Network on Early Childhood Education and Care

MEASURING CHILD OUTCOMES IN EARLY YEARS

DRAFT Outline for report to OECD

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This draft outline was prepared by Dr. W. Steven Barnett and colleagues at the National Institute for Early Education Research (NIEER) (Rutgers University, United States) as background material for the 15th meeting of the OECD Network on ECEC.

Note from the author:
It is our intent to discuss notable examples of measures in each of the sections on specific domains as illustrations, which could include examples from the omnibus measures discussed separately later. We will not provide a compendium of measures, as this would be a much larger task. Also, there may well be additional omnibus measures in OECD countries (e.g., the NEPS and EPPE measures), which could be included if someone is able to provide the relevant information.

Miho Taguma, Project Leader; Tel: +33 (0) 1 45 24 92 65; Email: miho.taguma@oecd.org

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MEASURING CHILD OUTCOMES IN EARLY YEARS: DRAFT OUTLINE FOR REPORT TO OECD

1. Why do we measure? Use of outcome measures to make inferences about policy
   
   1.1. Conditions required for valid inferences and circumstances that make this difficult to achieve
   
   1.2. Designs that can be used to increase strength of inferences
   
   1.3. Types of inferences that are most strongly supported
   
   1.4. Types of inferences that are most problematic

2. Overview of “What do we want to measure?” “How can we measure these outcomes?”

   2.1. Overview of outcomes domains which countries wish to measure [reference – common framework of child outcomes prepared by the OECD network members]
   
   2.2. Overview of methodologies, different approaches to measuring children’s learning, development, and well-being

2.3. Desirable features of measures

   2.3.1. Comprehensive
   
   2.3.2. Specific
   
   2.3.3. Highly policy relevant--are responsive to preschool program experiences
   
   2.3.4. Valid and reliable
   
   2.3.5. Predictive of later outcomes
   
   2.3.6. Positive (not just looking at the negative)

   2.3.7. Comparable

      2.3.7.1. Over time and as children grow older
      
      2.3.7.2. Across different groups within countries
      
      2.3.7.3. Across countries
2.3.8. Do not overly burden children or teachers

2.3.9. Have a reasonable cost

2.3.10. Include multiple perspectives

2.3.11. Age and developmentally appropriate

3. Specific outcomes domains for measurement

3.1. Cognitive abilities and achievement and school performance

3.1.1. Overview of this domain and types of measures

3.1.1.1. Standardized on demand assessments—tests, types, strengths and weaknesses, cost, issues of comparability

3.1.1.2. Norm referenced

3.1.1.3. Criterion referenced

3.1.1.4. Teacher administered—types, strengths and weaknesses, cost, issues of comparability

3.1.1.5. Checklists and rating scales

3.1.1.6. Performance assessments

3.1.1.7. Portfolios

3.1.1.8. Observational assessments

3.1.1.9. Parent ratings

3.1.2. IQ and General Knowledge

3.1.3. Verbal ability, vocabulary, language

3.1.3.1. Assessing DLL children in L1 and L2, including immigrants, and issues may spillover into assessing other domains

3.1.3.2. Receptive

3.1.3.3. Productive

3.1.3.4. Literacy
3.1.3.5. Print awareness

3.1.3.6. Phonological awareness

3.1.3.7. Writing

3.1.4. Mathematics

3.1.4.1. Number sense and operations

3.1.4.2. Special sense and geometry

3.1.4.3. Patterns and classification

3.1.4.4. Measurement and comparison

3.1.4.5. Others?

3.1.5. Science

3.1.5.1. Inquiry process skills

3.1.5.2. Knowledge of physical and natural world

3.1.5.3. Technology skills

3.1.5.4. Others?

3.2. Approaches to learning

3.2.1. Critical thinking

3.2.2. Problem solving

3.2.3. Creativity

3.3. Arts and culture

3.4. Executive functions

3.4.1. Overview of this domain and types of measures

3.4.1.1. On demand, clinical assessments

3.4.1.2. Teacher and parent ratings and observations

3.4.2. Domains
3.4.2.1. Attentional control
3.4.2.2. Cognitive flexibility
3.4.2.3. Goal setting
3.4.2.4. Delayed gratification
3.4.2.5. Information processing

