Israel through the Global Education Prism: Policy Implications

Michal Beller
Director-General of RAMA
The National Authority for Measurement and Evaluation in Education

A paper presented at the Van Leer Education Conference
From Vision and Policy to Implementation

May 20, 2009
Introduction
“Without data, you are just another person with an opinion”

Andreas Schleicher

OECD

Head of the Indicators and Analysis Division (Directorate for Education)
Large Scale Assessments in Israel

- Matriculation Exams – Bagrut (upper secondary school)
- School Climate and Pedagogical Environment Survey
- International Assessments:
  - TIMSS - Math and Science Study – 9th grade
  - PIRLS - Reading Assessment – 4th grade
  - PISA - Reading, Math & Science Literacy – 15 Years
  - SITES - Information Technology
    - (1997, 2006)
Campbell's Law

"The more any quantitative social indicator is used for social decision making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor."

"achievement tests may well be valuable indicators of general school achievement under conditions of normal teaching aimed at general competence.

But when test scores become the goal of the teaching process, they both lose their value as indicators of educational status and distort the educational process in undesirable ways.”

Unintended Negative Effects of External Testing

Between-Subject Reallocation of time
The Impact of Setting a Specific Target
“Most Children are Left Behind…”
Teaching to the Test; Test Inflation
Narrowing the Curriculum
Assessment is Only a Sample of the Curriculum
Collateral Damage & Tyranny of Testing

Introduction

Shift

Israel & PISA

Lessons

In Other Words

Conclusion

HOW HIGH-STAKES TESTING CORRUPTS AMERICA’S SCHOOLS

Sharon L. Nichols and David C. Berliner

Foreword by Nel Noddings

EDUCATION BY NUMBERS

The Tyranny of Testing

Warwick Mansell
Can We Measure Learning When Stakes are High?

- Information from test-based accountability (TBA) systems is likely to be more valid under some conditions than others.

- But scores on high-stakes tests will always provide an incomplete indicator of learning.

- Developers of TBA systems must create conditions that will promote valid information while informing users of the limitations of this information.

- Recent research suggests that TBA has some potential to promote positive outcomes, but efforts must be taken to reduce likelihood of negative consequences.
On the Intended Positive Effects of External Testing And Intelligent Accountability

The focus of my presentation
Shift of skills required to function in modern world

... and in the ways to guage them
Key Competencies in Three Broad Categories

The DeSeCo Project’s conceptual framework for key competencies classifies such competencies in three broad categories. First, individuals need to be able to use a wide range of tools for interacting effectively with the environment: both physical ones such as information technology and socio-cultural ones such as the use of language. They need to understand such tools well enough to adapt them for their own purposes – to use tools interactively. Second, in an increasingly interdependent world, individuals need to be able to engage with others, and since they will encounter people from a range of backgrounds, it is important that they are able to interact in heterogeneous groups. Third, individuals need to be able to take responsibility for managing their own lives, situate their lives in the broader social context and act autonomously.

**How the demand for skills has changed**

*Economy-wide measures of routine and non-routine task input (US)*

---

**Mean task input as percentiles of the 1960 task distribution**

**From:** Andreas Schleicher

---

The dilemma of schools: The skills that are easiest to teach and test are also the ones that are easiest to digitise, automate and outsource.
Deciding what to assess...

looking back at what students were expected to have learned

...or...

looking ahead to how well they can extrapolate from what they have learned and apply their knowledge and skills in novel settings.

For the PISA assessment of the knowledge and skills of 15-year-olds, OECD governments chose the latter.

From: Andreas Schleicher
Alignment

Curriculum
...and beyond

Teaching & Learning
Content & Performance Standards
Assessment
Educational Environment
School Climate

Introduction
Shift
Israel & PISA
Lessons
In Other Words
Conclusion

© 2009 # 14
New Constructs Initiative at ETS

Cognitive skills
- Critical thinking
- Communication skills
- ...

Non-Cognitive skills
- Work Ethic
- Teamwork
- Leadership
- Ethics & integrity
- Adaptability
- ...

