Better M & E for Better Policies & Better Education

UNESCO International Symposium on Education Policies for 2030

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Sub-Themes

- Evolution for education evaluation
- Monitoring as an evaluation system
- Education E & M: Shanghai practice
- Personal Opinion
Educational Evaluation has a very long history and developed various ways and for various purposes.

In the modern and western society, it is said that the *British Royal Inspection* was one of the important start in late 18th and early 19th Century.

1) The education evaluation was designed for "his/her" governmental financial support for elementary schools of pauper children;
2) Inspectors were educators and responsible to the Monarch;
3) Inspectors visited schools with their experiences and insights.
4) Pauper schools were given financial aid, if they were ratified by Inspectors;
Public examinations (kejiu kaoshi) in China

- In Chinese history, "Recommendation system" and "Public examination system" were adopted, yet "Public examination system" was used nearly 1300 years. As is considered for the following advantages:
  1. Open and fair to all, regardless family background. The system gave high edu. expectation of all the families and the nation;
  2. While the governors were easier to select top and right candidates, and therefore, the nation could be controlled by natural elites;
  3. Easier to stimulate the schools to follow the official education requirements, from contents to forms;
  4. schools & teachers obtained reputation for their students.
Evolution of Evaluation

- Educational Evaluation developed in USA
  - In the process of industrialization and modernization, education evaluation came into a scientific and measuring time in USA.
    - 1st wave flawed in first 30 years of 20th Century, scholars tried to measure everything under the impact of Behaviorism and Scientific Management (F. W. Taylor);
    - 2nd wave appeared in late 1930s, evaluation was looked as a crucial "descriptive" tool of the degree for curriculum objectives by Ralph Tyler, afterwards followers worked on various evaluation models;
    - 3rd wave highed in 1970s, "judgement" role in objective set-up came with measurement and description rolls of goal attainment.
    - "4th generation", called by Guba, raised constructivist topics such as "truth-facts", "causes-effects" and "response-negotiation-consensus".
## Evolution of Evaluation

<table>
<thead>
<tr>
<th>Students with education</th>
<th>Chinese Test</th>
<th>Arrival at requirements, Bests got better future</th>
</tr>
</thead>
<tbody>
<tr>
<td>School conditions &amp; education results</td>
<td>UK Inspection</td>
<td>Financial aid for the schools</td>
</tr>
<tr>
<td>Schooling process &amp; conditions</td>
<td>Scientific measurement</td>
<td>Improving schooling process &amp; results</td>
</tr>
<tr>
<td>Aims, curriculum, &amp; instruction process</td>
<td>Tyler assessment for description</td>
<td>Improving curriculum &amp; instruction process</td>
</tr>
<tr>
<td>Aims, curriculum, etc. Education process</td>
<td>4th generation Evaluation</td>
<td>Constructive consensus: aims, curriculum, results</td>
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</tbody>
</table>
When evaluation has been refined in various ways, large-scale & cross-national statistics has been used in education as a helpful base of evaluation and monitoring.

In 1989, the 25th Session of UNESCO Conference decided that UNESCO would publish its *World Education Report* based on *self-reported data* in a unified indicator framework;


However, F. Mayor, the DG of UNESCO then, did not use the words, such as check, test, assessment, evaluation or monitoring, he modestly selected the words, like "survey", and "provide information".
## PISA: An international evaluation example

- PISA is an **evaluation with the data collected in its tests and survey**.
- PISA is designed by OECD & 65 countries/regions joined with 600 thousands of 15 year-old students.
- On one hand, PISA **tests** math, reading, & science, and others.
- On the other hand, PISA has a **questionnaire survey** from all the testees and their school principals.

