Quality and Accountability: An International Perspective

Jamil Salmi
CHEA Conference
Washington DC
25 January 2010
the future of tertiary education?
a world of science fiction?

Progress is achieved principally through the advancement and application of knowledge.
outline of the presentation...

• importance of knowledge
• changing education needs & practices
• growing accountability agenda
explaining the difference between poverty and wealth

South Korea

Difference in output due to TFP growth or knowledge accumulation in Korea

Brazil

Difference in output due to growth in labor and capital in Korea

© K4D program
South Korea and Brazil

<table>
<thead>
<tr>
<th>Year</th>
<th>Blue</th>
<th>Green</th>
<th>Red</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>55%</td>
<td>26%</td>
<td>18%</td>
<td>100%</td>
</tr>
<tr>
<td>1980</td>
<td>49%</td>
<td>9%</td>
<td>42%</td>
<td>100%</td>
</tr>
<tr>
<td>1960</td>
<td>80%</td>
<td>3%</td>
<td>17%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Blue</th>
<th>Green</th>
<th>Red</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>14%</td>
<td>8%</td>
<td>78%</td>
<td>100%</td>
</tr>
<tr>
<td>1980</td>
<td>9%</td>
<td>4%</td>
<td>87%</td>
<td>100%</td>
</tr>
<tr>
<td>1960</td>
<td>14%</td>
<td>2%</td>
<td>84%</td>
<td>100%</td>
</tr>
</tbody>
</table>
creative work in the economy

IN THE UNITED STATES

Creative Work

- Research
- Development
- Design
- Marketing and Sales
- Global Supply Chain Management

IN LESS DEVELOPED COUNTRIES

Routine Work
DONE BY PEOPLE

Routine Work
DONE BY MACHINES
evolution of Nokia sales
knowledge for safety

- sismology
- vulcanology
- climatology (floods, tsunamis, droughts, etc.)
Tsunami
26 December 2004
acceleration of speed of creation of new knowledge
how can we update our knowledge?
outline of the presentation...

• importance of knowledge

• changing education needs and practices
changing education needs and practices

• new skills
  – professional skills
  – soft skills
changes in job task-skill demands in the USA (1960 – 1998)

Robot Doctors Replacing Real Doctors

Judith Mey consults with Frank in person and Kaveousi via video. Technology assists in maintaining personalized doctor-patient relations.
2006 PISA results

Percentage of students at each proficiency level on the mathematics scale

% Percentage of students at each proficiency level

Below Level 1 Level 1 Level 2 Level 3 Level 4 Level 5 Level 6

Finland Korea Ireland Colombia Brazil Indonesia Hong Kong-China
“Although humans make sounds with their mouths and occasionally look at each other, there is no solid evidence that they actually communicate among themselves.”
design

prada phone
luxury Razr with lizard skin
Giorgio Armani-Samsung mobile
creativity

• invent

“I didn’t know you could do that!”
creative work in the economy

IN LESS DEVELOPED COUNTRIES
any country
changing education needs and practices

• new skills

• lifelong learning
from innocence
... to wisdom
university of the future?

Undergraduate studies

Career change studies

Graduate studies

On-campus

On-line

Continuing education
changing education needs and practices

• new skills

• lifelong learning

• learning to learn and unlearn continuously
new pedagogical approaches

- focus on learning tailored to needs of individuals rather than teaching
- new and varied modalities for learning: interactive & collaborative learning
when you want...
where you want...
**Gather clues - Interview suspects - Analyze evidence**
**Solve a mysterious death**

This activity is set in a research group that is developing an antivenom for spider bites. In the opening scene, Nelson Fogline, a talented graduate student, dies unexpectedly at a university reception. As a detective, you must use chemistry concepts to determine if this was murder and if so, solve the case. You can interview suspects using Quicktime movies, investigate the crime scene for clues with Quicktime Virtual Reality images, and analyze the evidence from the crime lab.

This activity requires basic knowledge of formula weight, stoichiometry and the scientific method to solve the mystery.

Additional concepts that are discussed include: molecular recognition, limiting reagents, and mass spectrometry.

**Note to Instructors:** The Windows-based software is suitable for high school and college introductory chemistry students. Mixed Reception can be used as a homework assignment for individual students, or as an in-class group activity. Solving the case takes between 40 and 50 minutes.

**Activity and Materials:**

**Activity:**
- Mixed Reception Activity [260 MB Zip file]
- Installation instructions

**Classroom Materials:**
- User Walkthrough [pdf]
- Activity Worksheet [doc]
- Periodic Table [pdf]
- Final Report [doc]

**Classroom CD’s:**
(Each includes activity and classroom materials)
- Fill out a form to request free CD’s
- Email us for teacher solutions and hints
- Download .iso file to make your own CD’s

Please email us for additional information, or just to tell us what you think.
“In the early twenty-first century, people will be able to study what they want, when they want, where they want, and in the language they prefer, electronically.”

Peter Knight, July 1994
“For sale: charming and peaceful residence away from neighbors, with a wonderful view of the sea, a grand period staircase, and lots and lots of light…”
outline of the presentation...

