

## **“Demonstrable developmental gains”**

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### ***Abstract***

*Children from ethno-linguistic minority groups in Myanmar tend to live in remote areas and are the most disadvantaged with regard to access to education. There are 135 minority ethnic groups and the issue of language poses great challenges with children often starting school unable to communicate in the language of instruction (Myanmar). Development of literacy skills in mother tongue is discouraged and there is a paucity of appropriate reading materials for young children within communities.*

*The “Transitions Initiative” programme (Save the Children Myanmar) is a community-based ECCD programme with a focus on “readiness”; children ready for school and schools ready to receive children. The programme is committed to the maintenance and promotion of minority language with activities such as “story-telling” competitions leading to workshops at village level to enable the production of a “library box” of locally written books. This commitment is evidenced by the programme’s Language Policy document. The programme is split between townships in the States (predominantly Minority language speaking) and Divisions (Burmese speaking) in approximate ratio of 55:45 and there is a programme logframe requirement that children display demonstrable developmental gains.*

*A decision was taken to focus on early language ability and Receptive Vocabulary as well as Visuo-motor Perceptual Ability as areas for assessment. These were chosen because of high correlations with general verbal and non-verbal ability respectively. It was anticipated that mother-tongue language games & songs and the opportunity to access crayon and pencil (for most a new experience) would lead to enhanced skills in the areas assessed and, ultimately, enable a higher level of literacy skills promoting self-confidence and reducing drop-outs.*

*While the efficacy of the programme may be inferred from the results of the assessment, the main purpose of this paper is to identify relative strengths and weaknesses of the two cohorts above and, if numbers justify it, the disaggregated cohorts mentioned below. Monitoring responses of these cohorts to the programme in-put should enable fine-tuning of the current programme and improved design of future programmes.*

*Promoting oral / aural mother tongue activities and enhancing pre-writing skills, for those children whose minority language has a written form, is intended to be a useful preparation for the work done by the minority language LCAs ( Literature and Culture Associations) and for those without a written form, as a basis for developing literacy skills in the majority language.*

*Initial entry cohorts were assessed between 4-8 weeks after entry to Centres in order to establish base-line data. Subsequent same-age cohorts are*

*being assessed at 6-month ECCD exposure intervals and the initial entry cohorts will also be assessed after one year's exposure to ECCD. It is hoped that it will be possible to follow the initial entry cohort into and through Primary school where drop-out rates at Grades 1 & 2 are reported as being very high. Data is being disaggregated according to ethnicity, gender and poverty status.*

*Initial data against these baselines indicates dramatic developmental gains in some cohorts. So far evidence suggests that these gains are due as much to the social maturation opportunities provided by early childhood care and education as to the cognitive benefits delivered by ECCE interventions.*

*The paper will identify interventions used in ECCD Centres, which are designed to enhance the assessed skills, consider the results so far with particular reference to any indications of stimulus deficits and consider how the results might be used to help in the design of future programmes.*

## **Programme description**

The Transitions Initiative Programme (Myanmar) is a community-based, three-year early childhood care and development (ECCD) programme with initial focus on ECCD Centres (3-5 years) and Parenting Education Programme (0-3 years).

Years two and three of the programme has a focus on transition to school and curriculum changes for the initial months of Grade 1 to improve developmentally appropriate practice with the long-term objective of reducing drop-outs which are particularly high for Grade 1. The principles established which under-pin these curricular changes are appropriate for extending throughout the rest of the Grade 1 curriculum and there are future plans for the total revision of the Primary (Grades 1-5) curriculum which Save the Children hope to be involved in.

The activities in ECCD Centres and Parenting Education Programme are designed to enhance “readiness for school”<sup>1</sup> leading to enhanced skills in the areas assessed and, ultimately, enabling a higher level of literacy skills, promoting self-confidence and reducing drop-outs.

Promoting oral / aural mother tongue activities and enhancing pre-writing skills, for those children whose minority language has a written form, is intended to be a useful preparation for the work done by the minority language LCAs (Literature and Culture Associations) which aim to improve opportunities for literacy in minority languages. Minority children who do not have access to a written language will not have access to literacy in their own language. However, the programme team is working on the assumption that building pre-literacy abilities in key verbal and motor skills will improve the capacity of minority children to develop literacy skills in the majority language.

