Measuring global progress in education: what to count and why

UIA Round Table
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Outline

• Introduction to IEA
• IEA approach (MODEL)
• Recognition of the CONTEXT
• Education 2030 & SDG 4
• QUALITY is like a BEAUTY
• Problems with the MEASURING (focus & executions)
• CONSEQUENCES and data LIMITATIONS
• Do you prefer HUNTING or FISHING?
"If custom and law define what is educationally allowable within a nation, the educational systems beyond one's national boundaries suggest what is educationally possible."

Arthur W. Foshay, Educational Achievements of Thirteen-Year-Olds in Twelve Countries
IEA’s approach (MODEL)

IEA studies are curriculum rooted, classroom based, and consider the input, processes and outcomes of education.

Studies draw on the notion of “opportunity to learn” in order to understand the linkages between:

- The intended curriculum (what policy requires);
- The implemented curriculum (what, how, and under what circumstances, is taught in schools); and
- The achieved curriculum (what students learn).

Exhibit 1: TIMSS Curriculum Model

- Intended Curriculum
- Implemented Curriculum
- Attained Curriculum

National, Social and Educational Context
School, Teacher and Classroom Context
Student Outcomes and Characteristics
Recognition of the CONTEXT of education

• **Community and national policies**
  Intended curriculum; Language(s) of instruction; Student flow; Teacher education; Principal certification

• **Home contexts**
  Home resources for learning; Language(s) spoken in the home; Early literacy and numeracy activities; Preprimary education

• **School contexts**
  School characteristics and demographics; Instruction affected by mathematics and science resource shortages; School emphasis on academic success; Parents’ perception of their child’s school; Safe and orderly schools; Student bullying; Sense of school belonging

• **Classroom contexts**
  Teacher preparation and experience; TIMSS mathematics and science topics taught; Instructional time; Instructional practices and strategies; Instructional clarity; Supportive classroom climate; Use of technology in instruction; Challenges faced by teachers

• **Student attitudes toward learning**
  Student confidence in using technology

Example taken from *TIMSS 2019 Context Questionnaire Framework* by Martin Hooper, Ina V.S. Mullis, Michael O. Martin, and Bethany Fishbein
Model of the IEA Civic Education Study (CIVED)
### Education 2030 & SDG 4

#### Table 2. SDG 4 global indicators and custodian agencies

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Source: UNESCO/UIS Quick Guide to Education Indicators for SDG 4
QUALITY is like a BEAUTY
Problems with the Measuring I (focus)

• In order to measure you need to DEFINE
• Concrete TARGET
  (You can focus only on one thing at one time.)
• Appropriate METHODS
• RESPONDENTS
• INSTRUMENTS (test them first!)
• PROCEDURES for any step including data collection
• Achieve COMPARABILITY & CONSISTENCY
Problems with the MEASURING II (execution)

• In order to collect the data and create the indicators, you will need the RESPONDENTS to fill into the INSTRUMENTS

• How long can instruments you can afford in order to get them answered? How many languages?

• How many responses do you actually need to form a conclusion on something?

• Is it enough to rely on the responses from VOLUNTEERS?

• Would you prefer a LOW STAKE or a HIGH STAKE data collection?
CONSEQUENCES

- Competition (instead of research)
- Teaching to the test (narrowing curriculum)
- Cheating (at any means and by any levels)
- Socially desirable answers

- Flows in data understanding (errors in analysis, wrong interpretation of the results – *causality matters*, ill-measures taken on the basis of the results)
Limitations of the data (e.g. COVERAGE)

IEA’s data are mostly collected in educational systems within high & upper middle income countries

Participation in IEA studies

What to do with all these data?!

Do you prefer HUNTING or FISHING?
Thank you!

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