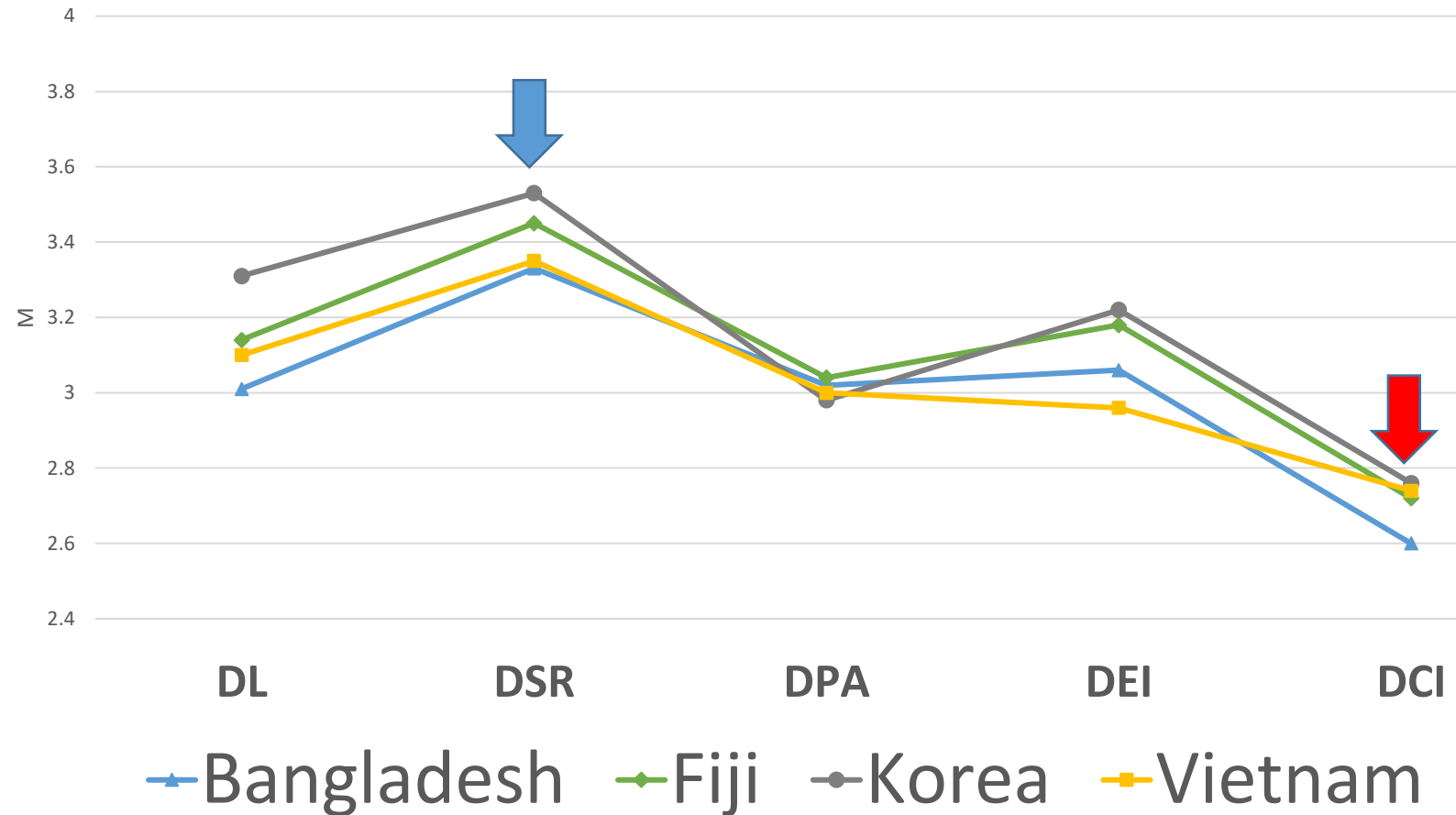
Education in an era of disruptive technology

Digital Citizenship: What should we teach?



THE GLOBAL GOALS
For Sustainable Development

- Digital Kids Asia Pacific (www.dkap.org)
- Digital Citizenship Competencies
 - Digital literacy
 - Digital safety & resilience
 - Digital participation & agency
 - Digital emotional intelligence
 - Digital creativity & innovation
- 4 countries, 5,129 students of 15 yo in 2019



