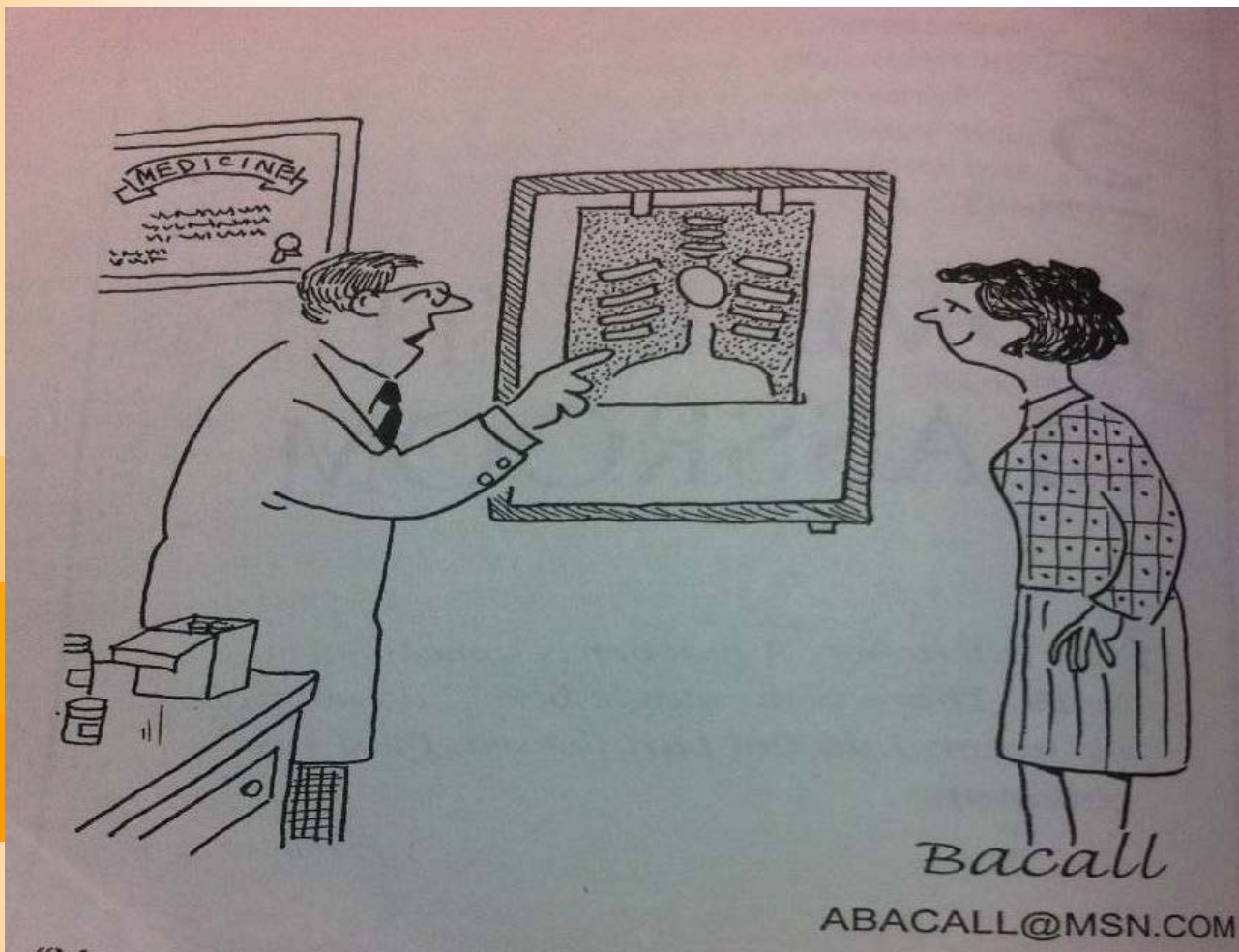




# Teaching Maths Beyond Formulae

Hardware & Heartware



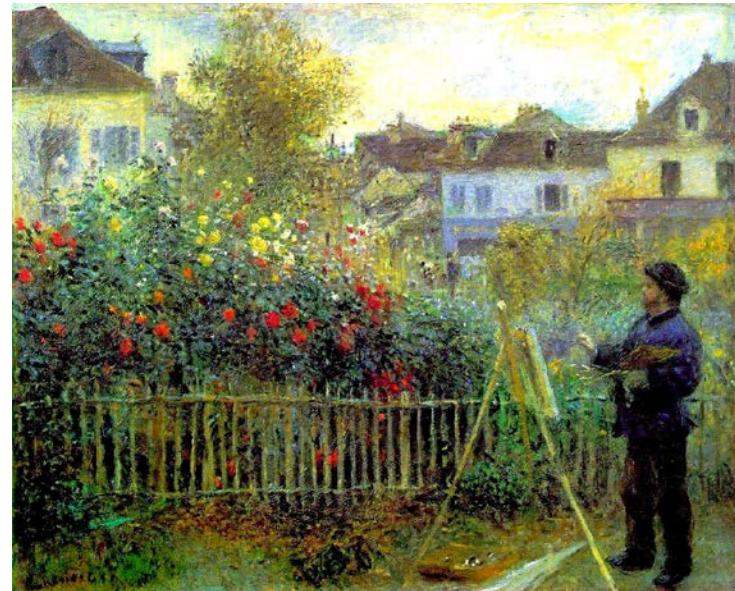


**"Your heart is slightly bigger than the average human heart,  
but that's because you're a teacher."**

A teacher is a painter, but

He paints not on canvas