- importance of knowledge
- changing education needs & practices
- growing accountability agenda
do we really need accountability?
the growing accountability agenda

• integrity and honesty
unethical and fraudulent practices

- financial management
- academic management
- information management
the growing accountability agenda

- integrity and honesty
- effective use of resources and quality of results
- adherence to national policy goals
accountability mechanisms

• legal requirements
  – licensing, accreditation, evaluation, academic audits

• financial incentives
  – linking resources and performance (funding formula, performance contract, demand-side mechanisms)
accountability mechanisms (II)

• surveys of student engagement
  – US, Canada, Germany, China, Taiwan

• measurement of learning outcomes
  – institutional level (CLA, etc.)
  – national efforts (Brazil, Colombia, Jordan)
  – international approach (AHELO)
accountability mechanisms (III)

• labor market observatories
• Boards with external representation
• proliferation of rankings
  – press
  – independent bodies
  – government
Futuro Laboral

El sitio www.futurolaboral.cl es un servicio de información pública desarrollado por el Sistema Nacional de Información de la Educación Superior (SIES) de la División de Educación Superior del MINEDUC destinado a los estudiantes de enseñanza media y superior, sus familias, profesores, orientadores, académicos, medios de comunicación, empresas y empleadores.

Futuro Laboral actualmente informa sobre 85 carreras de profesionales y 50 técnicas, que concentran más del 80%
<table>
<thead>
<tr>
<th>Region</th>
<th>National and International Ranking System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>Kazakhstan (A, B), Lithuania (C), Poland (C), Slovakia (B), Romania (B/C), Russia (B), Ukraine (B/C)</td>
</tr>
<tr>
<td>East Asia and Pacific</td>
<td>Australia (B), China (B, C, IB), Hong Kong (C), Japan (B, C), Korea (A), Malaysia (A), New Zealand (A), Taiwan (B, IB), Thailand (A)</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>Argentina (D), Brazil (A), Chile (C,D), Mexico (B), Peru (B)</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>Tunisia (A)</td>
</tr>
<tr>
<td>North America</td>
<td>Canada (B, C, B/C), United States (C, IC)</td>
</tr>
<tr>
<td>South Asia</td>
<td>India (C/D), Pakistan (A)</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>Nigeria (A)</td>
</tr>
<tr>
<td>Western Europe</td>
<td>Germany (B/C, C), Italy (C), Netherlands (A), Portugal (C), Spain (B, C, IC), Sweden (C), Switzerland (B/C), United Kingdom (A, B, IC)</td>
</tr>
</tbody>
</table>
monitoring and reporting

- increase in number of monitoring agencies
  - Parliament
  - funding body
  - accreditation agency
  - statistics unit

- benchmarking
Building Minnesota’s world-leading status in the knowledge economy requires setting goals for HE and measuring results.

Governor Tim Pawlenty

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**clear goals**

<table>
<thead>
<tr>
<th>GOAL ONE</th>
<th>Improve success of all students, particularly students from groups traditionally underrepresented in higher education.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL TWO</td>
<td>Create a responsive system that produces graduates at all levels who meet the demands of the economy.</td>
</tr>
<tr>
<td>GOAL THREE</td>
<td>Increase student learning and improve skill levels of students so they can compete effectively in the global marketplace.</td>
</tr>
<tr>
<td>GOAL FOUR</td>
<td>Contribute to the development of a state economy that is competitive in the global market through research, workforce training and other appropriate means.</td>
</tr>
<tr>
<td>GOAL FIVE</td>
<td>Provide access, affordability and choice to all students.</td>
</tr>
</tbody>
</table>
# Research Expenditures as a Proportion of Gross Domestic Product by State and Country

<table>
<thead>
<tr>
<th>Top 3 States</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Mexico</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8.0%</td>
</tr>
<tr>
<td>Maryland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.3%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.2%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>2.3%</td>
<td>2.6%</td>
<td>2.6%</td>
<td>2.8%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Rank</td>
<td>17</td>
<td>16</td>
<td>14</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>National average</td>
<td>2.7%</td>
<td>2.7%</td>
<td>2.5%</td>
<td>2.6%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Peer States⁵</td>
<td>2.7%</td>
<td>2.7%</td>
<td>2.5%</td>
<td>2.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>OECD Countries</td>
<td>2.2%</td>
<td>2.3%</td>
<td>2.2%</td>
<td>2.3%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top 3 Countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.5%</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.1%</td>
</tr>
<tr>
<td>Korea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Source: The National Science Foundation (national data), Organisation for Economic Cooperation and Development (international data).

Note: In order to scale the measure across states, the indicator was divided by gross domestic product by state which is provided by the Bureau of Economic Analysis.
excessive requirements?

- reporting to death
- unfair rankings
- measurement of learning outcomes

Spellings Commission, AHELO
fear of transparency

- complaints: Pakistan
- boycott: US
- legal action: New Zealand
- national audits: Colombia
benefits of information

• choice of institution (domestic) or for studies abroad
• culture of transparency
• setting stretch goals
conclusion

the end
a brave new world?
the brick university
the click university
competing in the learning society...
competing in the learning society...
competing in the learning society...
competing in the learning society...
the digital gap
the digital gap
the digital gap
accountability is healthy

- fraud and corruption
- complacency and mediocre performance
accountability is healthy

- fraud and corruption
- complacency and mediocre performance
- accountability for change
principles for an appropriate accountability system

- constructive mode
principles for an appropriate accountability system

- constructive mode

- multi-dimensionality
OLD BOOKS & CROWDED CLASSES
KEEPING YOUR GRADES DOWN?

STUDY THE TEST!

ACCOUNTABILITY IS WHAT MATTERS
principles for an appropriate accountability system

- constructive mode
- multi-dimensionality
- mutually-agreed or voluntary
mutually agreed
voluntary initiatives

• Ireland
• US (College Portrait)
• CHE partners
principles for an appropriate accountability system

- constructive mode
- multi-dimensionality
- mutually-agreed or voluntary
- no accountability without autonomy