

Research Assessment Exercise 2020
Impact Case Study

University: The University of Hong Kong
Unit of Assessment (UoA): UoA 41 education (incl. curriculum & instruction, education administration & policy and other education)
Title of case study: Documenting early child development in East Asia and the Pacific: from evidence to impact

(1) Summary of the impact

Population-level monitoring of early child development (ECD) is vital to inform educational and social policy. However, the lack of appropriate developmental assessment tools contributes to the paucity of data on ECD in low- and middle-income countries (LMICs). Between 2000 and 2014, the University of Hong Kong (HKU) team, led by Nirmala Rao, developed the East Asia-Pacific Early Child Development Scales (EAP-ECDS), the first developmental assessment tool based on the culture and values of a world region. The application of this assessment tool generated knowledge from understudied populations about the association between ECD and preschool attendance, urbanicity, gender and family wealth. These findings have informed governments' early childhood policies. Furthermore, at the global level, the tool has helped measure progress towards the achievement of the United Nations (UN) Sustainable Development Goal (SDG) for the proportion of children under five who are developmentally on track in health, learning and psychosocial well-being (Target 4.2; Indicator 4.2.1).

(2) Underpinning research

Need for data on ECD. There is a dearth of data on ECD in low- and middle-income countries. In the area of early childhood, outcome data have been limited to mortality and indicators of physical development. Stunting data, for example, are available from countries across the world because assessment is universally agreed upon and straightforward to collect. However, there are currently no globally accepted tests of ECD. This is due to the widely accepted concern that Western assessment tools may not be valid in LMICs due to cultural differences in both the overarching constructs to be assessed and the assessment techniques (R1).

Sampling bias in ECD research. The majority of our knowledge regarding child development is derived from high-income Western societies, but only 18% of children are born in high-income countries; the remaining 82% live in LMICs, and more than one-quarter of the world's children live in the East Asia and Pacific region. By studying the patterns and facilitators of ECD across different developmental domains in the diverse LMICs of this region, the initial research work at HKU contributed to an understanding of the universality of factors that influence ECD (R2 and R3) and the impact of risk and protective factors on early development and learning. Protective factors here include stimulating home learning environments (R4 and R5) and preschool attendance (R6).

Process of development. The EAP-ECDS were conceived at HKU in 2010, validated in 2014, and the work is ongoing. HKU has provided the technical support, conducted all the data analysis and written all the reports and policy briefs. Funding for the development of the Scales (about USD 2 million) was given by UNICEF to a competitive HKU bid. Additional funding was provided by UNICEF for the HKU project to cover seven countries for the collection of data from representative samples of three- to five-year-olds (about 10,000 children).

In Phase I of the research, the EAP-ECDS were developed based on a comprehensive desk review of the Early Learning and Development Standards (ELDS) from seven countries, and the

construction of the Scales was underpinned by these standards. In Phase II, the Scales were piloted in three countries (China, Fiji and Mongolia), while Phase III involved validation in six countries: Cambodia, China, Mongolia, Papua New Guinea (PNG), Timor-Leste and Vanuatu. Phase IV involved the development of an abbreviated version of the Scales (Short Form) and Phase V involved the use of the Short Form in Cambodia, Myanmar, and Vietnam. Phase VI (ongoing) analyses the impact of EAP-ECDS on national policy.

The EAP-ECDS were developed in a culturally appropriate way, not only in terms of administration and materials, but also in reflecting the values and skills important within the cultural or national framework of the countries concerned. The EAP-ECDS take a *holistic* view of ECD beyond mere cognitive factors, incorporating areas such as health, hygiene and social development.

Key researchers. The team includes child psychologists, early childhood educators, paediatricians and social science researchers:

- HKU: Nirmala Rao (employed since 1987; Principal Investigator), Diana Lee, Ben Richards, Carrie Lau (Faculty of Education); Patrick Ip (LKS Faculty of Medicine); and John Bacon-Shone (Faculty of Social Sciences).
- Formerly associated with HKU (until 2012-2013): Jin Sun (Assistant Professor at EdUHK); and Marie Ng (Associate Professor at University of Washington).
- HKU Faculty of Education Honorary Research Associates: Yvonne Becher (CEO, Child Development Centre, 01.01.2017–31.12.2018); and Mami Umayahara (UNESCO, 01.01.2017–31.12.2018 and 16.04.2019–15.04.2021).

(3) References to the research

The quality of the research is reflected in the accolades for the research report, the scientific publications generated from it, the award of an international research prize and numerous invitations for keynote/plenary presentations on child development measurement.