He paints on the hearts and souls of the  
students



# Story of Mr Kulasingham

- He is a Maths teacher
- He never taught me Maths
- HE TAUGHT ME ABOUT LIFE





# Teaching is an art and a science

## ■ Hardware (Science)

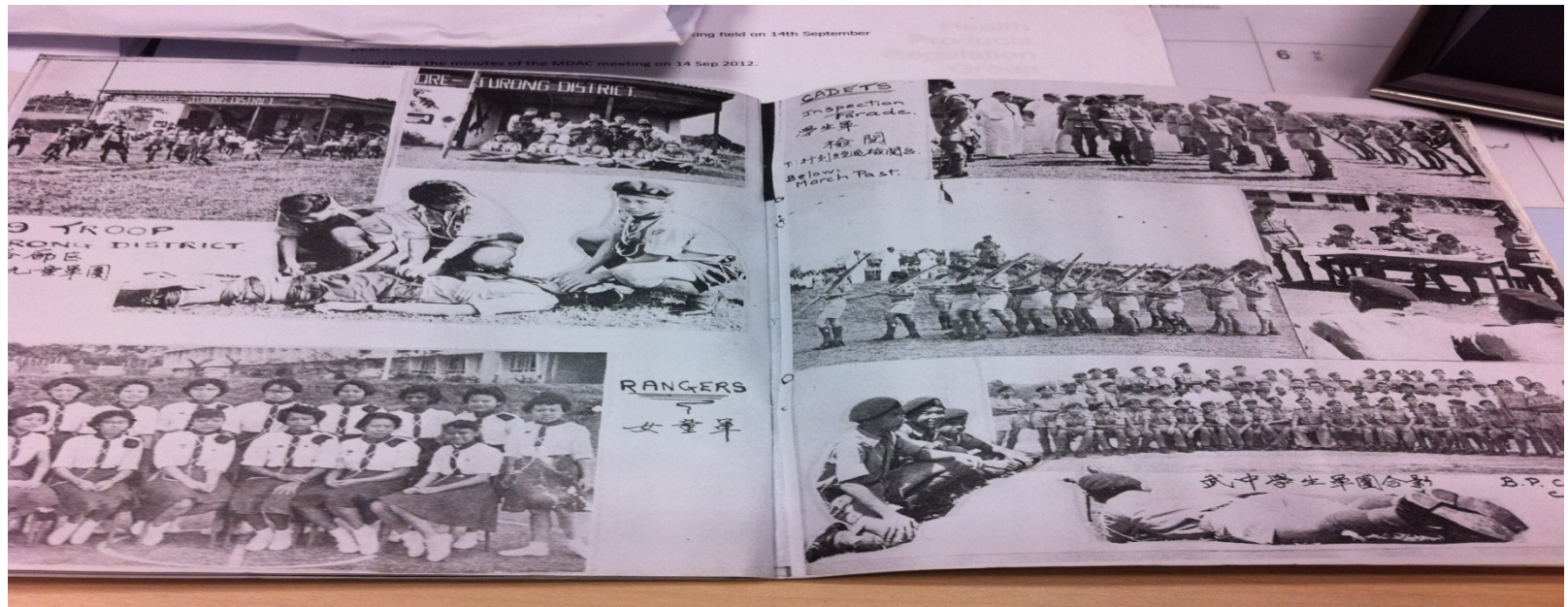
- Knowledge
- Technology
- Skills
- Simulation Innovation
- Etc

