

Challenges of cultural, linguistic and socio-economic diversity in the measurement of developmental domains during early childhood

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Cultural, linguistic and socio-economic diversity

“culturally variant settings of the Global South”:

- India (Andra Pradesh)
- East Asia (Vietnam)
- Polynesia (Tonga)
- Latin America (Peru)
- Africa (Ethiopia, Kenya, Malawi, Rwanda, Tanzania, Zambia ..)

“low and middle income settings”:

Tonga: 93% primary enrolment, but only 30% literacy, 57% high school drop-out; signs of spatial distribution of inequality on Mukolofu Island ?

Why measure at all ?

- Benyam Dawit Mezmur (plenary lecture): are duty-bearers upholding their responsibilities ?
- Celia Hsiao: demonstrating the impact of ECDCE intervention as a social equalizer – Ethiopian study, Rwandan study

Cultural identity, social competence

- “Basic building blocks of being a Tongan” (Sally Brinkman) include:
- “respect”, “dignity”, “appropriate obedience”, “knowing your place” (personal attributes also widely valued in agrarian African societies, but accorded little attention in Western social and psychological theories of child development), also:
- “local song and dance”, “phonological awareness” (features of the cognitive repertoire distinctive, if not unique, to a particular sociocultural system of practices and meanings)
- Role of ethnography and local stakeholder consultation in making instruments culturally sensitive

Andy Dawes' bottom line discussion topic

Are internationally appropriate measures of children's core competencies-- **essential developmental skills that may manifest in particular culturally embedded ways** – feasible or realistic ?

Embedded in this question is the supposition that what is essential in one particular cultural context is **equally essential** in another.

If so, the challenges are to

- i. find a way of defining a skill in a cross-culturally equivalent way
- ii. Establish a reliable and valid way of measuring that skill in a fair and acceptable way across different contexts

Concepts, constructs & indicators – Penny Holding

- Indicators represent constructs
- Constructs are selective representations of conceptual domains

cf Horton's 1982 universal "primary theory" & culture-specific "secondary theory" in human understanding of the world.

E.g. primary theory consensus:

children's increases with age and experience

Secondary theory diversity:

what matters most is social competence

what matters most is cognitive alacrity

Normative expectations of learning and development (ELD)

- Linda Biersteker

- ELD = what children **should** know and be able to do (in various domains) (*prescriptive meaning* of “normative”)
- ELOM (Early Learning Outcomes Measure) is to be empirically **validated** on a **representative sample** of children in various ses, deep rural and language communities (*descriptive meaning* of “normative”)
- The target standard for assessing outcomes of ECD (pre Grade-R) intervention programmes is “**that achieved by an agreed %** of healthy children.

Issue for discussion: what is the relation between the two meanings of “normative” (*descriptive* and *prescriptive*) ?

Which domains should be assessed ?

- Language
- Literacy
- Mathematics
- Non verbal cognitive abilities, eg Executive functioning
- Gross & Fine motor co-ordination
- Task orientation/ engagement
- Socio-emotional development (eg empathic capacity –ELOM)
- Why so little attention to social and moral dimensions of behavior ?
- Too difficult to assess ? Too open to cross-cultural debate ?
- Are these outcomes not even more important for every society than cognitive skills and abilities?
- Intelligence (in many African cultures) includes both cognitive alacrity and social responsibility.

Who should make the assessments ?

Pragmatic and democratic focus on going to scale (Linda Biersteker, Gabriela Guerrero):

- simple assessments can be more reliably conducted by personnel with limited professional preparation (education, training)
- local stakeholders are authorities about the local cultural system of meanings and values informing child socialization (Sally Brinkman)
- and have a right to determine ECD priorities (parental rights ?)

How should the tests be designed ?

- Direct observation (IDELA) vs adult reports (TeHCI) - trade-off between authenticity and precision ?
- Commendable attempt by ELOM to triangulate observation x reports (prosocial disposition; rule-change/executive function; orientation to adults)
- Local workshops to develop item banks (Beatrice Matafwali: ZAMCAT, Sally Brinkman: TeHCI)
- “Matched items with international measures where possible” (Sally Brinkman)
 - what are the benefits of comparability ? In cross-cultural psychology it has long been agreed that what is important is **not nominal equivalence** of test items **but functional equivalence**.
 - note the seductive invidiousness of direct comparisons between groups, cultures, nations (e.g PISA studies)

Gabriela Guerrero: “In spite of all adaptations, we recommended in the technical documents NOT to compare PPVT scores across languages or countries. However, we expect results to be reasonably valid to compare associations (e.g. PPVT and maternal education) among language groups.

Problematic features of test design

“Instrument tweaking” (Sally Brinkman)

dropping of “skip pattern”, improved wording (TeHCI)

- Pictorial materials
- Abstract geometrical designs (cf ZAMCAT experience with object pattern reasoning task)
- Paper and pencil tasks
- Rectilinear (carpentered) blocks (cf wire and clay modeling as alternative constructional media – Panga Munthu Test)
- Why does IDELA place so much emphasis on paper-based tasks for assessing fine motor coordination ? (cf UNICEF instrument developed in Zambia, leading one readers to conclude that this was a domain in which the country needed special intervention to promote ECD)

Reliability and Validity

- Internal consistency (Cronbach alpha) easier to assess, but quite different from
- Inter-rater reliability
- Test-retest reliability

Validity is a much more problematic psychometric property to establish, eg

Celia Hsiao: Is IDELA capturing skill variation by SES ?

Jane Kvalsvig's for improvements and inclusions to the HSRC inventory

include:

- Where a copy of the test can be obtained?
(Note danger of packaging)
- Can it be administered by field staff without professional qualifications
(Note dangers of Credentialism vs quality assurance)
- Is there a manual, in what setting can the test be administered?
(Note dangers of misapplication, misleading interpretation)

Conclusions

What these studies demonstrate convincingly for me is that, across a wide variety of sociocultural settings around the world, it is feasible to prepare professionals to sit down with a local child of preschool age and conduct systematic assessment of various cognitive functions with a fair degree of reliability.

Moreover performance on those measures generally correlates significantly with various indices of academic performance later in life.

What remains unclear is what explains those correlations, and what is the value of such reliable predictors.

Some possible alternative explanations

- These batteries of ECD tests tap into a set of core competencies: **essential developmental skills** of successful adaptation across a wide variety of ecocultural niches. Academic performance, like many other valued behaviours, is assisted by the prior attainment of those core competencies.
- Schools across the world have adopted an increasingly standardized format (IPBS) that is widely accepted among the populations of varied societies as beneficial for the majority of their children, and the **ECD tests predict performance in IPBS** quite accurately. They do so because the paradigm of IPBS prioritises a particular a set of skills and dispositions.
- Either way, those **preschool adaptive skills and dispositions can be effectively promoted with ECDCE intervention programmes.**

Utility: Jane Kvalsvig identifies 3 different research priorities

- Scientific explanation (Understanding the causes of developmental delays)
- Impact evaluation (improving existing interventions and devising new ones)
- Ameliorative intervention (monitoring outcomes to reduce inequity at all levels- global to local)

On the third, she suggests using indicators of positive mental health in children (resilience and competence) in sentinel sites to determine whether inequity between well-resourced areas (usually urban) and poorly resourced areas (usually rural) has been reduced.

- But can these be validly conceptualised independently of socio-economic context ? (Note danger of equating urbanisation with societal progress)