- R1. Rao, N., Sun, J., Ng, M., Becher, Y., Lee, D., Ip, P., & Bacon-Shone, J. (2014). [Validation, Finalization and Adoption of the East Asia–Pacific Early Child Development Scales \(EAP-ECDS\)](#). UNICEF.
- R2. Weber, A., Darmstadt, G.L., & Rao, N. (2017). Gender disparities in child development in the east Asia-Pacific region: a cross-sectional, population-based, multicountry observational study. *The Lancet: Child & Adolescent Health*. 1(3), 213-224. DOI: [10.1016/S2352-4642\(17\)30073-1](#).
- R3. Rao, N., Sun, J., Richards, B., Weber, A., Sincovich, A., Darmstadt, G.L., & Ip, P. (2018). Assessing Diversity in Early Childhood Development in the East Asia-Pacific. *Child Indicators Research*. DOI: [10.1007/s12187-018-9528-5](#).
- R4. Richards, B., Bacon-Shone, J., & Rao, N. (2018). Socioeconomic correlates of early child development: Gradients from six countries in the East Asia-Pacific region. *International Journal of Behavioral Development*. DOI: [10.1177/0165025418785460](#).
- R5. Sun, J., Lau, C., Sincovich, A., & Rao, N. (2018). Socioeconomic status and early child development in East Asia and the Pacific: The protective role of parental engagement in learning activities. *Children and Youth Services Review*, 93, 321-330. DOI: [10.1016/j.childyouth.2018.08.010](#).
- R6. Rao, N., Richards, B., Sun, J., Weber, A., & Sincovich, A. (2019). Early childhood education and child development in four countries in East Asia and the Pacific. *Early Childhood Research Quarterly*, 47, 169-181. DOI: [10.1016/j.ecresq.2018.08.011](#).

Funding. The received funding covered technical support only. Countries were funded separately to assess 10,000 children and their parents, with representative samples in seven countries. Separate funding for travel and local accommodation was also provided for the HKU consultant team.

- UNICEF Cambodia. Assessing the impact of socio-emotional learning in children in target preschools (2018–2019). HK\$.
- UNICEF Myanmar. Technical Support for EAP-ECDS. (2016–2017). HK\$.
- UNICEF Papua New Guinea. Baseline survey of ECCE facilities in PNG and the Autonomous Region of Bougainville (AROB) (2016). HK\$.
- UNICEF Cambodia. ECD Scale In-Depth Analysis. (2015–2016). HK\$.
- Asia Pacific Regional Network for Early Childhood (ARNEC). EAP-ECDS. (2015). HK\$.
- UNICEF (East Asia Pacific Regional Office). Validation, Finalisation and Adoption of the EAP-ECDS. (2013–2014). HK\$.
- Asia Pacific Regional Network for Early Childhood (ARNEC). (2011–2012). HK\$.

(4) Details of the impact

The ability of the EAP-ECDS to provide *evidence of disparities* in ECD and to measure the impact on **equity-focused national early childhood policy** has driven uptake of the developmental assessment tool. Five countries are now using the tool to assess the effectiveness of early childhood programmes on ECD and to track child development. Items from the Scales have informed the development of the measure being developed by UNICEF to track progress towards SDG 4.2.1.

Country-level impact

National policy development. Evidence from the application of the Scales has informed early childhood policy in the East Asia and Pacific region. While other factors have contributed to the scaling-up of pre-primary education, solid evidence from the EAP-ECDS of differences based on gender, urban-rural residence, ethnicity and family wealth, as well as the importance of maternal education on ECD, have been presented to and acknowledged by participating countries. Of particular note is the finding that participation in early childhood education (ECE) programmes had a significant impact on ECD outcome. This finding has further fuelled efforts to scale up ECE programmes. In Cambodia, UNICEF commissioned HKU to conduct an in-depth analysis of the findings to better understand the differences in developmental outcomes across demographic groups. The analysis was presented to the National Early Childhood Care and Development (ECCD) Committee chaired by the education minister and attended by 12 ministries. Further, PNG commissioned the HKU team to develop a baseline survey of preschool facilities and minimum operating standards and to help draft their national policy for early childhood care and education based on EAP-ECDS results.

The EAP-ECDS are being used to assess the effect of a **Curriculum Revision** in Cambodia, PNG and Vietnam focused on socio-emotional learning, as well as for research in China and longitudinal studies in China and Timor-Leste. There have been several changes in the early childhood landscape since the first EAP-ECDS study began in 2010, and evidence from the EAP-ECDS has contributed to the development of more equity-focused national ECD policy and action plans, a national core curriculum, and efforts to promote home-based early childhood learning and development through parent education. Examples are Myanmar’s ECCD Policy, 2014; Cambodia’s National Action Plan on ECCD 2014–2018; Fiji’s Policy in Early Childhood Education, 2013; and Mongolia’s National Core Curriculum for Preschool Education, 2015.

