Quality Education: fit for purpose

11th November, 2013

Sunil Jayantha Nawaratne
Secretary, Ministry of Higher Education – Sri Lanka
Fresh fears that the UK’s education system is not “fit for purpose” have emerged after a number of studies reveal employers are increasingly put off hiring young people directly from school.

This is very common for most of the Commonwealth Nations including Sri Lanka.

http://www.telegraph.co.uk/finance/jobs/8720697/UK-schools-not-fit-for-purpose.html
Louisa Peacock: The Telegraph's Deputy Women's Editor

• Already at one in five among 16 to 24 year were not “employable”

• Gerwyn Davies, public policy adviser at the CIPD, said there was a strong perception among companies that school leavers lacked basic workplace skills, such as good customer service or communication skills, “which may explain why fewer young people are being hired”
Graduates too....

• The research comes as official figures yesterday showed graduates are now more likely to work in low-skilled jobs as postal workers, hotel porters and cleaners compared to over a decade ago.
“We want to be sure our workforce has the most up-to-date skills and knowledge they need to invent and integrate highly technical systems for a very diverse customer base”

Dr. Candice Phelan
Director of Lockheed Martin Learning Services
Your Human Capital

• Skills
• Knowledge
• Experience
• Personal qualities
THE NEW LABOR MARKET
That was then, this is now

THEN

BASIC SKILLS REQUIRED: ASSEMBLY LINE

NOW

GLOBAL COMPETITION, RAPIDLY CHANGING TECHNOLOGY
<table>
<thead>
<tr>
<th></th>
<th>The Industrial Age</th>
<th>The Information/Knowledge Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology change</td>
<td>Took years to accomplish</td>
<td>Months, weeks to accomplish</td>
</tr>
<tr>
<td>Competition</td>
<td>Local, state, national</td>
<td>Global</td>
</tr>
<tr>
<td>Type of production</td>
<td>Manufacturing</td>
<td>Service, info, knowledge</td>
</tr>
<tr>
<td>Role of workers</td>
<td>Manual Laborer</td>
<td>Designer, engineer, manager</td>
</tr>
<tr>
<td>Skill requirements</td>
<td>Strength, dexterity, stamina</td>
<td>Scans (see Table II)</td>
</tr>
<tr>
<td>Employment</td>
<td>Lifetime with one employer</td>
<td>Change jobs at least six times, careers three times</td>
</tr>
<tr>
<td>Learning span</td>
<td>Kindergarten-12th grade</td>
<td>Lifetime</td>
</tr>
</tbody>
</table>

Table I: Then and now

<table>
<thead>
<tr>
<th>Rank</th>
<th>Skill Category</th>
<th>Description (BaTPRIS IT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Basic Skills</strong></td>
<td>Can you read, write, listen, and speak?</td>
</tr>
<tr>
<td></td>
<td><strong>Thinking Skills</strong></td>
<td>Do you make careful, well-informed decisions? Do you know how to learn?</td>
</tr>
<tr>
<td></td>
<td><strong>Personal Qualities</strong></td>
<td>Are you honest, hardworking, respectful, and self-motivated? Can you be trusted? Are you on time? Do you dress appropriately?</td>
</tr>
<tr>
<td></td>
<td><strong>Resources</strong></td>
<td>Do you use your most important resource (you) well?</td>
</tr>
<tr>
<td></td>
<td><strong>Interpersonal Skills</strong></td>
<td>Do you work well with others, are you a team player? Do you help others succeed? Do you get along well with people who don’t look like you, who may be from a different part of the world, or another neighborhood? Are you kind to people who might not be as talented or good looking or popular as you? Do you try to make others feel comfortable in your group?</td>
</tr>
<tr>
<td></td>
<td><strong>Systems</strong></td>
<td>Do you know how your family, your school, and your classroom work? Do you understand the system? Can you see problems with these systems and find ways to improve them?</td>
</tr>
<tr>
<td></td>
<td><strong>Information</strong></td>
<td>When you have to talk about things at school or at home, do you speak off the top of your head, or do you collect information before you make your point? Are you willing to listen to others when they present their facts? Can you tell the difference between facts and “stories?”</td>
</tr>
<tr>
<td></td>
<td><strong>Technology</strong></td>
<td>Are you up to date on the latest technology and are you willing to learn new ones?</td>
</tr>
</tbody>
</table>
To compete in a global economy, you will need these skills.
Basic Skills