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<sup>1</sup> See Annex 5

These skills are developed partly through mother-tongue language games & songs and the opportunity to access crayon and pencil (for most minority children a new experience). Other activities provided by the centres include:

Learning Corners:

- “Pretend” corner -developing imagination and spoken language
- “Blocks” corner -developing gross /fine motor skills to enhance pre-writing skills and “symbolic” play for imagination
- “Handcraft” corner (paper / pencils / crayons / scissors / glue etc)- developing fine motor skills; pre-writing
- “Homemade Games” corner (puzzles / lotto / bingo / etc-developing visuo-perceptual and visual memory skills)
- “Library” corner (Big Books / Puppets etc)-developing general verbal and pre-reading skills

Group Activities (Family / Small / Large Groups):

- Community action songs / stories / poems / active visual aids etc- enhancing pre-literacy skills both auditory and visual
- Routines e.g. hygiene / snack / snooze-using DAP language-enhancing auditory memory and auditory sequencing skills-using visual aids to enhance visual memory skills (e.g. hand-washing routine)

### **Demonstrable Developmental Gains concept**

The original Logframe (Objective 1) committed us to; “Children .... achieving *key developmental milestones*”

But this was changed,at our request to: “Children in ECCD centres are showing *demonstrable developmental gains*”  
for the reasons stated below:

A ***developmental milestone*** is an observed feature or behaviour which is located in one of the three domains (Cognitive / Intellectual, Social / Emotional, or Physical) of child functioning. For example, “Speaks first word” (Language development in the Cognitive / Intellectual domain), or “Can climb stairs unaided” (Physical domain).

For such a milestone to be of any use, it has to be norm-related. For example, if a child does not speak first word until eight years then, clearly, there is a problem which would immediately come to light on referring to norms for 2 year olds which would tell us that, by that age, almost all children have spoken their first word.

In Myanmar, the only norm-related data we could find was on height and weight (physical domain) which we have been monitoring monthly since the programme began, with respect to the available norms used by UNICEF. However, these would not be regarded as “***key***” for an ECCD programme which is focusing on enabling children to

stay in school, as few would argue that children drop out or struggle predominantly because of low height / weight scores.

Almost all children will eventually achieve key developmental milestones but what is important is when these are achieved. It must also be borne in mind that children will demonstrate developmental progress even without interventions such as ECCD programmes. This fact is often lost in reporting of interventions for which totally unwarranted claims are made. For this reason, gains must be “demonstrable” i.e. there should be a base-line to which we can refer. The indicator as it stood was, therefore, of limited use.

### **The Developmental Assessment**

The main purpose of the assessment was to identify relative strengths and weaknesses of the two cohorts; children in the States (Ethnic minority children) and children in the Divisions (Bamar children) and, if numbers justify it, the other disaggregated cohorts described below.

A decision was taken to focus on early language ability and *Receptive Vocabulary* as well as Visuo-motor Perceptual Ability (using a *Draw-a-Figure* exercise) as areas for assessment of developmental gains which might be attributed to the programme. These were chosen because the two skill areas have high correlations with general verbal and non-verbal ability respectively, and both are important for eventual literacy.

#### Receptive Vocabulary assessment

Vocabulary has been demonstrated as the single most important factor in predicting future success at the point of school entry and correlates highly with verbal intellectual ability. Children with high scores on receptive and expressive vocabulary are more likely to complete school and go on to further education. This is the factor that gives middle-class children in the West such an advantage over less fortunate social groups. Receptive vocabulary is a more fundamental building block of language than expressive vocabulary because listening comes before speaking. Vocabulary has been shown to correlate highly with general verbal ability.

