

Getting Data in Early Childhood Education: Lessons from the MELQO Experience

Abbie Raikes, Kate Anderson, Rebecca Sayre

The authors would like to thank Evelyn Seminario (Ministerio de Educación de Perú), Marilou Hyson (Consultant, Indonesia MELQO Team), and Anna Smeby (UNICEF) for their willingness to be interviewed for this paper.

Introduction

The Measuring Early Learning Quality & Outcomes project (MELQO) was initiated in 2014 to create feasible, actionable tools addressing child development and learning and quality of learning environments in the preschool years. Now with users in several countries, this brief outlines lessons learned on the process of generating, analyzing and applying data to programs and policies in low- and middle-income countries¹. We end with ideas for future directions on designing and implementing ECD measures that will lead to maximum impact for children.

Why an emphasis on ECD data?

In recent years, there has been an increased focus on generating data on early learning and development and the quality of early learning programs in low- and middle-income countries (LMICs).² MELQO was initiated in the lead-up to the decision-making on a new set of global goals, the Sustainable Development Goals (SDGs). The SDGs by UN Member States in 2015 brought data issues to the forefront of discussion of global development. Data on quality of instruction and children's learning is thought to be a central element of building effective education systems, and several groups have placed considerable attention on producing data that reveal inequity in educational outcomes and systems. Among global organizations, much attention has been placed on generating globally-comparable data using new or existing measures. There is also growing emphasis on using new techniques to capture previously undocumented trends and influences and that place data more directly in the hands of users (e.g., Data for SDGs). Open data and social accountability initiatives that hinge on making data available are evident in many countries.

Early childhood development, especially early childhood education, has also been part of the wave of emphasis on data. Like other areas of education, data on key elements of early learning and early childhood settings can help improve early childhood care and education in at least two ways. First, data on the quality of programs is a key element of ensuring that investments will lead to desired outcomes. Second, inequities in development begin early and have lasting implications for learning and well-being. Data is needed to call attention to these disparities and focus attention addressing them.

¹ Detailed technical findings are available at ecdmeasure.org

² See, for example, SDG 4.2.1, MELQO Overview

At the same time, there are unique elements of ECCE that influence the design and implementation of effective data systems. First, ECCE should be approached in a holistic manner, with attention placed on health, nutrition and social protection as well as learning and development outcomes. Second, ECCE professionals are among the least qualified and trained; early childhood ministries are often under-funded, and resources are even more scarce than for other areas of education. The acute strains of low capacity in ECCE suggest that data can be an important contributor to building effective systems, but also highlights how much work may be required to effectively integrate data into ECCE systems.

At present, we are not clear on where and how to build ECCE data systems that will encourage change – because data are often not available to those who work directly with children and parents; because data do not capture key elements of child development; and because priority is sometimes placed on generating data using tools and approaches developed outside of the countries where they are used, which decreases relevance and impact. This brief outlines lessons learned from the process of implementing measures of child development and learning and quality of learning environments in several countries, between 2016 and 2018.

MELQO in Context

MELQO was intended to jump-start the process of obtaining data on early childhood development and learning and quality of learning environments for national monitoring. As the MELQO tools and process for adaptation were developed, MELQO projects were initiated in several countries. The structure of these projects varied, with some directly sponsored by ministries of education; some in partnership with multi-lateral organizations; and some as part of research studies or impact evaluations. At present, the tools have been requested by more than 150 users in more than 35 countries.

As described in greater detail below, MELQO tools have often been adapted and implemented to generate new insight into child development and learning or quality of children’s learning environments, to help inform policies such as teacher training and curricular reform. MELQO projects have produced some of the only nationally-representative data on child development or quality of learning environments; at times, MELQO was intended to serve as the jumping-off point for ongoing national measurement of early childhood development and quality of learning environments. As the projects unfolded, several important insights emerged on the necessary conditions for success.

For this paper, we interviewed government and non-government stakeholders in Perú, Indonesia, and Tanzania on recent MELQO projects. A short summary of the experiences in each country is below.

MELQO in Perú

Perú has experienced turnover in leadership at multiple levels of the government since they started adapting the MELQO tools in 2016, including three education ministers and five ECE directors. When the work began, Perú had an education minister who prioritized monitoring

and evaluation and had tasked his team with developing a M&E system for the primary and secondary levels. This was later expanded to include ECE.

By 2017, a new minister was running the Ministry of Education (MOE) and was not supportive of assessment or monitoring. He cancelled the national educational assessment that year, stating that teacher strikes and flooding caused schools to close and this would negatively impact learning levels.

