

Measuring Early Learning Quality and Outcomes (MELQO) Modules Quick Guide to Content and Use¹

MELQO's purpose. Initiated in 2014, the Measuring Early Learning Quality and Outcomes (MELQO) project was designed to efficiently generate locally-relevant data on children's learning and development at the start of school, and pre-primary learning environments with specific relevance to inform national ECD policy and inform global monitoring. Through a consultative process designed to draw on the best experiences in measuring early childhood development to date, MELQO has developed modules for country adaptation, measuring child development and learning for children between four and six years (MODEL) and quality of children's learning environments (MELE).

MELQO modules: What are they and how to use them? The MELQO modules were designed to serve as a starting point for national-level studies and assessments by identifying a core set of items that can also help inform global and regional monitoring. The modules were developed based on the work done to date by many assessments, intended to address feasibility in measurement and the science of child development. Based on expert input and testing in countries, the modules were further refined and condensed, to achieve the goal of 1) reflecting consensus on important constructs to measure; 2) cross-culturally relevant, established either through input from experts (MELE) or empirical analyses (MODEL); 3) feasible for use in low and middle-income countries.

MODEL contains items indexing early literacy, mathematics, executive function, and for the teacher/caregiver report, items on social/emotional development. MODEL includes both a direct assessment module requiring trained, direct observers of children and taking about 30 minutes to complete; and a teacher/caregiver report module based on surveys with teachers and/or caregivers. The modules are designed to work together: the direct assessment module provides information on children's early learning, while the teacher/caregiver modules provide insight into children's behavior in school and at home, and for the caregiver modules, children's family backgrounds and home learning environments. MELE includes seven constructs, and examples of items that may be useful in indexing them. The state of evidence on quality in early learning environments, and the strong cultural influences on what defines "good quality," led to a conclusion to focus on constructs rather than specific items. There were several versions of the MELE tool developed in the first phase, which reflected diversity in how the constructs were interpreted in various countries. We also have an item bank that contains a set of items that were not included in the final MELQO modules but may be useful for specific cultural contexts or purposes.

These modules are intended to be used to measure child development and learning and quality to identify areas of strength and challenge, and then to integrate into national systems to monitor progress towards goals over time. The modules are therefore intended to be adapted to national standards, and can also be integrated into existing assessments – meaning that the modules could be used as a starting point for national assessments and also may be possible to use to inform global and regional monitoring.

Accessing the modules. The primary use for the modules is national-level measurement and monitoring of child development and learning and quality of learning environments. The modules are also available for use to evaluate programs and conduct research studies. However, our materials for adaptation and alignment with national standards are designed to facilitate use of MELQO modules in partnership with national ministries. If modules are used for research or program evaluation, a slightly different set of modifications may be required to ensure alignment with programmatic goals or research questions.

¹ This note was prepared by Abbie Raikes, PhD, MELQO Technical Lead, University of Nebraska

The modules are available for use free of charge. **To continue improving the modules, we request that anyone interested in using them contact us and agree to share the adaptations made as well as the raw data (for MODEL, scores and ages of children; for MELE, scores on items and type of preschool setting, and for both, information on the sampling characteristics and purpose of the study).** We will then continue to analyze the data over time to further establish the applicability of the items across settings.

Adapting the modules. The adaptation process involves a series of steps: 1) meeting with the ministry or other national partner to outline the purpose of the exercise and define key questions to address; 2) conducting a review of the items to assess alignment with national standards and goals for each module; 3) making modifications to the modules by adding items as needed to improve alignment; 4) piloting the modules to test applicability and feasibility and further modifying as needed; and 5) training data collectors to reliably collect data. MELQO's lessons learned and recommendations on each of these steps are described in the final report. After completing these steps, the modules can be considered "national tools," which are intended to be useful in ongoing measurement and monitoring. In addition to the MELQO modules, we strongly recommend the addition of items that measure inequity, such as a brief survey to measure family income, cultural background, and home language of family; gender of child; and the location of the early learning environment (such as rural or urban).

Partnership with ministry officials, multi-lateral organizations working in early childhood development, local researchers and other stakeholders is strongly recommended across all steps of the process, starting with initiating the use of the MELQO modules, adapting the modules, reporting on the data, and perhaps most critically, in outlining policy recommendations based on what has been learned.