## ■ Heartware (Art)

- Passion
- Enthusiasm
- Conviction
- Trust
- Empowerment
- Etc



- Hardware makes you an instructor.
- **HEARTWARE** creates in you a passionate teacher





■ Hardware:

Training

Courses

Upgrading

Reading

Learning and Relearning



■ Heartware:

Difficult to learn

Challenging to teach

Essential to practice



*The mediocre teacher **tells**,*

*The good teacher **explains***

*The superior teacher **demonstrates***

*The great teacher **inspires***





# 10 Pillars of Effective Teaching



# Pillar No. 1



- Teaching & Mentoring is not just a job & profession.
  - It is a **PASSION & CALLING**

*You can pay  
people to  
teach,*



*Teacher with a heart*

*But you  
can't pay  
people to  
care*

# How do you teach “Compassion”

- By example  
Prof Donald  
Gunn and the  
*“Apert  
Syndrome”*







# Pillar No. 2

## Interest at Heart

Find a job you enjoy doing.  
You will never have to work  
a single day of your life

- Confucious





**East Africa- Kilimanjaro**





HANAULUX OSIO

Reference









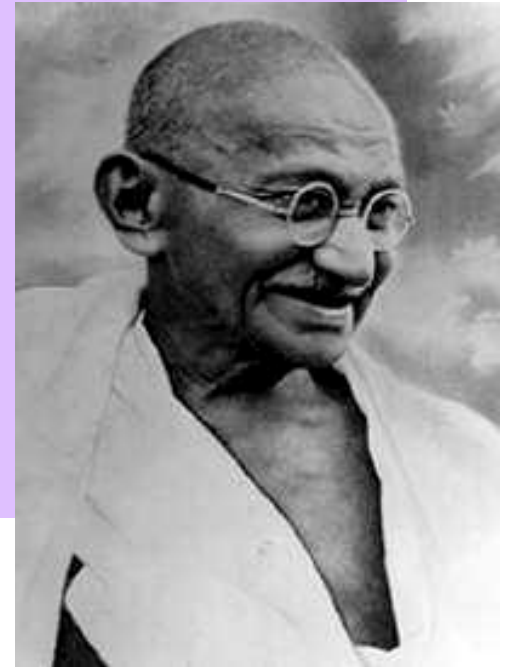
Pillar No. 3

*“Belief”*

# Belief and Conviction

- Make them feel welcome
- Make them feel productive
- Make them feel needed – part of team
- Teach by Example