3.5. Social and emotional development

3.5.1. Overview of this domain (Many overlapping and intersecting concepts within this domain and across domains, teacher ratings, parent ratings, self-ratings, costs and issues of comparability)

3.5.2. Mental health
   3.5.2.1. Internalizing, depression, anxiety
   3.5.2.2. Externalizing

3.5.3. Self-regulation and behavior
   3.5.3.1. Overlap with executive function
   3.5.3.2. School behavior
   3.5.3.3. Out of school behavior

3.5.4. Temperament

3.5.5. Self-concept, self-efficacy, self-esteem

3.5.6. Broad comprehensive measures
   3.5.6.1. Social skills
   3.5.6.2. Communication
   3.5.6.3. Cooperation
   3.5.6.4. Responsibility
   3.5.6.5. Empathy
   3.5.6.6. Independence
3.6. Relationships

3.6.1. With parents and family

3.6.2. With teachers

3.6.3. With other children

3.6.3.1. Friendships

3.6.3.2. Bullying and victimization

3.7. Attitudes, beliefs, dispositions, habits

3.7.1. Overview of this domain or domains

3.7.2. Attitudes toward learning and school

3.7.3. Engagement and motivation

3.7.4. Persistence

3.7.5. Moral values

3.7.6. Identity

3.7.7. Respect for diversity, tolerance

3.7.8. Resilience

3.8. Physical health

3.8.1. Overview of this domain

3.8.2. Self report, parental report

3.8.3. Direct measures/observation

3.8.4. Other sources of this information in other data systems

3.8.5. Motor skills (fine and gross)

3.8.6. Height and weight

3.8.7. Immunization and routine health care

3.8.8. Chronic conditions
3.9. Injury, ingestions and safety behaviors

3.9.1. Diet and nutrition

3.9.2. Physical activity

3.9.3. Disabilities and limitations in daily activities

3.10. General health

3.10.1. Health knowledge

3.10.2. For older children sexual activity, substance use

3.11. General well-being--happiness and satisfaction

3.11.1. What is measured

3.11.2. Choosing among measures

3.11.3. Comparability

3.12. School progress

3.12.1. Repeating grades, advancement through school

3.12.2. Special education and other added services

4. Synthesis of outcomes measures: Examples of broad measures that cover many of the domains and can scale for an OECD study on child outcomes. For each assessment: Description, ages, domains covered, method of administration, reliability and validity, time, cost, and other strengths and weaknesses.

4.1. Internationally adapted

4.1.1. EDI

4.1.2. East Asia-Pacific Early Child Development Scales

4.1.3. UNESCO/WB/UNICEF Post-2015 Measurement?

4.1.4. Others?

4.2. Nationally implemented

4.2.1. Hong Kong Early Child Development Scale
4.2.2. NEPS Measures

4.2.3. EPPE Measures (UK)

4.2.4. Observational measures: GOLD (Teaching Strategies), Work Sampling, COR, ELS (USA)

4.2.5. KEA consortia products (2, USA)

4.2.6. ECLS-B/K Measures (USA)

4.2.7. Others?

5. Links to measures for older children

5.1. National assessment systems

5.2. National longitudinal systems

5.3. International assessment measures

5.3.1. PISA

5.3.2. TIMMS

5.3.3. PIRLS

6. Other measures needed to make policy inferences

6.1. Program participation measures

6.2. Program quantity measures

6.3. Program/classroom/teaching quality measures

6.4. Assessments of “outcomes” prior to program participation

6.5. Family and community background and relationships

6.5.1. Home and community learning experiences

6.5.2. Exposure to stress

7. Setting priorities among measures

7.1. Importance for policy

7.2. Quality—validity, reliability, and comparability
7.3. Cost and burdens on children, teachers

8. Conclusion

8.1. Value of the international child outcomes assessments

8.2. Suggested scope of domains for an international child outcomes measurement

8.3. Suggested age or grade for an international comparative early child outcomes assessment

8.4. Suggested methodologies / instruments for measurement

8.5. Suggested methodologies for using the information to inform policy

8.5.1. Purely descriptive and statistical analyses

8.5.2. Case studies

8.5.3. Embedding experimental designs

Cost implications

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