### Evaluation Dimensions

<table>
<thead>
<tr>
<th>St. Development</th>
<th>Sch. difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. engagement</td>
<td>Sch. performance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Family SECS</th>
<th>G. investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family mobile</td>
<td>F. Efficiency</td>
</tr>
</tbody>
</table>
An International Evaluation

UNESCO Policy Conference
Paris, Jan.18th-20th, 2016

Mean score

High mathematics performance

... Shanghai-China performs above this line (613)

Average performance of 15-year-olds in Mathematics

Low mathematics performance

26% of American 15-year-olds do not reach PISA Level 2
(OECD average 23%, Shanghai 4%, Japan 11%, Canada 14%, Some estimate long-term economic cost to be US$72 trillion)
Socially equitable distribution of learning opportunities

High mathematics performance
- Shanghai, China
- Singapore
- Hong Kong-China
- Korea
- Macao-China
- Japan
- Liechtenstein
- Switzerland
- Netherlands
- Estonia
- Finland
- Canada
- Viet Nam
- Australia
- Ireland
- United Kingdom
- Iceland
- Norway
- Italy
- Russia
- Sweden
- Croatia
- Serbia
- Turkey
- Bulgaria
- U.A.E.
- Kazakhstan
- Thailand
- Malaysia
- Mexico
- Mexico
- United States
- Croatia
- Israel
- Greece
- Romania
- Slovenia
- Denmark
- Austria
- Germany
- New Zealand
- Czech Republic
- Luxembourg
- Portugal
- Spain
- Slovak Republic
- Hungary

Strong socio-economic impact on student performance

Low mathematics performance

Average performance of 15-year-olds in mathematics
A resilient student is situated in the bottom quarter of the PISA index of economic, social and cultural status (ESCS) in the country of assessment and performs in the top quarter of students among all countries, after accounting for socio-economic status.

Socio-economically disadvantaged students not only score lower in mathematics, they also report lower levels of engagement, drive, motivation and self-beliefs. Resilient students break this link and share many characteristics of advantaged high-achievers.
Education evaluation has been quite-well developed as an educational quality assurance mechanism in past centuries, and was used in various ways, in various words (evaluation, test, assessment, audit & accreditation) for various purposes.

Yet, the common feature of various educational evaluations is generally a kind of "ex post facto" & "retrospective" check.

An evaluation studies the outcome of a project (program, schooling, policy, system......etc.) with some aims or purposes to improve the future projects or selecting the right persons or institution bases on the checked results.

It is not prompt, not simultaneous for action adjustment, nor for reminding actors in the process.

However, education is a long process. For students, schools, teachers, policy-makers & governments, years of time are too large the cost that they could wait and afford.
Therefore, "Monitoring" came to be an evaluation mechanism for overseeing the whole education process for in-time action adjustment for educational goal realization.

UNESCO started to Monitoring EFA in the year of 2002.

Monitoring: is a type of evaluation that is performed while a project is being implemented, with aims of improving the project design and assuring the realization of education goals by offering early detailed information on the progress.

Bamberger defines: “an internal project activity designed to provide constant feedback on the progress of a project, the problems it is facing, and the efficiency with which it is being implemented”.
Shanghai Practice

- Shanghai started using Monitoring around 2000. While tests, inspection & evaluation were there for a quite long time, yet, Shanghai still faces quite many challenges;
- Shanghai tried to design and use "Monitor the whole process" as a mechanism for quality assurance & equity promotion since 2003;
- In 2010, Shanghai Municipal Educational Commission began to implement Shanghai Basic Education Monitoring and Evaluation, known as The Education Achievement Green Index.
- The basic structure of the green index is a system which covers almost all parts of compulsory education by multi-approaches and it starts at the beginning throughout the process, and it does not only check in the end of the 9-year education.
The Shanghai Process of Monitoring Basic Education

The 9-year compulsory education process in Shanghai

Shanghai Basic Education Achievement Monitoring System
"for every student lifelong development" (The Green Index)
The Shanghai Monitoring Structure

Government responsibility through plans
*For school conditions: Finance, personal, & Capital, etc.*

- Moral Development
- Methods Motivation
- Study burden
- Moral Development
- Teaching methods
- T. & S. relation
- School Leadership curriculum
- Family SECS

Students' Achievements & Progress

Mixed Approaches

- Tests/report cards
- Sample tests
- Questionnaire
- Health check
- Self review
- School visit
- Training records
- Inspection
- Budget audit
- Statistics
- Feed-back talk
In the long-term perspective, Chinese governments raised the macro social development goals for "the two hundred years" (1921-2021 and 1949-2049). The year of 2015-2016 is just the special time to design "The 13th 5-year Education Development Plan 2016-2020" (the first 100 years).