Introduction
Shift
Israel & PISA
Lessons
In Other Words
Conclusion
PISA

- The Program for International Student Assessment (PISA) is a system of international assessments that focus on 15-year-olds' capabilities in reading literacy, mathematics literacy, and science literacy.

- PISA also includes measures of general or cross-curricular competencies such as learning strategies.

- PISA emphasizes functional skills that students have acquired as they near the end of mandatory schooling.

- PISA is organized by the Organization for Economic Cooperation and Development (OECD), an intergovernmental organization of industrialized countries.

- Begun in 2000, PISA is administered every 3 years. Each administration includes assessments of all three subjects, but assesses one of the subjects in depth. The most recent administration was in 2009 and focused on reading literacy.
Strengths and weaknesses in math

From: Andreas Schleicher
“Education in one country can be better understood in comparison to education in other countries”

Porter & Gamoran, 2002
Methodological Advances in cross-national surveys of educational achievement.
The National Educational Plan

Because every child deserves more

"If you want to reform the world - you must reform education"

Janusz Korczak

September 2003 – December 2004
PISA 2006 – Science Performance Levels

<table>
<thead>
<tr>
<th>Level</th>
<th>Population</th>
<th>OECD Average</th>
<th>Finland Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>0.8%</td>
<td>13.8%</td>
<td>7.7%</td>
</tr>
<tr>
<td>5</td>
<td>4.4%</td>
<td>20.8%</td>
<td>17.0%</td>
</tr>
<tr>
<td>4</td>
<td>24.0%</td>
<td>27.4%</td>
<td>32.2%</td>
</tr>
<tr>
<td>3</td>
<td>21.2%</td>
<td>24.0%</td>
<td>29.1%</td>
</tr>
<tr>
<td>2</td>
<td>14.9%</td>
<td>14.1%</td>
<td>13.6%</td>
</tr>
<tr>
<td>1</td>
<td>5.2%</td>
<td>5.2%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Median</td>
<td>13.6%</td>
<td>13.6%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Below 1</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

Israel & PISA

Lessons in Other Words

Conclusion
PISA 2006: Variance of Science Scores

Graduation bars extend from the 5th to the 95th percentiles

- Mean score on the science scale
- 95% confidence interval around the mean score
Lessons from International Comparisons on PISA
Money matters - but other things do too

From: Andreas Schleicher
How the world’s best-performing school systems come out on top

September 2007

1. “The quality of an education system cannot exceed the quality of its teachers”
2. “The only way to improve outcomes is to improve instruction”
3. “High performance requires every child to succeed”
High ambitions and universal standards
Rigor, focus and coherence

Great systems attract great teachers and provide access to best practice and quality professional development

From: Andreas Schleicher
Challenge and support

From: Andreas Schleicher
Autonomy and Accountability

Devolved responsibility, the school as the centre of action

Accountability and intervention in inverse proportion to success

From: Andreas Schleicher
School autonomy, standards-based examinations and science performance

School autonomy in selecting teachers for hire

PISA score in science

Yes

Standards based external examination

School autonomy in selecting teachers for hire

No

From: Andreas Schleicher
Integrated educational opportunities

From prescribed forms of teaching and assessment towards personalised learning

From: Andreas Schleicher
Creating a knowledge-rich profession

The future of education systems is “knowledge rich”

Informed prescription

Informed professional judgement, the teacher as a “knowledge worker”

National prescription

Professional judgement

Uninformed prescription, teachers implement curricula

Uninformed professional judgement, teachers working in isolation

The tradition of education systems has been “knowledge poor”

From: Andreas Schleicher
Local Responsibility and National Prescription

Towards system-wide sustainable reform

Schools today
The industrial model, detailed prescription of what schools do

Schools tomorrow?
Building capacity

Finland today
Every school an effective school leading reform

Personalized Learning

High Excellence, High Equity

From: Andreas Schleicher
Finland excels in personalized learning: 30% of instruction hours are spent by teacher outside the classroom with individual students.
"New Horizon" Reform in Israel

Fosters a new understanding of the interaction between teachers and students

placing notions such as: intimacy, responsibility, and accountability at the core of the pedagogical exchange

It’s about Time

Quality time
Great systems attract great teachers and provide access to best practice and quality professional development.

