Empowering Students’ Leadership in Sustainable Development Goals (SDGs) via Innovation and Inventions (Video Competition)

Entire Collection of PPTs
Sustainable Development Goal 4 – Quality Education

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Outline of the presentation

• What is SDGs?
• What is meant by Quality Education?
• Has SDG4 met its goals?
• How could we contribute in achieving SDG4 Quality Education?
What is SDGs?

• An agenda agreed by more than 178 countries in the world that aimed to be achieved by 2030.

• There are 17 Sustainable Development Goals altogether, and one of it is Quality Education which is SDG4.
What is Meant by Quality Education?

• Quality Education is one of the 17 goals stated in SDGs; specifically goal number 4. Frequently, it is referred as SDG4. It is actually one goal related to education which aims at “ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all”.
By 2030, SDG4 Quality Education is targeting at achieving 7 targets. Those targets are:

<table>
<thead>
<tr>
<th>Summary of Targets:</th>
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<tbody>
<tr>
<td>4.1 Complete free primary and secondary school for all</td>
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<tr>
<td>4.2 Access to early childhood education and care</td>
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<tr>
<td>4.3 Affordable quality technical, vocational, tertiary, and university</td>
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<td>4.4 Skills for employment and entrepreneurship</td>
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<td>4.5 Eliminate gender disparities and equal access</td>
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<td>4.6 Ensure all youth and “most” adults have numeracy and literacy</td>
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<td>4.7 Knowledge and skills for sustainable development</td>
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- Plus – equity, scholarships, increased quality teachers etc.
• All children complete free, equitable and quality primary and secondary education.

• All children have access to quality early childhood development, care and pre-primary education.
• Equal access for everyone to get affordable and quality technical, vocational and tertiary education.

• Increase the number of youth and adults for employment, decent jobs and entrepreneurship
• Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for everyone
• Ensure that all youth and a substantial proportion of adults achieve literacy and numeracy

• Ensure that all learners acquire the knowledge and skills needed to promote sustainable development
3 approaches

Build and upgrade education facilities that are child, disability and gender sensitive. Also, provide safe, non-violent, inclusive and effective learning environments for all.
3 approaches

Expand the number of scholarships available to developing countries for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes.
3 approaches

Increase the supply of qualified teachers in developing countries, least developed countries and small island developing States.
Has SDG4 Met Its Goals?

• At the governmental or country level, various measures could be taken or even have been done in achieving the goals of SDG4.

• As a result, there are increase of students’ enrolment rate in schools in most countries in the world.
<table>
<thead>
<tr>
<th>Level of Schooling</th>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary School</td>
<td>97.24</td>
<td>97.88</td>
</tr>
<tr>
<td>Lower Secondary</td>
<td>94.09</td>
<td>95.25</td>
</tr>
<tr>
<td>Higher Secondary</td>
<td>84.3</td>
<td>86.46</td>
</tr>
<tr>
<td>Post secondary</td>
<td>17.78</td>
<td>17.78</td>
</tr>
</tbody>
</table>

Source: Malaysia’s Open Data Portal
In Malaysia, in 2016 633 schools have been identified as schools with poor infrastructure. However, until 2019, 147 of these schools have been upgraded. 

Source: Malaysia’s Open Data Portal
How Could We Contribute in Achieving SDG4 - Quality Education?

• As a member in the school community it is our responsibility to create a safe and harmonious school climate.

• Develop positive attitude towards learning such as by being proactive, motivated students.

• Develop various skills including soft skills, technical skills and talent by actively participate in school co-curricular activities.
How could we contribute in achieving SDG4 Quality Education?

- Treat teachers and friends with respect.
- Avoid negative influences such as bullying, discrimination, gangsterism or vandalism.
- Use of schools’ facilities and infrastructure with responsible and care.
Sustainable Development
Goal 15 – Life on Land

Dr Nurul Salmi Abd Latip
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You, durians and bats
Elephants are forest gardeners.
Why is biodiversity important for us?