"High standard quality and equity education" and "world-class science/technology innovation center" are the two core goals.

Yet, to realize the great goals, we have to design the systematic plans, to have unfaltering implementation and to have effective monitoring in the long process. Therefore,

The whole plan goals are specified into a series of assessable indexes in each branches, and monitored by year, by university & faculty, district & school, education & research achievement, comparing with world-class systems (global cities & top universities).
Shanghai Education Modernization Monitoring Index

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2017</th>
<th>2020</th>
<th>2023</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Ed. Expenditure</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Public exp./per student</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>School modernization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ed. Of labor</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduates/labor</td>
<td></td>
<td></td>
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<tr>
<td>Teacher with MEd.</td>
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<tr>
<td>In-service training</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Teacher career ladder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top discipline</td>
<td></td>
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<td></td>
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<tr>
<td>Gross rate of HEd.</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Student health</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Pre-school Ed.</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>LLL participation</td>
<td></td>
<td></td>
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</tbody>
</table>
• Teacher policy monitoring framework

- **Career Ladders:** 5 Grade steps of teacher professional career, 4 steps of school principals; 5-year re-registration, and Clear criteria for teacher promotions

- **Performance review:** from regular peer review (half year & annual) to national titles for excellent teachers

- **In-service training:**
  - Time requirement: 120, 360 & 540
  - Gov. & school time arrangement for in-service training;
  - Gov. & school financial support for in-service training
  - Providers for in-service training: TRGs, GGs, others
Based on Shanghai practice, a good monitoring practices requires:

<table>
<thead>
<tr>
<th>No.</th>
<th>Requirement</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A component of plan/project, etc.</td>
<td>Monitoring should be designed in policy/project plan as a component &amp; told to stakeholders (as a reminder mechanism);</td>
</tr>
<tr>
<td>2</td>
<td>Measurable objectives</td>
<td>Monitoring would need staggered &amp; assessable performance output, that means the plan/project should have statements of measurable objectives</td>
</tr>
<tr>
<td>3</td>
<td>Indicators and observing points</td>
<td>Measurable objectives and performance output could be transferred into indicators, observing points and statements;</td>
</tr>
<tr>
<td>4</td>
<td>multi-dimensioned</td>
<td>Monitoring should be multi-dimensioned and cover all the parts and various components of education policy/project.</td>
</tr>
<tr>
<td>5</td>
<td>Framework for time &amp; structure</td>
<td>Monitoring should be designed as an acceptable framework with a series of regular monitoring actions</td>
</tr>
</tbody>
</table>
### A good monitoring practices requires:

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</thead>
<tbody>
<tr>
<td>6</td>
<td>Collect &amp; manage data in approaches</td>
<td>M. should <strong>collect data, manage records and analyze data and evidences with various suitable approaches</strong>;</td>
</tr>
<tr>
<td>7</td>
<td>In-time feed-back to stakeholders</td>
<td>M. should <strong>provide in-time feed-backs</strong> (data, analysis &amp; comparison) for improvement only to the stakeholders who are promissory before monitoring;</td>
</tr>
<tr>
<td>8</td>
<td>Other data used for comparison</td>
<td>M. could be carried out by <strong>insiders and outsiders invited</strong>, and could <strong>take other retrospective evaluation data as its comparative evidence and reference</strong>;</td>
</tr>
<tr>
<td>9</td>
<td>Detailed report for improvement</td>
<td>In the end, M. should give <strong>detailed report</strong> for policy-makers/ school leaders to improve/re-design their projects.</td>
</tr>
<tr>
<td>10</td>
<td>Sampling data for acceptance</td>
<td>M. should use <strong>sampling test, data, survey</strong> for <strong>reducing the pressure</strong> of stakeholders (esp. teachers, students and schools) for extra time, cost and work.</td>
</tr>
</tbody>
</table>
THANK YOU!