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Assessment of Equity in Education

Roshan Bajracharya
Programme Specialist (Statistics)
UNESCO Institute for Statistics
UNESCO Bangkok
The 10 Targets

Outcome Targets [7]

4.1 Quality primary/secondary education for all
4.2 Early childhood & pre-primary education
4.3 Equal access to TVET & higher education
4.4 Relevant skills for work
4.5 Gender equality & equal access for all
4.6 Youth and adult literacy
4.7 Global citizenship education for sustainability

Means of implementation [3]

4.a Safe & inclusive learning environments
4.b Scholarships for higher education
4.c Teachers’ training and working conditions

• SDG 4 consists of 7+3 targets and 43 indicators. There are 4 monitoring levels.
• The 11 global indicators are led by IAEG-SDGs. TCG SDG4-ED2030 leads the methodological development and implementation of the 43 thematic indicators.
Three key data priorities for Education2030

• **Broad scope across the life cycle**: Indicators for areas which are on the “margins” of the formal education system, but recognized as critically important to achieving the development goals (levels and types)

• **Education quality**: results of learning at all stages of education provision or learning opportunities

• **Equity**: measures that capture those who are excluded from education provision or learning opportunities
Monitoring education from various basic social service aspects

Access
- Access to education
  - Gross Intake Ratios
  - Net Intake Ratios
  - % of new entrants with ECCE

Participation
- Gross Enrolment Ratios
- Net Enrolment Rates

Performance/efficiency
- Promotion, repetition and drop-out rates
- Internal efficiency

Output
- Survival rate to last grade
- Completion rate

Quality
- Pupil-teacher ratio
- % of trained teachers
- % of children with minimum competencies

Labour Market
- Transition rate to the next level of education

Next Level

Equity
- Gender parity Index and other parities
Education Monitoring and sources of data

NESS

- Learning Outcomes data
- Administrative data
- Household Surveys data
- Finance data

Skills
- Reading and mathematical skills at different levels
- Digital literacy/ICT skills
- Functional literacy skills

Sample Assessment survey; examination

Student/teacher/environment
- ECCE/Pre-primary
- Primary
- Secondary
- TVET/Tertiary
- NFE

Annual School census, school record

Participation/Completion
- Education attainment
- Education participation
- Completion
- Literacy

Household survey/censuses

Investment
- Expenditure by levels and by types
- Expenditure by nature
- Unit cost

Administrative records
How much more bitter that lesson becomes when they realize that they are excluded because of who or where they are.

In effect, an accident of birth means that they are the losers in the education lottery.

As if they didn’t have enough problems, they are also invisible in the data. We simply don’t know enough about them.
2 Key Questions

1. Why does equity in learning matter so much?

   • For moral and political reasons: Equity by definition is about whether the distribution of education is fair, just and impartial.

   • For instrumental reasons: Policy and programmes to improve learning outcomes for all will often require resources to be targeted towards those who are worst off, and the most unfair systems are often those that produce the worst average outcomes. In other words, equity in learning gives each child the chance of a level playing field in education.

2. How do we measure it?

   • What approaches can we take to measure whether that playing field is truly level?
5 Principles to Guide the Measurement of Equity

- **Meritocracy**: Educational opportunities are distributed on the basis of merit (e.g., exams).
- **Redistribution**: Mechanism for compensation of initial disadvantage by e.g., distributing educational inputs unequally to compensate for existing disadvantages.
- **Equality of Condition**: Educational opportunities must be the same for everyone in the population, regardless of their different circumstances (every child receives same investment, equal treatment).
- **Impartiality**: It is unfair to discriminate by characteristics.
- **Minimum Standards**: Educational opportunities must be at least the same for everyone below a certain threshold (e.g., MDG-2).