*‘Gandhi and the Sweets’*



# The Human Touch

## The Story of the Sacred Cow



**C** OMPUTER

**O** n

**W** heels



*NUS Lecturer*

# Pillar No. 4

## *Respect*

Story of Mr  
Anthony Cheah

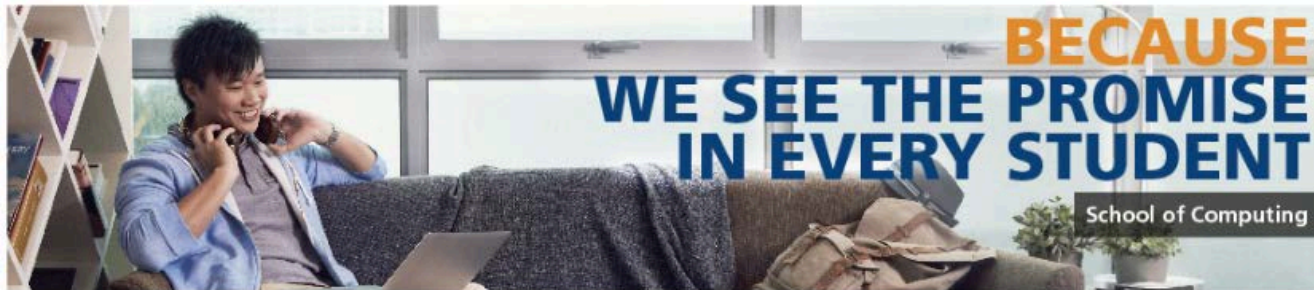


# Pillar No. 5



- Everyone has Greatness
- Recognize different Potential/Talent in EACH & EVERYONE
- Unleash the **GIANT** within.

# Nothing abnormal about Normal Technical



Internship in NOC Silicon Valley with NUS peers

## Ang Jin Hui

Year 2

School of Computing

University Scholars Programme

NUS Overseas College programme in Silicon Valley

Jin Hui took the unconventional route: After the 'N' levels, Jin Hui went on to study at an ITE, a polytechnic and the National University of Singapore. Along the way, he received a Lee Kuan Yew Scholarship to Encourage Upgrading Award and an NUS Undergraduate (Merit) Scholarship. Currently enrolled at the School of Computing, University Scholars Programme and NUS Overseas Colleges programme, Jin Hui continues fulfilling his potential and inspiring others.

## Why NUS

I was offered scholarships from NUS and NTU but chose NUS because of the e-commerce major, which is offered jointly by computing and business.

One of the main attractions was the NUS Overseas Colleges programme, where students get to work as interns in start-up companies in various