Development of research capacity in low and middle-income countries. Countries want a tool that can help them monitor ECD and progress towards SDG target 4.2.1. The EAP-ECDS have been used to measure ECD in nine countries, and the HKU team continues to train local research teams on how to assess children using the EAP-ECDS and to advise on the data collection process (e.g., sampling, survey methods, data collection and analysis) to build local capacity for conducting research. As noted above, the EAP-ECDS are now being used by trained researchers in Cambodia, China and PNG for baseline assessment and programme evaluation. To further build the region’s

capacity, the HKU team conducted regional training of trainers (July 2017) with participants from Cambodia, Malaysia, the Philippines, the Republic of Korea, Singapore, Timor-Leste and Vietnam. A similar training programme (November 2018) included participants from South Asian countries with the potential for expansion to other regions. The HKU team also provided a series of in-country training sessions in Vietnam, including the training of trainers.

Global and regional-level impact

The EAP-ECDS were lauded as one of the major events influencing early childhood development policy and practice in the 2017 *Lancet* series on Advancing Early Childhood Development, and have been recognised as a population-level tool to address equity concerns. The Asia-Pacific Regional Network for Early Childhood has done much to enhance the visibility of the tool and promote its use.

The EAP-ECDS study won a Best of UNICEF Research Award for 2015. Among 99 submissions of research in 2014, four were selected for special commendation by an eminent international external review panel. The panel commented: *'This large-scale research project aimed to provide Asian countries with a standard and reliable measurement tool to assess the holistic development of children from 3 to 5 years. This research is thoroughly conceptualized and directly engages with UNICEF's core work. There is important potential for policy impact and development of policy tools.'*

Contribution to the monitoring of Sustainable Development Goal (SDG) Target 4.2. Using insights from the ECD research, Rao was appointed as a member of the Expert Advisory Panel to the global Inter-Agency Advisory and Coordination Group (a UN group convened by UNICEF on ECD measurement (IAEG-ECD) in 2017). Notably, the EAP-ECDS are among six tools that have informed the development of a new measure for SDG Target 4.2.1, and items from the EAP-ECDS have been used by UNICEF in Bangladesh, India and Mexico in the development of the new measure.

(5) Sources to corroborate the impact

- S1. UNICEF Office of Research (2015). Early childhood development in East Asia and Pacific: Culturally sensitive testing. In: [Best of UNICEF Research 2015](#) (pp. 19-23). Florence, Italy.
- S2. Fernald, L.C., Prado, E.L., Kariger, P., & Raikes, A. (2017). [A Toolkit for Measuring Early Childhood Development in Low- and Middle-Income Countries](#). World Bank, Washington, DC.
- S3. UNESCO (2016a). [New Horizons: A Review of Early Childhood Care and Education in Asia and the Pacific](#). UNESCO Bangkok.
- S4. Grieshaber, S. (2017). A Changed Agenda for Early Childhood Education in the Asia-Pacific. In: Li, M., Fox, J., & Grieshaber, S. (Eds.) [Contemporary Issues and Challenge in Early Childhood Education in the Asia-Pacific Region](#). Springer, Singapore.
- S5. Yoshikawa, H., Mistry, R., & Wang, Y. (2016). Advancing Methods in Research on Asian American Children and Youth. *Child Development*, 87(4), 1033-1050. DOI: [10.1111/cdev.12576](#).
- S6. Testimonials and other evidences.
- S7. Raikes, A. (2017). Measuring child development and learning. *European Journal of Education*, 52(4), 511-522. DOI: [10.1111/ejed.12249](#).
- S8. Carr, V., Kym, S., & Manson, E. (2018). Early childhood education in Papua New Guinea. In: Jaipaul L., Roopnarine, J.L., Johnson, J.E., Quinn, S.F., & Patte, M.M. (Eds.) [Handbook of International Perspectives on Early Childhood Education](#). New York: Routledge.
- S9. Black, M.M. et al., (2017). Early childhood development coming of age: Science through the life course. *The Lancet*. 389(10064), 77-90. DOI: [10.1016/S0140-6736\(16\)31389-7](#).
- S10. UNESCO (2016b). [Global Education Monitoring Report 2016](#). Paris: UNESCO. (pp. 217-218).