Despite this, the MELQO project survived due to several factors. One was the project lead, a civil servant who initiated the MELQO project within the MOE and served as a champion for the project. In addition to her leadership, MELQO efforts were sustained because the project came through a loan from the World Bank, so the funds needed to be spent on what they had been allocated for.

Further, the partnership with NYU allowed the project to be run through the government and not by an independent agency. The project lead was in close communication with a team at NYU and the MELQO core team for technical support but the majority of the work was carried out by the Ministry. This partnership built capacity in the Ministry team, increased the confidence in the team by others in the government, and also ensured the project was embedded within the ministry. Having access to an international team of technical experts also lent credibility to the project when there were questions that arose around the methodology and findings.

Finally, the project was managed from outside of the ECE department, in the education ministry and budget ministry, which elevated the status of the project and prevented a conflict of interest (i.e. the early childhood department was not evaluating itself). The fact that the project was run by the government and not by an outside consulting firm or NGO was also important, as a previous attempt to measure quality and outcomes in early childhood was not well received, partially due to the fact it was wholly done by an external firm.

Although the results of the full MELQO study are not yet analyzed, they did have an opportunity to disseminate some of the findings from the piloting. One major finding was that there were books and learning materials in the classrooms, but they were not accessible to children and the teachers were not using them. At the same time, ECE programs were asking for more funding for materials. It became clear that a focus on professional development on instructional techniques was needed before more materials were distributed.

For the national MELQO study, the team is required to produce a publication of the results. This will not be sent directly to the schools, but will be available publicly.

Perú is now in the process of integrating MELQO into its national monitoring system. This system includes eight indicators for classroom observation: planning and organization of the class sessions, maximizing class time, critical thinking and reasoning, student engagement in

class sessions, feedback and monitoring, relationships, behavior management, and feedback from written work.

MELQO in Indonesia

In Indonesia, a World Bank-funded research project was conducted in 2017 using the Measure of Early Learning Environments (MELE) to see if the information can be used to affect teacher classroom practices. This was part of a project to improve the national teacher training system for ECCE.

The version of MELE was shortened and locally adapted. The study found that MELE was able to identify areas in which teachers were particularly low at baseline, such as support for language and literacy development and critical thinking. There were also strengths identified, such as teachers showing respect for children and engaging them in music and movement. This information was used to help the trainers design their interventions. There was much enthusiasm over the potential of data to transform the teacher training process, but in the end there was not much of an improvement between the treatment and control groups.

Overall, the project is sparking dialogue on measurement in ECCE where there was none. The idea that quality in ECCE is something that can be measured has raised an awareness of the kinds of uses of data. The baseline data from community village preschool programs in rural districts has been of interest to the Directorate of ECE Teacher Quality and Performance. There was also an interest in developing a short checklist based on MELE to be used by supervisors. In the past, collecting data was done just to have the information. Using data for continuous improvement is something that the country is hoping to do in the future.

MELQO in Tanzania

In Tanzania, a large study of ECCE has been underway since 2015. The data have been collected on early childhood outcomes and quality, and a national report is in the final stages of a process of being approved for release. The government has instituted a robust process for the results being reviewed by a technical working group, the Ministry of Education, and the ECCE management committee. This process is necessary but has extended the amount of time between data collection and release of results.

While only the pilot data has been released, there has been some impact on the ECCE sector already. The MELE tool categorized pedagogical approaches into basic, intermediate and sophisticated. This gave stakeholders a way to talk about pedagogy that seems more accessible—1, 2, and 3 feels easier to understand than more qualitative descriptors. Still, teachers and other stakeholders are struggling to envision how this looks in the classroom.

Challenges in Tanzania include a lack of a champion for national early childhood assessment studies. There is a national examinations council that has not been involved in early childhood assessment, but is increasingly being seen as the national body to oversee assessments. There has been shifting responsibility for MELQO to different agencies, which has resulted in lack of momentum and a slower pace.

The plans for data use in Tanzania include possibly developing standards and targets for learning and development in ECCE. A similar exercise was carried out for grade 2 following a national assessment of early grade reading and math. UNICEF and the Tanzania Institute for Education (TIE) conducted a review of the pre-primary curriculum and developed a presentation of what could be strengthened based on the curriculum.

One challenge is that complex analyses were required to accurately quantify associations between children's development and learning and contextual factors, including classroom quality. These analyses may be difficult to translate into policy, and underscore the importance of highly-skilled data analysts and a clearly-articulated plan for reporting on and analyzing the data.

There is also an interest in creative ways to share the MELQO data informally. In the past, there have not been ways to disseminate data widely, but in-service training is a possibility for dissemination this time. Tanzania will also be revising its education management and information system (EMIS) in the coming year, and it is possible that the information gathered using MELQO tools could be integrated into the new EMIS.