• reading
• writing
• mathematics
• listening
• speaking
Thinking Skills

- **Informed decisions**
- Benefit/Cost Analysis
- Know **how to learn**
Personal Qualities

• Honest
• Hard working
• Respectful
• Self-motivated
• Trustworthy
Resource Use – How to optimize
Interpersonal Skills

• Work **well with others**
• Help others succeed
• Get along **with others who are not like you?**
• Kind to others
• Try to make **others comfortable**
Systems – how to fit & use
Information

• Do you **have facts**?
• Do you know **where to get facts**?
• Do you listen **to facts**?
• Can you tell the difference between **facts** and **opinions** (yours and others)?
• **Not who** is correct **but what is**?

Sunil Nawaratne
11th November, 2013 – Hambanthota – Sri Lanka
Technology

• Selecting **appropriate**
• applying **to specific tasks**
• maintaining and **troubleshooting**
• keeping **up to date**
• learning
Why are you in school / Uni?

- To improve your **incredible human capital**
- To use your human **capital and other resources to achieve your goals**
- To lead the **good life and make you valuable**
- To **develop our nations and contribute to the society**
- You are in school / Uni for **YOU!!!!!!**
You are the only one who can develop your human capital..... not your teachers, not your parents, but **YOU** – Education will create the environment

Sunil Nawaratne

11th November, 2013 – Hambanthota – Sri Lanka
K-SAM – Total Human Capital Development Model
(Developed by Sunil Nawaratne)

Knowledge
TK
PK

Skills

Attitudes, Values and Vision for life

Mindset

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Ministry of Higher Education – Sri Lanka
**K- SAM**

**Market is asking for K- SAM graduates & employees**

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
<th>Attitudes + V+V4L</th>
<th>Mindset / Paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Theory</td>
<td>• Technical</td>
<td>• Daily Behavior</td>
<td>• Perception or View accepted by an Individual or society</td>
</tr>
<tr>
<td>• Practice</td>
<td>• Human</td>
<td>• Relationships</td>
<td>• Continues Learning</td>
</tr>
<tr>
<td></td>
<td>• Conceptual</td>
<td>• Values</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Vision for life</td>
<td></td>
</tr>
</tbody>
</table>

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To compete in a global economy, you will need these skills
Paradigm Shift of **Education**

- **Old – Instruction Paradigm**
  - An educational institution **exists to provide instruction.**

- **New – Learning Paradigm**
  - An educational institution **exists to produce learning.**
Teaching to Learning

- **Pedagogy**
  - From lecture hall to environment for interactive, collaborative learning
  - From teacher to designer and coach

- **Classroom**
  - From solitary students to learning communities
  - From campuses to virtual, distributed environments

- **Open Learning**
  - From teacher-centered to learner-centered

- **Passive Student to Active Learner**

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There is a gap in Skills that needs to be bridged in the future graduate.
### The Changing World

#### SKILLS & ATTITUDES

**NOW**
- Special skills
- Planning & implementation
- Navigating the bureaucracy
- Following the heritage

**FUTURE**
- Communications
- Team-working
- Human relations
- Problem-solving
- Design & innovations
- Personal responsibility
- Self-management
- Ethics, values, principles

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Forces of Change

**A Changing World**

- The Knowledge Explosion
- Globalization
- High Performance Workplace
- Diversity
- Technological Change
- Knowledge Transfer

