Education and sustainability

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The conception of education as a social process and function has no meaning until we define the kind of society we have in mind.

- John Dewey
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Big questions of our time
Most important in my life is to...

...be very well off financially.
(money, fame, image)

...develop a meaningful philosophy of life.
(self-acceptance, affiliation, community)


OUR CULTURAL PROGRAMMING

- Increasing consumption is the best way to happiness
- We need rapid economic growth at any cost
Current model of well-being, happiness and good life?

I Economic growth

II Human rights, social justice, dignified living

III Thriving ecosystems and sustainable use of natural resources
Result #1

Depleting natural resources
Economic progress is blocked more often

- not by a shortage of fishing boat but by a shortage of fish;
- not by poorly performing pumps but by the sinking of groundwater;
- not by a lack of chainsaw but by the disappearance of forests.

## Predicted depletion of different metals and fuels, and main area of usage

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Depletion (year)</th>
<th>Main area of usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>2020-2030</td>
<td>electronics, pharmaceuticals</td>
</tr>
<tr>
<td>Zinc</td>
<td>2025-2035</td>
<td>energy storage (batteries), anticorrosives</td>
</tr>
<tr>
<td>Lead</td>
<td>2030</td>
<td>automobile industry, chemical industry</td>
</tr>
<tr>
<td>Tantalum</td>
<td>2030</td>
<td>electronics (mobile phones, automobiles), pharmaceuticals</td>
</tr>
<tr>
<td>Copper</td>
<td>2040-2070</td>
<td>energy transport, piping, electronics</td>
</tr>
<tr>
<td>Uranium</td>
<td>2035-2045</td>
<td>energy generation</td>
</tr>
</tbody>
</table>

Why do we collectively create results nobody wants?
Result #2

Fast climate change
Climate change is mainly a man-made phenomenon

According to the analysis of 11,944 scientific papers, written by 29,083 authors and published in 1980 journals, there is a 97 percent consensus on anthropogenic global warming.


Burning of fossils fuels is a crime against humanity?


Marcott, S., Shakun, J., Clark, P., Mix, A. (2013). A Reconstruction of Regional and Global Temperature for the Past 11,300 Years. Science 339(6124), 1198-1201

Why do we collectively create results nobody wants?
Result #3

Lack of transparency
Without transparency the most profitable way to produce goods and services is forced labour, child labour and ecological irresponsibility?
"Will we ever be able to buy a fair-trade smartphone?"

Negative social and ecological impacts are related to our daily used commodities.


Reardon, S. (2012). Will we ever be able to buy a fair-trade smartphone? New Scientist 2860, 18.


Mobile Phone Composition

MOSTLY CONTAINED IN...
- Circuit Boards
- Case
- Wires
- Screen
- Chips
- Batteries

WEIGHING 100 grams CONTAINS
- 13.7 g. of copper
- 0.028 g. of gold
- 0.190 g. of silver
- 0.014 g. of palladium

Great Recovery Project http://www.greatrecovery.org.uk/
Why do we collectively create results nobody wants?
Human life can no longer be taken for granted
There is an irresponsible search for short-term benefits without concerns for long-term consequences.

*If we do not change direction we will end up exactly where we are heading.*

- Chinese proverb
“Human activity is putting such strain on the natural functions of Earth that the ability of the planet’s ecosystems to sustain future generations can no longer be taken for granted.”

Why do we collectively create results nobody wants?
Conclusion

Our society is focused on speed
“If you have no idea where you want to go, it makes little difference how fast you travel.”

- Italian proverb
Life satisfaction and meaning as a goal of life
Assess your life satisfaction (scale 1-7)
Results by the groups (scale 1-7)

<table>
<thead>
<tr>
<th>Group</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 richest people in USA</td>
<td>5.8</td>
</tr>
<tr>
<td>Maasais from East Africa</td>
<td>5.7</td>
</tr>
<tr>
<td>Random sample of people from Sweden</td>
<td>5.6</td>
</tr>
</tbody>
</table>

Happiness-enhancing capacity of money is limited

Education needs to help people to reach their full potential and more fulfilling lives?

> How to be all you can be
Fair future for you and me
Solution #1

Integrate social and ecological concerns
Eco-social approach

Social concerns

Ecological concerns

Human rights, Equity, Dignity, Social justice

Planetary boundaries, Vital ecosystem services, Foundation of life
Solution #2

Identify how world works
Fact based model of well-being, happiness and good life

I
NATURE
Without well-functioning biosphere there can be no society (intrinsic value)

II
SOCIETY
Without a society there can be no societal functions, including an economy (intrinsic value)

III
ECONOMY
Without efficient economy it is not possible to fulfil basic needs of people (instrumental value)

Solution #3

Identify what is overdevelopment and underdevelopment
Fair future for all when carrying capacity of Earth is limited

“Overdeveloping” cultures, societies and lifestyles

“Underdeveloping” cultures, societies and lifestyles
Fulfilling of basic needs can not be questioned

- food
- clothes
- shelter
- energy
- education
- health care
Solution #4

Ask big questions:
What really matters in life?
What counts as a good life?
What is human excellence?
While income has risen, self-reported happiness has not

![Graph showing personal income vs. percentage very happy]

People who prioritize money, image, and status...