*“The woods would be silent, if  
no birds sing except those  
who sing best “*





**“Forgive me. If I whine...”**

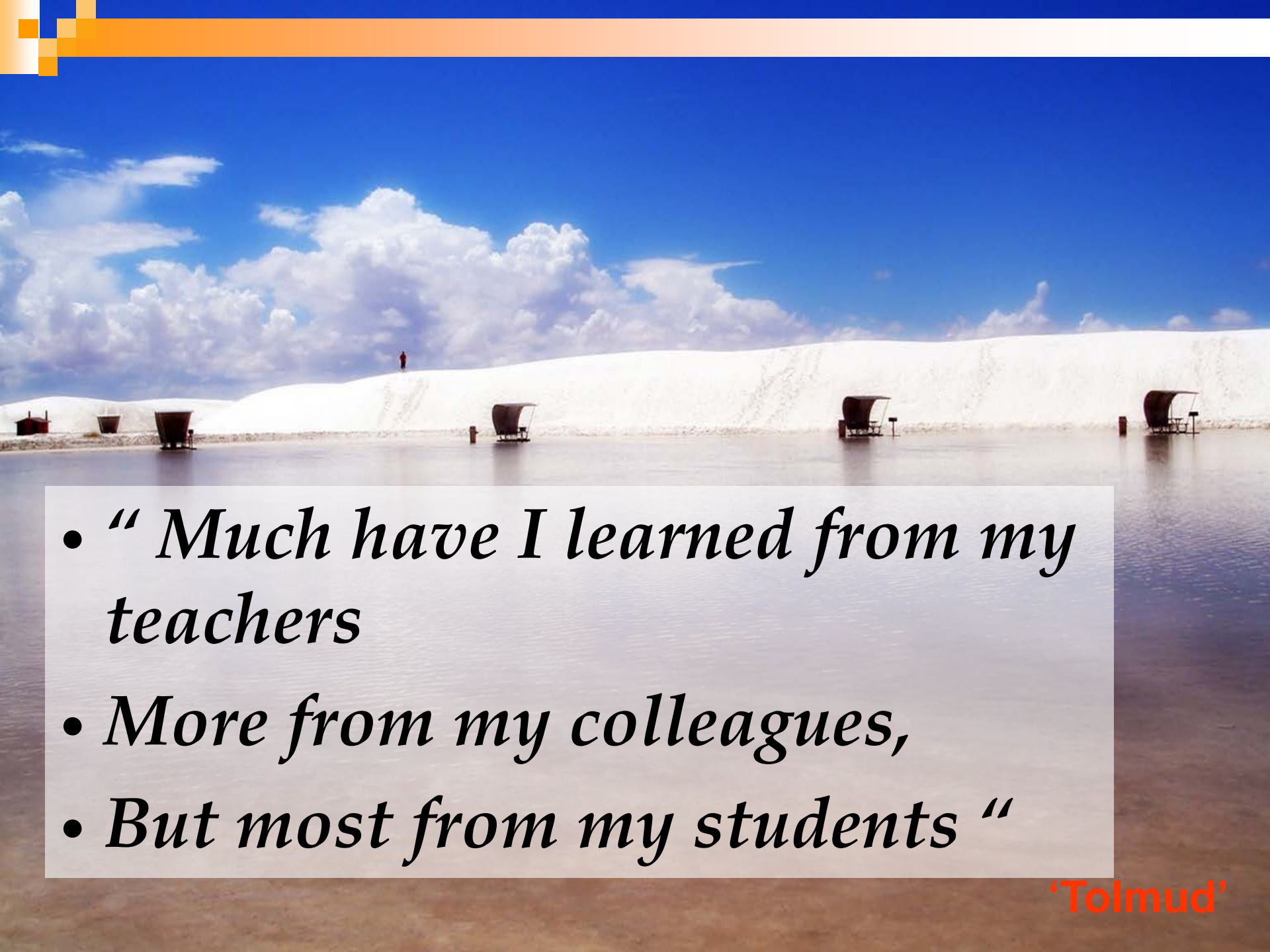