#### Draw-a-figure test (based on the Goodenough Draw-a-man test)

The outcome of this activity enables a scoring of visuo-motor-perceptual / conceptual ability which correlates highly with non-verbal intellectual ability but also has elements, in the instruction of, receptive language comprehension and social confidence (ability to relate to a stranger). This test is recognized as being culturally neutral due to the universal nature of both in-put (instruction) and outcome (drawing)

Thus by selecting two activities which can be presented as fun to children by well-trained staff, we will be able to get an indication of benefits to various cohorts of children in both verbal and non-verbal intellectual ability, which combined form the basis for the

computation of overall intellectual ability, which has long been recognised as the single best predictor of academic success in systems throughout the world.

The programme has entered its third year and has been disrupted by the movement of staff to deal with the aftermath of Cyclone Nargis. Consequently, it has not been possible to complete the assessments anticipated at this point and reporting is, therefore, somewhat limited

## **Methodology**

Great concern has been expressed in recent years about children being tested / assessed in order to prove efficacy of educational programmes. The concerns are well founded and based on the perceived damage that such assessments can do to children if not conducted properly. Save the Children (US) has an embargo on using such assessments for programme monitoring purposes.

Many of the assessment tools are designed as comprehensive indicators of child functioning in all domains and as such are open to criticism on the grounds that the outcomes are not being used to design improved educational in-puts for children. The tools themselves may be flawed by, for example, having a high “failure” risk leading to damaging self-confidence or having insufficient items to adequately grade scores. In addition, many of them are lengthy and quite exhausting for young children. In addition, and perhaps more importantly, outcomes can alter teachers’ perceptions of individual children’s abilities and, therefore, alter expectations and consequent attainment.

The above criticisms can be deflected by taking the following measures:

1. Using assessment as a tool for comparison of sub-cohorts within the programme e.g. States / Divisions Linguistically minority ethnic / Myanmar speaking Poor / Not poor etc. in order to identify which cohorts benefit most from the programme rather than as a tool for assessment of efficacy of the programme as a whole
2. Collecting only unidentifiable data
3. Selecting assessment tools that are recognised as non-threatening and, even, fun
4. Ensuring the assessment tools are culturally sensitive or neutral
5. Selecting limited specific areas for assessment rather than a comprehensive coverage
6. Thorough training of experienced ECCD staff who will carry out the assessment in order to avoid any possibility of damage to children
7. Ensuring that the above training enables the process to be a learning experience for the children and a positive one in terms of social development e.g. praising the child for work done / teaching additional vocabulary after the assessment

### **Initial Assessment**

The following cohorts were identified :

Cohort 1: Receptive Vocabulary 3 years 6 months -3 years 8 months

This cohort will enable monitoring over time of both the Parenting Programme and first six plus months of the ECCD Centre Programme

Cohort 2: Draw-a-Figure 4 years 6 months -4 years 8 months

This cohort will give maximum exposure to ECCD over time

- Children assessed were required to have completed a “settling-in” period of four weeks but no more than eight weeks.
- Children were required to be assessed in the familiar surroundings of ECCD Centres
- Children were required not to be exposed to prolonged ECCD programme as this data is to be used as base-line data
- Progress to be reviewed every six months

As a base-line can be established from the results obtained from entry cohorts with no experience of ECCD, subsequent assessments should enable:

- longitudinal comparison (same entry cohort at different ages e.g. after one-year exposure to ECCD)
- same-age comparison (different same-age cohorts with different periods of exposure to ECCD Programme both at Centres and in Parenting Programme)

The following elements were integral elements in the methodology:

- Generating items of vocabulary from national staff and, in the case of ethnic minorities, from minority ethnic staff
- Ranking items with the assistance of programme staff as a result of limited field testing in order to avoid excessive failure (including minority language speaking field staff where appropriate)
- Commissioning Myanmar artist to design “typical Myanmar girl and typical Myanmar boy”-large picture (see below)
- Training of experienced ECCD teachers / trainers who are SC staff to do the assessment
- Informing parents that this exercise will be carried out in such a way that it will be a beneficial learning experience for their children on a one-to-one basis by experienced ECCD staff.

## **Limitations**

The assessment does not purport to be norm-referenced or comprehensive and the results, therefore, will have limitations in their application but should yield useful information for future programme direction and modification.

