Can compassion inspire the learning of science?

Can science empower compassion?

Putting love and logic to work

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Motivation

Understanding the urgent need

- Earth ability to sustain quality life: unhealthy competition
- Complexity increases faster than people’s knowledge: more local and global problems and gaps in society

Empower and Engage

Bring the issues home

- Understand the reason for global sustainability
- Mind and reduce the gap
- Rebuild trust
We keep on multiplying
Where and how are we supposed to live while guaranteeing our grandchildren’s well being
Not much fresh water
Sharing the ever depleting natural resources
The Network of Needs
Distribution of human population
follows the distribution of life support
How should we prepare the future?

Long term prediction is difficult
EDUCATION!
What kind of education?

- Produce a robust **competence** with a wide knowledge of the working of inter-relations:
  - **Independence**: ability to adapt and self develop
  - **Professionalism**: work with high competence, ethics, and versatility
  - **Confidence**: able to participate in healthy competition and enjoy personal reward

- Nurture a compassionate citizen **attitude**
  - **Perceptive** and willing to **take charge** in improving self and environment
  - **Inclusive**: respect and embrace heterogeneity
STEP

STEAM Teacher Education Program
• **STEAM** components: different but inseparable
• Empower **rational capacity** and **artistic imagination** in observation of objects and phenomena, analysis, construction of ideas, and creation
• Integration of **STEAM** yields **holistic mind** and **refined conscience**

**Active Learning Inquiry Method**
problem/project-based in team
COLOUR

OBSERVE

ASK

DISCUSS

HYPOTHIZE

SHOW & TELL

TEST

SYNTHESIZE/CREATE

The water droplets reflect all colors, but at different angles.

Primary Rainbow: How it looks to you...
Optimal Learning Experience?

CLASSROOM PRESENTATION

- Verbal
- Symbols
- Equations
- Sketches
- Color Graphics
- Color Graphics
- Dynamic & Interactive
- Physical Reality

Sprawls
With STEAM

an imagination and creativity ...
...would manifest in beauty and sophistication
Teamwork Quality determines achievement
EDUCATION
Perpetually challenging long term project

- No educational substance and method is absolutely right and suitable in all spacetime
- Perpetual construction, evaluation, and revision to produce the best one for each condition and period

Key: Teachers with high and robust competence and premium personal quality: Resilient to changes in formal education system and setting
- Perceptive to students needs
- Focused in delivery
- Calm in all situation
- A good role model
Genuine and expressive:
Engage more efficiently
STEP

Why Junior High School Teachers

Characteristics of Junior High School (JHS) Students

Up till teenage:
- high curiosity
- less burdened by cognitive bias

**BUT**: JHS learning substance offers little direct usefulness:
- demotivate
- need more challenging substance that also offers immediate acknowledgement of the gained knowledge/skill

→ Problem-based learning
STEP

Why Junior High School Teachers

Certainty in optimally benefitting demographic dividend 2045

Fulfilling the demand in job market and real work needed
The works

- **Workshop**: exposure: global and local; STEAM enrichment and training
- **Post workshop**: internet-based communication, local facilitator
- Environment coverage: Poor to middle class
- School types: public, private, madrasah
- **STEP book**: main ideas and guidelines; projects: water, food, energy
Is this effort worthwhile?

- STEAM learning with enquiry method needs more time and human resource
- Strategy:
  1. apply this to lower level education to build a STEAM – based outlook and thinking
  2. at higher education level this method should be combined with the ongoing curriculum, to ensure the graduates will be on the same platform for further studies and competition

Adjusting the assessment system

1. Describe and create
2. Qualitatively and technically describe, create, argue the reason
Astronomy for Development

Astronomy for **STEAM**: long and winding road but can be effective for particular cases

- Universal beauty: bridge between conflicting parties (e.g. cases: Atambua (border region between Timor Leste and Timor Indonesia; Poso (northeast Sulawesi: “religion-based” tension in society)
- Public education service: astronomy and science in general
- Community development

- Departement of Astronomy and Bosscha Observatory, Institut Teknologi Bandung
- UNAWE
- International Astronomical Union
Astronomical Observatory

Remote

Difficult access

Space Age Meets Stone Age
Taman Ilmiah Nusa Tenggara Timur
Pusat Pendidikan IPTEK untuk masyarakat

Program, Fasilitas, Aktivitas untuk:

Membangkitkan rasa ingin tahu yang sehat dan membangun daya nalar dan kreativitas

Menghaluskan kepekaan terhadap lingkungan

Mendampingi guru dalam pemberdayaan diri dan persiapan pembelajaran

Meningkatkan partisipasi orangtua dalam proses pendidikan anak

Menghidupkan kembali kebersamaan dalam belajar dan bekerja
Partisipasi dalam Pembangunan Daerah

Kabupaten Kupang

Dukungan IPTEK dalam pemenuhan kebutuhan primer masyarakat (air, energi, pangan, kesehatan)

Amfoang

Apresiasi kekayaan lokal (budaya dan nilai-nilai dalam masyarakat, dan keindahan alam) yang perlu dilestarikan sebagai modal pembangunan daerah yang berkesinambungan

Pemberdayaan Sumber Daya Manusia melalui pendampingan dalam pendidikan, pelatihan ketrampilan kerja, dan perluasan wawasan
For A Quality Life
(not just) An ALS issue

- Raising awareness of health issue
- Accepting and understanding the facts: challenges for difficult disease:
  - denial
  - seclusion
  - unscientific alternatives
- Staying positive requires knowledge and preparation
  - the power of rational knowledge
  - letting go, not giving up
- Together holding up above the water:
  - building community support
  - encourage participatory attitude
Kami mengundang Anda untuk menghadiri Seminar ALS untuk umum
"Mengenal Penyakit Amyotrophic Lateral Sclerosis (ALS) dan
Bagaimana Menjaga Kualitas Hidup Pasien ALS"

Sabtu, 6 Juni 2015: 08:30-12:30
Auditorium Ang Boen Ing, Lantai 10
Mayapada Hospital Jakarta Selatan
Jln. Lebak Bulus I Kav. 29, Cilandak, Jakarta Selatan

Terima kasih untuk dukungan Anda yang amat berarti bagi kami.

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Nana Premadi: n.premadi@yahoo.com
Keterangan lebih lanjut di: https://alsnstars.wordpress.com/

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Sains
Sains, 10 Agustus 2015

ALS dan Cerita tentang Jiwa yang Terpenjara dalam Tubuh Kaku
Rabu, 3 Juni 2015 | 20:51 WIB
Make sure they can grow..

and always want to continue to flourish and shine