High ambitions and universal standards.

Rigor, focus and coherence.

Devolved responsibility, the school as the centre of action.

From prescribed forms of teaching and assessment towards personalised learning.

Integrated educational opportunities.

Accountability and intervention in inverse proportion to success.

From: Andreas Schleicher
In Other Words
High Equity and High Excellence

In the drive for high equity and high excellence we need more emphasis on:

i. Personalisation of Teaching and Learning

ii. A Focus on System Leadership

iii. A New Relationship with Schools

iv. Workforce Reform and Reducing Within School Variation

v. Segmentation and Collaboration

From: David Hopkins
Identifying School Performance on Meitzav per SES Category
## Segmentation Strategies

<table>
<thead>
<tr>
<th>Type of School</th>
<th>Key elements of the offer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leading Schools</strong></td>
<td>- Funding to become leading practitioners</td>
</tr>
<tr>
<td></td>
<td>- Formal federation with lower-performing schools</td>
</tr>
<tr>
<td><strong>Succeeding, self-improving schools</strong></td>
<td>- Regular local networking for school leaders</td>
</tr>
<tr>
<td></td>
<td>- Entitlement time from consultants</td>
</tr>
<tr>
<td><strong>Succeeding schools with internal variations</strong></td>
<td>- Consistency interventions: such as AfL.</td>
</tr>
<tr>
<td></td>
<td>- Subject specialist support to particular depts.</td>
</tr>
<tr>
<td><strong>Underperforming schools</strong></td>
<td>- Tailored consultancy for underperforming depts.</td>
</tr>
<tr>
<td></td>
<td>- Underperforming pupil interventions, eg: catch-up.</td>
</tr>
<tr>
<td><strong>Low attaining schools</strong></td>
<td>- Formal support in Federation structure</td>
</tr>
<tr>
<td></td>
<td>- Consultancy in core subjects and best practice, eg: curriculum content for low-attaining students.</td>
</tr>
<tr>
<td><strong>Failing schools</strong></td>
<td>- Intensive Support Programme</td>
</tr>
<tr>
<td></td>
<td>- New provider: eg: Academy.</td>
</tr>
</tbody>
</table>

From: David Hopkins
Public and Private Schools

- Government schools
- Government dependent private
- Government independent private

Observed performance difference
Difference after accounting for socio-economic background

Luxembourg, Japan, Italy, Switzerland, Finland, Denmark, Czech Republic, Sweden, Hungary, Austria, Portugal, United States, Netherlands, Slovak Republic, Korea, Ireland, Spain, Canada, Mexico, New Zealand, Germany, OECD, United Kingdom

Private schools perform better
Public schools perform better

From: Andreas Schleicher
Conclusions
Lessons from High Achieving Schools

- Positive school climate with high expectations
- Engaging diversity without retentions or tracking
- Professionalized teaching ranks

“...Success will go to those individuals and nations that are swift to adapt, slow to complain, and open to change. The task for public policy is to ensure that countries rise to this challenge.”

Andreas Schleicher, Seeing the United States Education System through the Prism of International Comparisons, May 2009
“Intelligent” Accountability

- **Vertical accountability** is about systems that provide information on performance to a higher level in the administration.

- **Lateral accountability** is about systems that provide incentives for teachers and schools to learn from other teachers and schools.
RAMA: Assessment in the Service of Learning

Accountability Starts from school self-evaluation
National Education Goals

• Maximizing individual achievements
• Narrowing achievement gaps
• Promoting moral and social values
• Preparing graduates to effectively function in the changing world
Equal worth. Active learning. Informed professionalism. Record resources. High expectations. These are the foundations of a new education settlement.

The ultimate test is not that they hold firm for a few months, or even two Parliamentary terms, but that they endure.

Thank You