The Draw-a-Figure assessment is less specifically targeted (at non-verbal ability) than the Receptive Vocabulary assessment because it contains other elements as described above. There are **many aspects of vocabulary that are important other than those being assessed** here, for example the use of vocabulary in context but the “naming of body parts” is an established way of assessing, at this stage, the ability of the child to recognize sound and relate to the names of familiar objects (e.g. hand, face, eye etc); a key stage in language development.

#### Complexity of assessment at this age:

While it may, superficially, appear that this is an assessment of cognitive intellectual ability, at this stage of development, assessment is better thought of in terms of all domains (i.e. including physical & social/emotional). For example, although a child may have the cognitive ability to draw a figure, if hand muscles are weak, the score will be low. Another example: if the child is unable to understand the instruction, the drawing may be poor or irrelevant to the set task. Particular attention needs to be paid to social development e.g. is the child able to sit still and carry out the task required. Therefore these assessments, while specific in nature, in fact tap into a range of developmental abilities; some of which may be culturally determined. For this reason, observation of behaviour during the assessment is just as important as the results.

Data is being disaggregated according to ethnicity, gender and poverty status. Subsequent same-age cohorts are being assessed at 6-month ECCD exposure intervals and the initial entry cohorts will also be assessed after one year’s exposure to ECCD. It is hoped that it might be possible to follow the initial entry cohort into and through Primary school where drop-out rates at Grades 1 & 2 are reported as being very high.

Monitoring responses of these cohorts to the programme in-put should enable fine-tuning of the current programme and improved design of future programmes.

#### Limitations due to Initial Entry Cohort Size

Based on predicted numbers attending Centres, a two-month cohort (4y6m to 4y 8m) was originally selected for both assessments (Receptive Vocabulary & Draw-a-figure). It was calculated that all the children in Centres in this cohorts would give between 250 and 300 children for detailed monitoring and assessment.

The centres were opened over a lengthy period (at least six months) but we could not spend that amount of time on “initial” base-line assessment. We therefore decided to do “first batch” those opened before end of June Year 1 and “second batch” those opened between 1<sup>st</sup> June and end August. A few opened after that but staff had already moved on to other duties and therefore these Centres are excluded from this exercise.

Due to the slow start, the numbers in the initial (base-line) assessment were smaller than anticipated (101 & 220 respectively) and, due to pressure of other work, it was not possible to extend the period for initial assessment beyond September of Year 2. Only now are the anticipated numbers (120 & 297 respectively) becoming realized.

The second assessment (after one year of ECCD experience) should produce the required numbers. Effectively this means that our base-line data is weakened by the size of the initial cohorts and caution is required in interpreting the data. However, steps have been proposed to strengthen that data in adjacent <sup>2</sup>“cluster” villages which are just now starting up ECCD activities.

#### Limitations due to initial high results for receptive Vocabulary

Field testing was difficult because we wanted to use for base-line children who had settled in centres (for around four weeks) but had not had much exposure to ECCD (no more than eight weeks). Originally the team was going to use 4.6-4.8 for both assessments (to give maximum exposure to ECCD over time) but the first results from Batch 1 for Receptive Vocabulary gave surprisingly high scores both in States and Divisions-leaving little room for improvement over time exposure to ECCD. For the “second batch” we, therefore reduced the age cohort to 3.6-3.8.

Therefore for future assessments, we only have base-line for Receptive Vocabulary for second batch centres but for Draw-a-figure we have base-line data from both first and second batches. For this reason, cohort sizes for Draw-a-figure are approximately double those for Receptive Vocabulary.

#### **Administering the assessment**

Parents were told that the staff will monitor the programme by working with a few children and helping the development of skills including vocabulary. Teachers were told that the programme staff will be coming to work with a few children and teach them individually in a quiet corner of the centre. The monitoring and evaluation team nominated and trained field staff to identify the names of the children in the required cohort(s) and identify those which belonged to the “poorest’ category.

The Yangon Team also nominated SC field staff with strong ECCD experience working in Centres & Bases to carry out the assessment. Where both assessments were carried out, the Receptive Vocabulary exercise was done first, followed by the Draw-a-figure assessment.