<https://unesdoc.unesco.org/ark:/48223/pf0000367985>



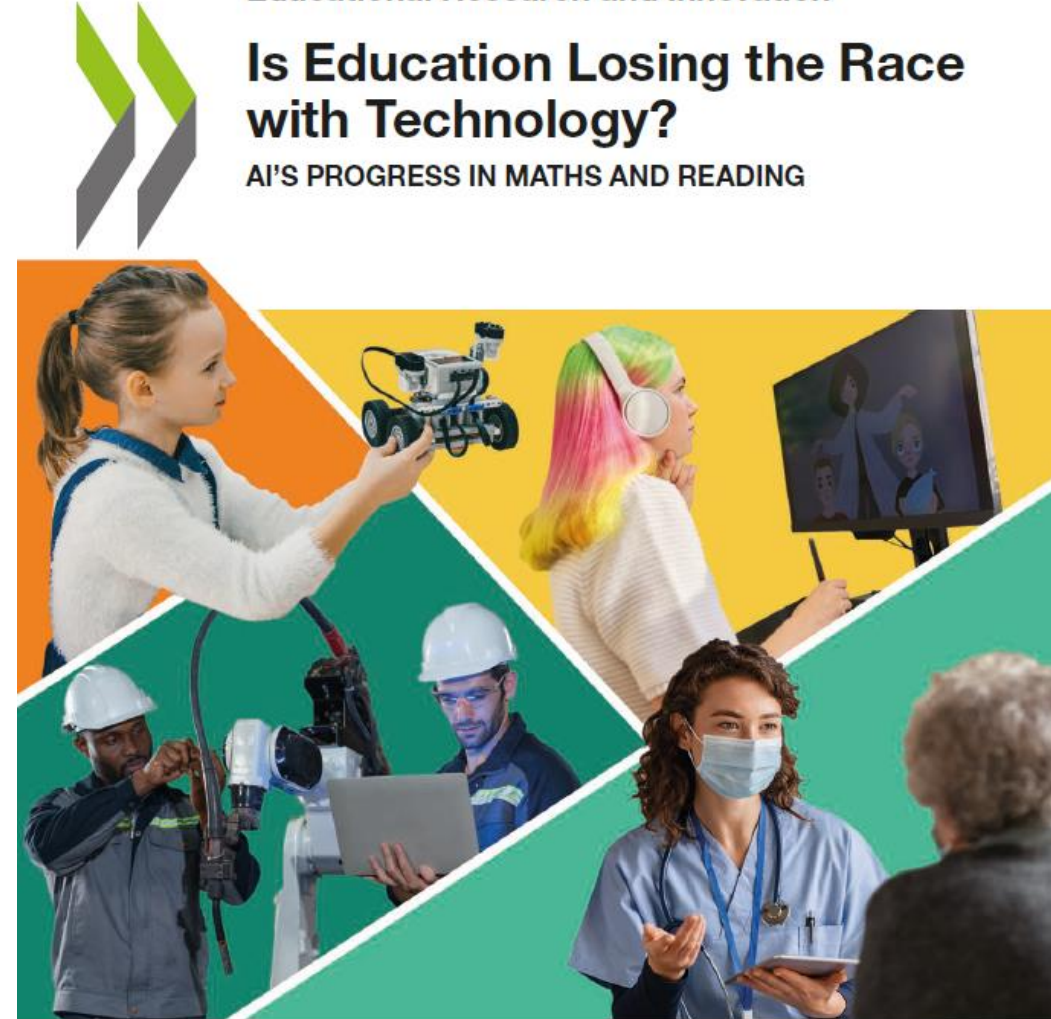
The era of ChatGPT

- Programme for International Assessment of Adult Competencies (PIAAC): International literacy and numeracy assessment for adults by OECD
- In 2022, AI solved 80% of the literacy and 66% of the numeracy.
- The current AI is at the Level 3 in literacy (top 10% of human adults) and numeracy (top 12%).
- OECD predicts that AI will be able to solve the entire literacy and numeracy tests by 2026.

Educational Research and Innovation

Is Education Losing the Race with Technology?

AI'S PROGRESS IN MATHS AND READING



What are we going to teach our students in an era of AI?



THE GLOBAL GOALS
For Sustainable Development

- Bill Gates gave a mission to OpenAI: Train an artificial intelligence to pass an Advanced Placement biology exam (requires critical thinking)
- In September 2022, GPT scored 59 out of 60, the highest possible score in a college level biology course.



The Age of AI has begun



Bill Gates

Co-chair, Bill & Melinda Gates Foundation

Published Mar 23, 2023

+ Follow



THE GLOBAL GOALS
For Sustainable Development

Equitable AI?

- English dominant data that feeds the machines
- Marginalized voices to be more marginalized.
- AI market for profits, not for public good

“With reliable funding and the right policies, governments and philanthropy can ensure that AIs are used to reduce inequity. Just as the world needs its brightest people focused on its biggest problems, we will need to focus the world’s best AIs on its biggest problems.
(Gates, 2023)”



United Nations University



THE GLOBAL GOALS
For Sustainable Development

- Established by the UN General Assembly in 1972
- Serves as a bridge between the United Nations and the international academic community
- Provides a platform for global and local dialogue and creative new ideas
- UNU-IAS is one of the 13 institutes under UNU, located in Tokyo. <https://ias.unu.edu/en/>



THE GLOBAL GOALS
For Sustainable Development

Thank you!

Jonghwi PARK
Institute for the Advanced Study of Sustainability
United Nations University
jonghwi.park@unu.edu