Does biodiversity matter?
Tapir, elephants, tigers

Example of biodiversity of plants and large animals in a tropical forest ecosystem
The tree-mendous benefits of a single tree

use carbon dioxide, reducing global warming
provide firewood
release oxygen
provide timber
reduce evaporation rates
provide habitat for birds and insects
give frost protection
provide shade
have aesthetic value (are beautiful)
act as windbreaks
prevent leachates entering waterways

Essential for human well-being
ECOSYSTEM SERVICES

Forest Ecosystems

- Forest canopy and leaf litter protect the soil surface from the erosive power of rain
- Forest trees and plants store carbon and help slow human-caused global climate change
- Forest canopy purifies air by filtering particulates and providing chemical reaction sites where pollutants are detoxified
- Forests help maintain the water cycle and stabilize local climate
- Forests provide critical habitat for plants, animals, and microbes
- Provides outdoor recreation, education, and ecotourism
- Deep forest soils store large volumes of water
- Forest tree roots bind soils and help prevent erosion
- Forest soils purify water, acting as a massive filters
Biodiversity feeds the world

Local dishes that come from diverse species of plants
Forests provide much of our medicines
Trees provide benefits to humans & many other species too.
Biodiversity and all benefits that forests provide will be lost when they are removed or cleared.
The kingfisher’s beak became the model for the nose cone of Japan’s 500 series Shinkansen bullet train.
Ecosystem diversity
Web of life – you are connected to the rest of planet Earth

We are all connected.

From the smallest ant to the tallest tree, from the birds roaming the skies to the fish swimming in the sea. Each and every creature is part of the biodiversity family. Let’s protect our family. Conserve biodiversity now.

For more information on biodiversity conservation, log on to www.aseanbiodiversity.org or chm.aseanbiodiversity.org
Let’s protect Nature like we would protect our own family.
Sustainable Development
Goal 7 – Affordable and Clean Energy

Dr Mohd Sukri Shafie
Director,
Knowledge Transfer Centre, Universiti Sains Malaysia
7 AFFORDABLE AND CLEAN ENERGY
• Energy resources that are:
  - Modern,
  - Sustainable
  - Accessible
  - Fully usable

The goal: To replace fossil fuels to clean fuels (Renewable Energy)
Extra heat is kept in the air by ‘greenhouse gases’ produced from human activity.

Some sunlight is bounced back into space.

Some heat is released into space.

Less heat is able to be released into space.

Some heat is naturally kept in by gases in the air like water vapour.
**HOW COAL WAS FORMED**

**SWAMP**
300 million years ago

Before the dinosaurs, many giant plants died in swamps.

**WATER**
100 million years ago

Over millions of years, the plants were buried under water and dirt.

**ROCKS & DIRT**

Heat and pressure turned the dead plants into coal.

**PETROLEUM & NATURAL GAS FORMATION**

**OCEAN**
300-400 million years ago

Tiny sea plants and animals died and were buried on the ocean floor. Over time, they were covered by layers of silt and sand.

**OCEAN**
50-100 million years ago

Over millions of years, the remains were buried deeper and deeper. The enormous heat and pressure turned them into oil and gas.

**SAND & SILT**

Plant & Animal Remains

**SAND & SILT ROCK**

Today, we drill down through layers of sand, silt, and rock to reach the rock formations that contain oil and gas deposits.
Renewable Energy Criteria:

- Can be generated throughout human life
- Energy resources that are ready to be used

From Corn to Ethanol (Clean Energy)
Renewable Energy

RE Examples

- Solar
- Hydro
- Biomass
- Geothermal
- Fuel Cell
- Wind
Solar

- Converted to electricity through photovoltaic effects
- Photovoltaics - electrons emitted from semiconductor material after receiving energy from electromagnetic radiation (light)

- Solar energy trapped by solar collectors for thermal energy
Wind

- Generated through the conversion of wind energy into electricity using wind turbines
- Consists of horizontal or a vertical axis types
Hydro

- Energy generated through gravitational force or water flow pressure
- Involves the construction of dams and the generation of electricity by turbine rotation.
Biomass

- Renewable energy sources referring to organic matter

Generated through the process of burning biomass material
- It usually involves processed steam technology to rotate the turbine
- Eg: Oil palm factory, rice mill

Biomass becomes fuel for industry and vehicles
Cth:
- Firewood
- Ethanol, palm oil
Fuel Cell

- ‘Electrochemical’ process conversion device
- Generates electricity from fuels (anodes) and oxides (cathodes) that react with the presence of electrolyte
- Fuel sources: Hydrogen, hydrocarbon, alcohol
- Sources of oxides: oxygen, chlorine, chlorine dioxide
Geothermal

- Energy generated from heat stored in the earth

- Its source comes from hot rock several hundred °C at depths within a range of km
RE that Conserve the Environment
Conclusion

Our everyday lives depend on affordable energy services to function smoothly and to develop equitably, clean energy is also important to counter the effects of climate change today.

Let's use Renewable Energy together and practice energy efficiency!
THANK YOU

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