# Pillar No 6

## ■ Humility

Learn from

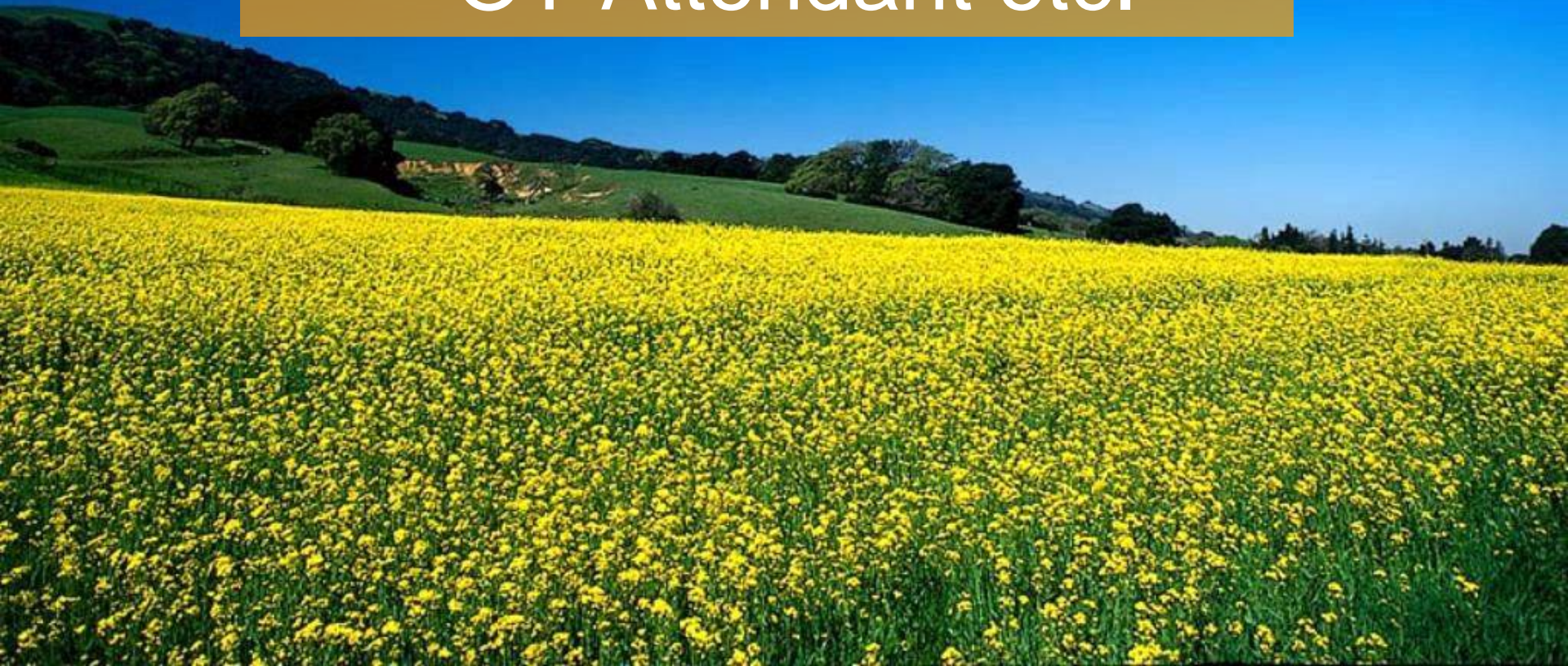
- STUDENT
- Nurses
- Patients
- O.T Technicians