- experience less happiness and life satisfaction,
- have fewer pleasant emotions such as joy and contentment
- have more unpleasant emotions such as anger and anxiety
- tend to be more depressed and anxious
- report more physical problems (headaches, stomachaches, backaches)

We also need things that are not traded in markets and not captured by monetary measures.
Full humanness gives life satisfaction?

- Altruism (sharing and caring)
- Ties to other people and society
- Dedication
- Self-transcendence

HOPE FOR FUTURE: Elements of human flourishing are non-material – they can increase forever.
Great changes are possible

- We managed to stop the global ozone depletion
- We already almost doubled our life spans
- We have created universal education system and universal medical care.
4 Full humanness as a goal of education
4 ways to enhance life satisfaction and ensure that future generations will be proud of us.
PARTICIPATION

“A bundle cannot be fastened with one hand."

- Proverb from Sierra Leone
Culture of trust is worth of it

- Trusting that your wallet would be returned if found by a neighbour (for someone who already felt they belonged in their neighbourhood) has the additional life-satisfaction equivalent of 30% higher income.
- Having a sense of belonging in one’s community has a larger effect on life satisfaction than a tripling of household income.

Expand your sphere of responsibility
Our planet and human life is a system of interdependence

<table>
<thead>
<tr>
<th>People</th>
<th>Animals</th>
<th>Plants</th>
<th>Abiotic part of nature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
“Happiness cannot exist while others suffer, and comes only from serving others, living in harmony with nature, and realizing our innate wisdom and the true and brilliant nature of our own mind.”

- Lyonchen Thinley
How big should our economy be

- How much material wealth is enough for us?
- More is enough?
Why do we need more and more?

A shopper who shops only to meet her or his needs poses danger to the consumer markets?
“You are rich if you know how much is enough”

<table>
<thead>
<tr>
<th>NEEDS</th>
<th>DESIRES AND WANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal ends for good life</td>
<td>Personal instruments for good life</td>
</tr>
<tr>
<td>Can NOT be questioned</td>
<td>Can be questioned</td>
</tr>
<tr>
<td>Fulfilling of basic needs(* is a human right)</td>
<td>Fulfilling of desires and wants depends on ethics</td>
</tr>
</tbody>
</table>

*) food, water, shelter, energy, health care, education...
Our planet is a system of the interdependence. All components support each other.

- My behaviour affects other people, nature and economy locally and globally
- The challenge is to identify what kind of systems we are linked in

* Systems thinking focus on causal relationships between elements. Systems thinking helps us to combine ecological, social and economic point of view. In East Africa they used to say “mvua ni chakula”. It refers to the systems thinking: “rain is food”.

What is behind a cup of coffee?
Global challenges in a supermarket: Effects of everyday choices occur far away from us

The origins and pathways of a can of cola bought in London

Bauxite was mined in Australia. Ore was transferred with trucks to a chemical reduction mill. After that ore was sent to Sweden. The journey across oceans took two months. In Sweden 10 meters long aluminum rods were processed in a smelter. The rods were sent to Germany where they were heated and pressed into a thin sheet of aluminum. Coils of aluminum were shipped to England, where the aluminum sheets were punched. Cans were washed, dried and coated, and transported to a bottler. Sugar canes, farmed in French farms, were refined to sugar flower and shipped to England. Cola contains phosphoric from a mine located in the United States. This mine uses energy equivalent to 100 000 people consumption of energy because food grade phosphoric requires a high degree of processing. Cola also contains caffeine. It comes from a chemical factory nearby. Cans are packed in cartons which are made of cellulose in a paper mill. The paper mill gets trees from Siberia, Sweden and Colombia. Finally, the beverage cartons were transferred to the supermarket in which they were sold to the consumer in three days. The average consumer drinks cola in a few tens of seconds. Manufacturing of the can is more expensive than the liquid inside the can.

5 Eco-social approach to education
# Eco-social approach to education

## Systems thinking
- integrated world (causal relationships)
- consequentialism
- local - global

## The hierarchy of ecological, social and economic aspects of well-being

I. Thriving ecosystems (intrinsic value)
II. Human rights, social justice, dignified living (intrinsic value)
III. Robust economy (instrumental value)

### Responsibility
- enough for all (sharing and caring)
- planetary responsibility (human and non-human world)

### Sufficiency
How much is enough?

### Participation
- culture of trust
- cooperation
- value of social capital

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Together we create a just and safe operation base for humanity on the planet Earth

*Tama sugo diniabe*

*Hope is the pillar of the world.
- Nigerian proverb*