What we learned from the MELQO country experiences

Experiences with MELQO mirror lessons learned in other projects on data use in education. An overarching theme is the importance of building capacity for data analyses and application: what happens after the data are collected is sometimes underemphasized in project planning, but has enormous implications for the long-term impact of data projects (RAND, 2011).

A number of lessons emerge from MELQO's experiences to date, and may be applicable to use of other tools as well. Data on both child development and learning and quality of learning environments can start a discussion on quality and child development. Even when the process was longer and more complex than anticipated, having data on child development and quality of learning environments can help instigate discussion on strengths and areas of improvement, and equity in learning.

Measuring early childhood development with observational tools and direct assessment requires strong local capacity for adapting tools to meet local standards; adequately training data collectors; analyzing and perhaps most critically, interpreting results within local context. While some of this expertise can be provided by outside consultants, it is preferable to have a strong local team with the ability to handle most if not all of the technical tasks associated with MELQO.

An emphasis on data generation should be matched with investments in capacity-building for long-term expertise in adapting tools, analyzing data, and applying to local context. "Use" and application of data can take place at multiple levels: While MELQO was designed for use at the national level, using the data to help teachers and school officials think through child

development and quality can also be beneficial. Workshops to share data can and should focus on many types of “users” of the data.

MELQO may be most useful if the findings can help inform the design and implementation of monitoring systems. While monitoring systems rely on shorter and less complex tools, MELQO can serve as a starting point for defining what to measure.

Finally, measurement is usually longer and harder than expected. The uses of the data should be very well-defined before beginning the process, given the amount of investment required to successfully complete the projects.

Considerations for ECCE Data Collections and Use

We hope that the experiences of Perú, Indonesia, and Tanzania can be informative to other countries embarking on a journey of ECCE measurement. It appears that the project design is important to consider for eventual data use. A strong champion in the ministry, a clear mandate and focus by the government (as opposed to from an external agency or donor), and several forms of accountability within the government and with donors tend to safeguard a project against risks and delays.

Furthermore, having a short time between when a study is conducted and when the data is disseminated is important in ensuring momentum does not slow. Delays appear to beget more delays. For example, if a decision is pushed to a subsequent committee meeting, and then that committee disbands for several months, the project can be put on-hold indefinitely. Having a strong advocate within the ministry to keep pushing things forward is important.

International technical experts can bring neutral, external credibility to back up the in-country experts. A true partnership with a university (as opposed to a contractual relationship), as in the case of Perú, helps build capacity within the ministry. However, the degree of trust with international agencies and foreign universities varies widely by country, and must be considered when seeking a technical partner.

A thorough audit of data already being collected in ECCE is necessary, especially in countries where there is a lot happening already. Often non-governmental organizations and development agencies are doing smaller projects in this arena, and need to be brought into project communications so that teachers and program administrators are not confused by multiple overlapping projects.

There is a trend in LMICs of gathering information for its own sake and not with a specific purpose (often as a donor requirement). ECCE measurement can help move the culture of evaluation in ECCE toward action, even if direct results are not seen in the first study. Tying the data to a specific intervention appears to work well, for example the case of improving the teacher training system in Indonesia, but still does not necessarily garner dramatic changes.

Next Steps

Experiences with the MELQO tools can help clarify where investments in ECCE data may be able to yield the greatest impact.

Trends in data in global development more broadly raise promising avenues for exploring the role of data in affecting change in early childhood policies and programs. For example, new technologies, which have been developed to capture previously-unmeasured aspects of environment and health, may be able to accelerate progress on unmeasured elements relevant to early childhood development. Greater data transparency and engagement of parents, stakeholders, and government officials in data on early childhood development can instigate action on behalf of children.

But to take advantage of these and other innovations, an ongoing investment in capacity-building is required, especially in partnerships and networks that cut across researchers, ministry officials, and users of data. As well, more emphasis on finding and replicating successful models of data use and application in ECCE may help generate new approaches.

Data on ECCE can be used for a variety of purposes, including designing and reforming policies, coaching and mentoring teachers, monitoring and evaluating the system, and informing consumers of ECCE, mainly parents, on the quality of the learning opportunities experienced by their children. Further research is needed on specific ways in which data is disseminated and used, as none of the cases reviewed were at that point yet.

To meet these information needs, a country must use tools of child development and program quality that measure critical elements associated with long-term child development, including teacher/child interaction and the physical, social-emotional, cognitive, and language aspects of child development.

MELQO is just one approach to gathering and using ECE data. A follow-up brief will further explore data-driven practices in ECE systems around the world and present a framework for ECE data use.