Focuses on the dispersion of education in the population.
Measuring equity using various Equity concepts

**Minimum standards**
- Binary educational variable (e.g. child is in school or not; completed primary education or not, have basic reading skills or not)
- If everyone achieved this minimum standards, then the educational opportunity is equally distributed

**Impartiality**
- Education doesn’t depend on background characteristics
- Differences/gaps shouldn’t be there due to groups characteristics (location, wealth, ethnicity, disabilities)
Measuring Inequity in Education - multi level disaggregation

Variation in cohort completion rate for primary level by provinces, Lao PDR, 2011-12

- Value of single indicator by different social groups
- Distance from average
- Gap between various groups
- Closing the gap/differences shows the distribution is becoming impartial

Literacy rate for the population 7+ years in Bangladesh, Multiple deprivation

National average = 67.2%
Measuring Inequity using Parity Indices

EQUITY CAN NOT BE LOOKED AT INDEPENDENTLY FROM ACTUAL LEVELS OF INDICATORS
Measuring Inequity through co-variations (Regression or correlation coefficients)

Coefficient of Determination (R²) measure the level of impartiality in distribution of education opportunities.

Other measurements
- Variance or standard deviation
- Coefficient of variation
- Average absolute deviation (difference from the mean) in the indicator.
Training teachers is a main issue

Both recruiting and training teachers are critical issues

Malaysia, 16 states and territories

Cambodia, 24 provinces

Pupil-teacher ratio
• Collected through annual school census- collects aggregated data (most of the cases) and limited to formal education

• Administrative data sources in Education are fragmented and data collection procedures, methodologies and production might differ from each sub sectors

• Disaggregated mainly by:
  - Location (Administrative Village/Municipality/district/province/region/)
  - Gender
  - Age
  - Educational levels
  - Some countries also tries to include ethnicity, disabilities, however, quality is always an issue

• Limited use of data/lack of capacity
• Actual measurement of skills (what is minimum competencies in your country at different levels?)
• Various types of learning assessment with different framework - difficult to compare the results
• International assessments such as PISA, PASEC, TIMSS, EGRA, EGMA etc. – but coverage is limited
• National Assessment systems are in place, however, capacity is still limited
• Most of such assessment focus on school population and out of school children are not included. Some assessment start including OOSC as well.
• Testing language is mainly on national or official languages and do not provide opportunity for ethnic children to take test in their languages

Global Alliance for Monitoring Learning (GAML) is building consensus on the international reporting and measurement of learning. It is developing:
• All of the SDG 4 global and thematic indicators related to learning and skills as well as the methodological tools and standards needed to ensure global comparability;
• Standards, guidelines and tools to help countries strengthen the implementation of their assessments and evaluate their quality; and
• Capacity-development tools to support countries in collecting, analysing and using learning assessment data

http://gaml.uis.unesco.org/
Does National Education Policies and plans are well developed to monitor Equity?

Analysis of 75 National Education Sector Plans

- National Education Plans are not prepared well to address the issues of inequalities
- Mostly sex disaggregation has been commonly foreseen (reducing gaps between male and female)
- Some cases, Location is addressed (e.g. urban and rural disparity in primary education will be reduced to less than 20%)
- Wealth and disabilities are least addressed
Innovative approaches and Best practices for measuring equity in education

1. National Strategies for Development of Education Statistics (NSDES)
   - A **policy instrument** designed by government and its partners (ie. the EDP) to provide a **medium-term vision** for a strengthened education data system and data management platform in the country: the National Education Statistics System (NESS)- **Addressing the equity through data policy**
   - It is **results-oriented**, outlining a coherent set of intended changes in the production, reporting and use of education statistics.
   - It is based on **a sound analysis**, ie. the Data Quality Assessments (DQA).
   - **Participating countries**= Nepal, Bangladesh, Afghanistan, Cambodia and Myanmar

2. Improving EMIS through collecting Individual level data
   - Individual student's detailed records by age, sex, cast/ethnicity, grade etc.;
   - Individual teacher's records by age, sex, ethnicity, training, qualification, subject, grades, salary, subject teaching by grade;
   - Students learning achievements;
   - Efficient and effortless data transfer
   - Nepal, the Philippines, Timor Leste, Republic of Korea etc.

3. Education Data Integration
   - Brings all the education data together
   - EMIS, NFE-MIS,
   - TVET-MIS, HEMIS,
   - Finance etc.
   - Child welfare, labor data
   - Demographic data etc.
   - E.g. Fiji, RoK
Resources
Questions/Clarification??

Visit UIS data Centre
http://data.uis.unesco.org/