**Forces on the HEIs**

- Economics
- Societal Needs
- Technology
- Markets

**Evolution?**

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Project Based Learning

Research Based Learning

Place Based Learning

Game Based Learning

Problem Based Learning

Curriculum design and the research-teaching nexus: Healey 2005

Student-Focused
Students as Participants

Research-tutored
Curriculum emphasises learning focused on students writing and discussing papers or essays

Research-based
Curriculum emphasises students undertaking inquiry-based learning

Emphasis on Research Content

Research-led
Curriculum is structured around teaching subject content

Research-oriented
Curriculum emphasises teaching processes of knowledge construction in the subject

Teacher-Focused
Students as Audience


10 Best Colleges for Game-Based Learning

- University of Washington
- University of Wisconsin-Madison
- Michigan State University
- Muhlenberg College
- The Wheaton School
- University of Pennsylvania
- Pace University
- University of Chicago
- University of Miami
- University of Central Florida
Inquiry Based Learning

The Inquiry Process

1. **Pose Real Questions**
   - What do I want to know about this topic?
   - What do I know about my question?
   - How do I know it?
   - What do I need to know?
   - What could an answer be?

2. **Find Resources**
   - What kinds of resources might help?
   - Where do I find them?
   - How do I know the info is valid?
   - Who is responsible for the info?
   - What other info is there?

3. **Interpret Information**
   - How is this relevant to my question?
   - What parts support my answer?
   - How does it relate to what else I know?
   - What parts do not support my answer?
   - Does it raise new questions?

4. **Report Findings**
   - What is my main point?
   - Who is my audience?
   - What else is important?
   - How does it connect?
   - How do I use media to express my message?

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E-Learning?

The idea is that learning is not based on objects and contents that are stored, as though in a library.
Rather, the idea is that learning is like a utility - like water or electricity - that flows in a network or a grip, that we tap into when we want.
The Pedagogy Wheel
ALRR – Average Learning Retention Rates

Source: National Training Laboratories

Lecture: 5%
Reading: 10%
Audio/Visual: 20%
Demonstration: 30%
Discussion Group: 50%
Practice by Doing: 75%
Teaching Others: 90%
Immersive learning = Learning by doing

The Cone of Learning

After 2 weeks, we tend to remember ...

- 10% of what we READ
- 20% of what we HEAR
- 30% of what we SEE
- 50% of what we SEE & HEAR
- 70% of what we SAY
- 90% of what we SAY & DO

Source: Edgar Dale (1969)
• **Connected Learning**

The computer connects the student to the rest of the world.

Learning occurs through connections with other learners.

Learning is based on conversation and interaction.

http://www.cetis.ac.uk/members/ple/resources/edf.ppt

Sunil Nawaratne

11th November, 2013 – Hambanthota, Sri Lanka
Traditional vs Modern

Traditional

Class Room Based
Teacher Centred
High Cost
Face to Face

Modern

Virtual
Student Centred
Low cost
Access from anywhere
K – SAM graduates & Hybrid HEI
New Way of Education for a Purpose
Government vision (Mahinda Chinthana)

“Develop a youth who can see the world over the horizon”

“We have the opportunity to make this country a knowledge hub within the South Asian region. I will develop and implement an operational plan to make this country a local and international research and training centre for knowledge”

Mahinda Chintana 2010 (President’s Mandate)

HE Mahinda Rajapaksa
Executive President
Democratic Socialist Republic of Sri Lanka
Sri Lanka’s Long-term Vision
Mahinda Chinthana Idiri Dekma

Commercial Hub

Knowledge Hub

Aviation Hub

Naval Hub

Energy Hub

Sri Lanka - Miracle of Asia
Few Main Programs in Sri Lanka

- **1,000** – Mahindyodaya Schools
- **5,000** – Feeder schools
- **Technology stream**
- **World Class Universities**
- **100% Employable Graduates**
- **Globally Employable Graduates**
The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn. - Alvin Toffler
Sri Lanka

The Most Cost-Effective and Quality Education Hub in Asia

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Your Turn Please ...