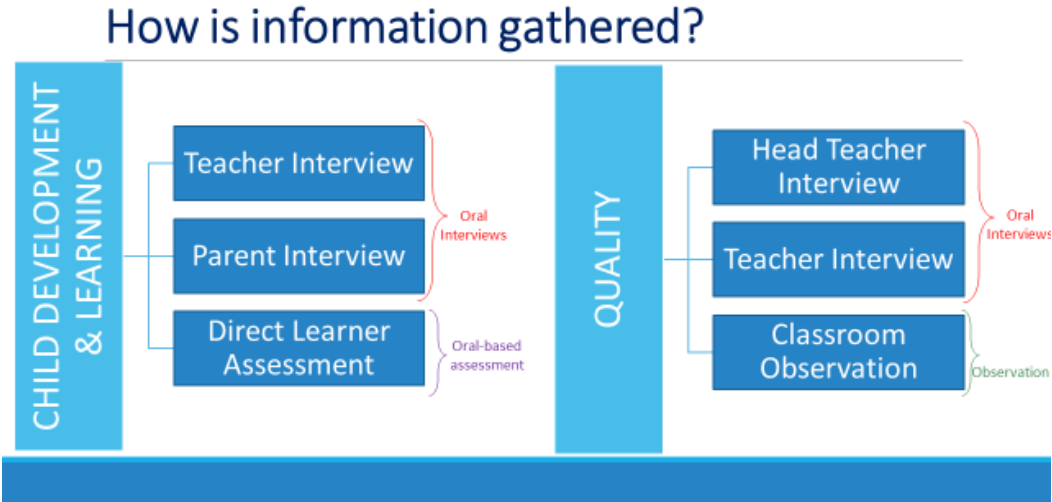
Interpreting the data. To date, data from the MELQO modules have been useful in providing information to countries on what children can do at the end of pre-primary school, and the overall characteristics of early learning environments. This information can then be used to help inform national policies on early childhood education and care; help inform teacher training; and identify areas for improvement in quality of early learning environments.

At present, there is not sufficient information on either module to say what's "typical" or "on track" for children's development and learning within an individual country or compared to other countries, or what is "high quality" in early learning environments, compared to the population of children or learning environments. Therefore, the most relevant way to interpret the data at present may be to use national standards, or to describe the range of skills and competences of young children and the overall state of quality in early learning environments *in relation to national goals*. Data may also be very useful in describing areas of equity and inequity, by reporting the extent to which region, family income, gender and other factors associated with children's development or the quality of learning environments.

Validation. Over time, it is critical to validate the resulting national tools within the local context. Validation refers to the process of establishing two key areas of evidence: First, that the tools measure important areas of children's development and learning, which in turn predict how well children will do in school over time; and second, that early learning environments rated as "higher quality" on the national tool will lead to better outcomes for children. These two areas of evidence require studies that look at quality of children's learning environments and children's development and learning at more than one point in time, ideally following children into the primary school years. These types of longitudinal studies are essential for building strong national evidence on early childhood development. Because they require substantial funding and a long-term commitment, it may be most feasible to begin with the process of adapting the MELQO modules and collecting information at one point in time, which then can be used to facilitate investments in longer-term studies over time.

Institutionalizing the modules. MELQO also included a focus on how the modules could be integrated into measurement systems over time. Results from this work indicated the need for strong technical capacity within the ministries to guide the adaptation and use of the modules, and a clear policy or programmatic goal for investing in the modules. Quality measurement poses unique opportunities for integration into ongoing monitoring systems, since many countries have a monitoring system in place for early learning programs, but may not presently be collecting information on the overall quality of learning environments. By identifying key markers of quality, the MELQO modules may be able to help focus routine government monitoring on critical indicators of quality learning environments.

Assistance. Assistance to countries in adapting and using the modules may be available through the MELQO partners, including World Bank/Early Learning Partnership; UNICEF; and the University of Nebraska, who coordinates a group of experts who were involved in the creation and testing of the tools. Virtual training on the modules is under development, along with support for country partners interested in moving through the adaptation process.