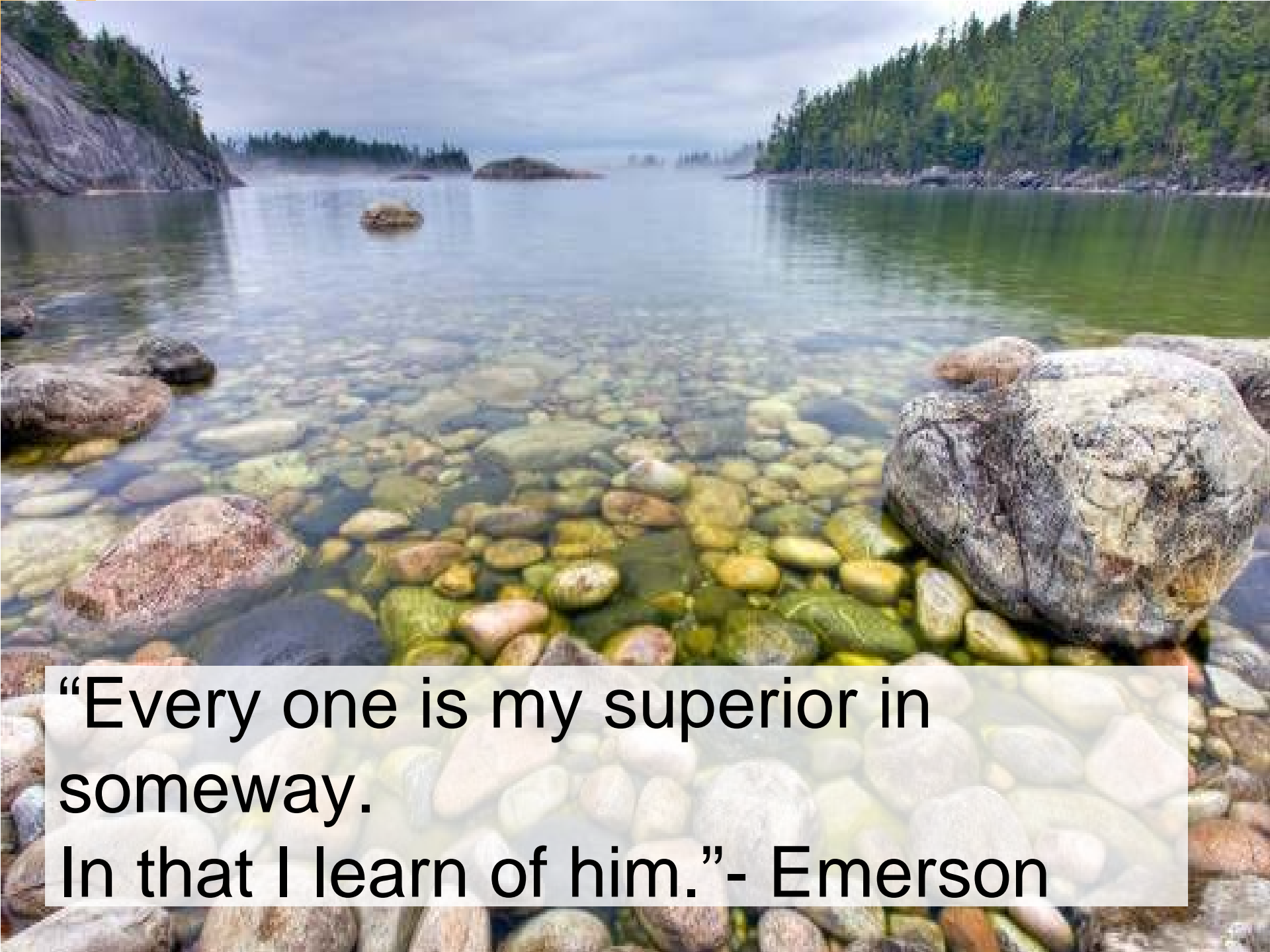


- *“ Much have I learned from my teachers*
- *More from my colleagues,*
- *But most from my students “*



- Humility is a Bitter Plant
  - But taste sweet
  - Learn from everyone:  
Teacher, Doctor, Nurses,  
OT Attendant etc.





“Every one is my superior in  
someway.  
In that I learn of him.”- Emerson



*“ Educator must lead student first to  
new places where even the educator  
has never been”*



*'Sometimes our light goes out  
but is blown into flame by  
another fellow human being.*

*Each of us owes deepest thanks  
to those who have rekindled  
this light'*





Mr. SOUVEY - CHANG

(Anoy), B.ED., M.ED. (Melbourne)

Our Bi-lingual Headmaster.

一九六〇年  
九號文憑班 →

校長：孫一臺先生

門大學學士，墨爾本大學教育學碩士

THE STAFF

全體教師 →





# Mary Boswell



The school building, the science lab, the facilities- these are important

Just as important, if not more, is the people- the teachers and students

You will give its spirits, its culture, its soul....

Stay back and join me to build a school for our village, our student-

Together we will build BPSS with our bare hand from our bare lands- Let's begin the adventure together.....



# Pillar No 7

T R U S T

Empowerment & Dedication – Be a  
good listener

Henry Khoo

**Pillar No 8**

**Teaching by “self-directed learning”**



***Learn Together***



**Self Directed, Continuous & Relentless**

















*'I am not just a teacher,  
But a awakener'*



**Robert Frost**

# Pillar no. 9

# Teamwork



A close-up photograph of two hands shaking over a globe. The hands are positioned in the center, with fingers interlaced, symbolizing agreement or support. The background is a blurred view of the Earth from space, showing blue oceans and green landmasses. The lighting is soft, highlighting the texture of the skin and the details of the handshake.

# HANDS

We need each other's help



# Pillar no. 10

Heart of  
Education is  
Education of  
the ***HEART***





# Story of Mrs Thomson & Teddy Stoddard

# Teddy Stoddard - MD



**Trust Me, I'm a Doctor**



**WHAT LEGACY DO YOU  
WANT TO LEAVE BEHIND?**



# Give me 1 more day- Mitch Albom

- Smile more broadly
- Hand shake more warmly
- Call your love ones
- Don't have to win every argument
- Forget the little irritation in life
- Smell the roses, treasure the morning dew
- More tolerant & hear the birds singing
- The sun will rise tomorrow but - - - -
- Say goodbye more tenderly

I sought for happiness  
Happiness I cannot see  
I look for fulfillment  
Fulfillment escaped me  
I seek for richness of spirit  
Richness of spirit eluded me  
But when I share my knowledge with my  
students... I found all three



**So go forth , my friends and serve**



**“In search for  
excellence in teaching of  
Maths**

**The sky has no limits”**

# THANK YOU!

## Acknowledgement & References

1. 7 Habits of Effective Living- Stephen Covey
2. Give me one more day by Mitch Albom
3. The last lecture by Randolph Pauch
4. SMA lecture by Dr H S Wong
5. Named and unnamed quotations
6. Pictorial resources
7. Technical assistance: Ms Shakila