Domains, Constructs and Items for MODEL

Domain	Construct	Teacher Caregiver Report (TCR) Item	Direct Assessment (DA) Item
Literacy	Motivation	Would you say (<i>name</i>) is interested in reading (inquisitive/curious about the meaning of printed material)?	--
	Expressive language	Can (<i>name</i>) communicate his/her own needs/what s/he wants in a way understandable to adults and peers?	Can you name some things you can eat that you buy at the market? Can you tell me the names of some animals you know?
		--	I want you to tell me the beginning sound of (<i>familiar word</i>).
	Alphabet knowledge	Can (<i>name</i>) identify at least 10 letters of the alphabet?	Here are some letters. I will point to the letter and I want you to tell me what it is.
	Receptive language	Can (<i>name</i>) understand on first try what is being said to him/her?	I am going to tell you a story. After the story, I will ask you some questions about what happened.
		Can (<i>name</i>) write his/her own name?	Can you write your name here?
Mathematics	Numbers and operations	How high can (<i>name</i>) count?	How high can you count?
		Can (<i>name</i>) count 10 objects?	Please give me 3 stones. Now please give me 6 stones. Now please give me 14 stones.
		--	Which number is greater, 3 or 5? 8 or 6? 4 or 7?
		Can (<i>name</i>) identify written numerals up to 5? If yes ask 10. If yes, then ask 20.	I will point to a number and I'd like you to tell me which one it is.
		Can (<i>name</i>) add three and two together?	If you have three balls, and I give you two more, how many will you have?
	Measurement	Does (<i>name</i>) know that a cow is taller than a cat?	--
		Can (<i>name</i>) identify: The largest/smallest/longest/shortest of three objects?	--
		Does (<i>name</i>) know that a goat weighs more than a mouse?	--
		Does (<i>name</i>) understand the concepts of: today/yesterday/tomorrow?	--

	Spatial relations	Can (<i>name</i>) name shapes like circles, triangles and squares?	Point to the picture with the ball on/under/in front of/next to the chair. (4 items)
		Can (<i>name</i>) complete a five-piece puzzle?	Look at these pieces. Now look at these shapes. If you put the pieces together, they will make one of these shapes. Point to the shape that the pieces make.
Social–Emotional Development	Self-regulation	How often does (<i>name</i>) plan ahead?	--
		How often does (<i>name</i>) stop an activity when told to do so?	--
		How often does (<i>name</i>) rudely intrude on others?	--
		Is (<i>name</i>) over-active?	--
		When you take your child somewhere new, does (<i>name</i>) seek to explore the new environment freely?	--
		Does (<i>name</i>) adjust easily to transitions? (for example starting pre-primary school for the first time, or going to visit relatives in another house)	--
		Does (<i>name</i>) settle down after periods of exciting activity?	--
		Is (<i>name</i>) unable to sit still?	--
		When interacting with others, for example, sharing food, does (<i>name</i>) show self-control?	--
	Social understanding/pro-social behaviour	Does (<i>name</i>) show consideration of other people's feelings?	--
		Does (<i>name</i>) offer to help someone who seems to need help?	--
		Does (<i>name</i>) share with his/her peers?	--
	Social competence	Does (<i>name</i>) get along with other children s/he plays with, such as siblings or family members?	--
		Does (<i>name</i>) have difficulty taking turns when playing together with others?	--
		Does (<i>name</i>) accept responsibility for his/her actions?	--
	Emotional well-being	Would you say (<i>name</i>) kicks, bites or hits other children or adults?	--

		Is (<i>name</i>) upset when left by parents/guardians?	--
		Would you say that (<i>name</i>) is often sad or unhappy?	--
		Is (<i>name</i>) easily distracted? (i.e. how often does his/her concentration wander?)	--
		How often does (<i>name</i>) keep working at something until s/he is finished?	--
		How often does (<i>name</i>) have difficulties doing things that s/he does not like?	--
Executive Function	Working memory	When asked to do several things, how often does (<i>name</i>) remember all the instructions?	Please do the opposite of what I say: When I say touch your head, you touch your toes instead.
		--	I am going to say a list of numbers, one after another. After you hear the numbers, I want you to repeat them after me in the same order.
	Inhibition ⁱ	Is (<i>name</i>) easily distracted? (i.e. how often does his/her concentration wander?)	I am going to say a list of numbers, one after another. After you hear the numbers, I want you to repeat them after me backwards.
		How often does (<i>name</i>) rudely intrude on others?	--
		Is (<i>name</i>) over-active?	--
Physical Development	Fine motor	Can (<i>name</i>) write his/her own name?	Can you write your name here?
		--	Here is a square. Can you draw a square like this one?
	Overall health	Is (<i>name</i>) often sick?	--
		Does (<i>name</i>) have any special needs or difficulties? If yes, please specify.	--
		Is (<i>name</i>) often tired?	--
		Has (<i>name</i>) ever received any vaccinations to prevent him/her from getting diseases, including vaccinations received in a campaign or immunization day?	--
Contextual Information	Socio-economic conditions ⁱⁱ	Does your household have: [<i>do not ask if already known/visible</i>]	--
		Does anyone in your household have:	--
	Parent education	What is the highest level of school you attended? (child's mother)	--

		What is the highest level of school attended by <i>(name)</i> 's father?	--
		If caregiver is not mother or father, what is the highest level of school attended by caregiver?	--
Household composition		How many other children live in <i>(name)</i> 's household? (list by age)	--
		How many adults (including yourself and excluding the children) live in this home? How are adults in the household related to the child?	--
Participation in early learning ⁱⁱⁱ		Does <i>(name)</i> attend any organized learning or early childhood education programme, such as a private or government facility, including kindergarten or community child care? <i>[do not ask if already known]</i> If yes: Within the last seven days, about how many hours did <i>(name)</i> attend?	--
Home learning environment/parent involvement		How many children's books or picture books do you have for <i>(name)</i> at home? (enter number)	--
		Does <i>(name)</i> attend any organized learning or early childhood education programme, such as a private or government facility, including kindergarten or community child care? ³ <i>[do not ask if already known]</i>	--
		Do you believe that in order to bring up, raise or educate a child properly, the child needs to be physically punished?	--

	Neglect	Sometimes adults taking care of children have to leave the house to go shopping, wash clothes, or for other reasons and have to leave young children. On how many days in the past week was (<i>name</i>): -left alone for more than an hour? -left in the care of another child (someone less than 10 years old) for more than an hour?	--
	Child health ^{iv}	Is (<i>name</i>) often sick?	--
		Is (<i>name</i>) often tired?	--
		Does (<i>name</i>) have any special needs or difficulties? If yes, please explain.	--

Constructs and Sample Items for MELE

CONSTRUCT	 Play	 Pedagogy	 Interactions	 Environment	 Personnel	 Parent & Community Engagement	 Inclusiveness
DEFINITION	<p>Emphasis of the programme on creating opportunities for all children to explore and engage in free play and group play; the presence of adequate toys and spaces to play.</p>	<p>Approaches that teachers take in teaching children, including individualized and/ or group lessons and opportunities for dialogue, and in supporting a successful transition to primary school independent work.</p>	<p>Type and quality of interactions between teachers and children, and between children and their peers.</p>	<p>Physical space and safety of the classroom, including access to clean water and toilets, and adequate space for each child.</p>	<p>Experiences of teachers and directors in training, years of service, compensation, supervision and mentoring.</p>	<p>Extent to which parents and community members are encouraged and able to engage in children's education.</p>	<p>Extent to which the classroom is able to support participation for all children, which may include gender, learning needs, and cultural, ethnic and linguistic accommodations.</p>
SAMPLE ITEMS	<ul style="list-style-type: none"> • Do all children have time for play during the school day? • Do all children get an opportunity to use toys during play? • Do all children have access to sufficient, varied and challenging materials, such as blocks, books and coloured pencils? 	<ul style="list-style-type: none"> • Has an age-appropriate curriculum or set of guidelines been developed outlining competencies and lesson plans? • Do children use objects to learn mathematics; for example, do teachers encourage children to use objects for numerical exploration like sorting, counting and operations? • Do teachers introduce new vocabulary by reading storybooks to children daily? • Are children learning to perform new skills independently? 	<ul style="list-style-type: none"> • Do teachers discipline and maintain order without being excessively negative? • How often do teachers smile or verbally praise children? • Do teachers patiently coach children who struggle to learn a new concept? • Do teachers encourage children's questions and respond to them with sentences of explanation? 	<ul style="list-style-type: none"> • Is there clean drinking water available for the children? Are toilets available for both boys and girls? • Are there safety hazards? • Is indoor and outdoor space sufficient for play? • Is there enough space for all children to sit and room for play? 	<ul style="list-style-type: none"> • How many years have you been a teacher overall? • Do you receive support from your supervisor, through in-class observations and professional development? • During the last 12 months, how often have you been observed in your classroom teaching as a part of supervision, monitoring or training? • How useful was the feedback you received from supervisors and from peers? 	<ul style="list-style-type: none"> • Do parents have regular meetings with teachers to discuss children's learning and development? • Do community members who are not parents (in the neighbourhood or village) participate in making decisions about the programme? • How often does your pre-primary programme provide group sessions on parenting or home visits? 	<ul style="list-style-type: none"> • Does the programme show evidence of encouraging enrolment and participation of all ethnic, linguistic, religious and gender groups? • Are children with disabilities included in the programme? • Does the programme include a focus on mother-tongue instruction?

ⁱ Overlaps with 'Self-regulation' and 'Emotional well-being' (Social–Emotional Development).

ⁱⁱ Will vary according to country context.

ⁱⁱⁱ If children are sampled exclusively from pre-schools, this item becomes redundant.