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<sup>2</sup> Schools are grouped in “clusters” of between 5 to 10 adjacent villages

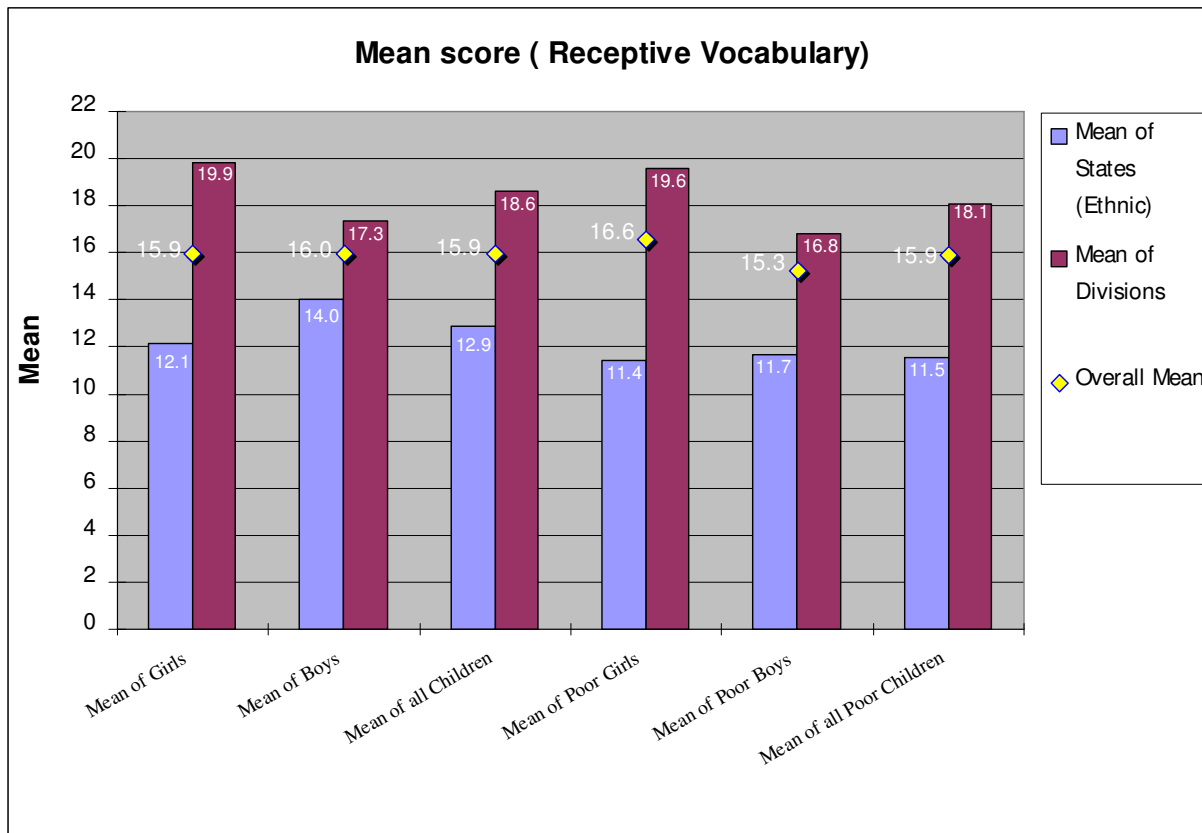
**Results: First assessment**

**Receptive Vocabulary Tables & Graphs (1<sup>st</sup> Assessment – July to September 07)**

Total number of children in receptive vocabulary assessment ( 3<sup>6</sup> - 3<sup>8</sup> Cohort )

Children assessed	Total Girls	Total Boys	Total Children (G+B)	Total Poor Girls	Total Poor Boys	Total Poor Children (G+B)
Total number of children in State	28	19	<b>47</b>	7	6	<b>13</b>
Total number of children in Division	27	27	<b>54</b>	12	14	<b>26</b>
Total children	<b>55</b>	<b>46</b>	<b>101</b>	<b>19</b>	<b>20</b>	<b>39</b>

Graph of mean score of children in Receptive Vocabulary initial assessment

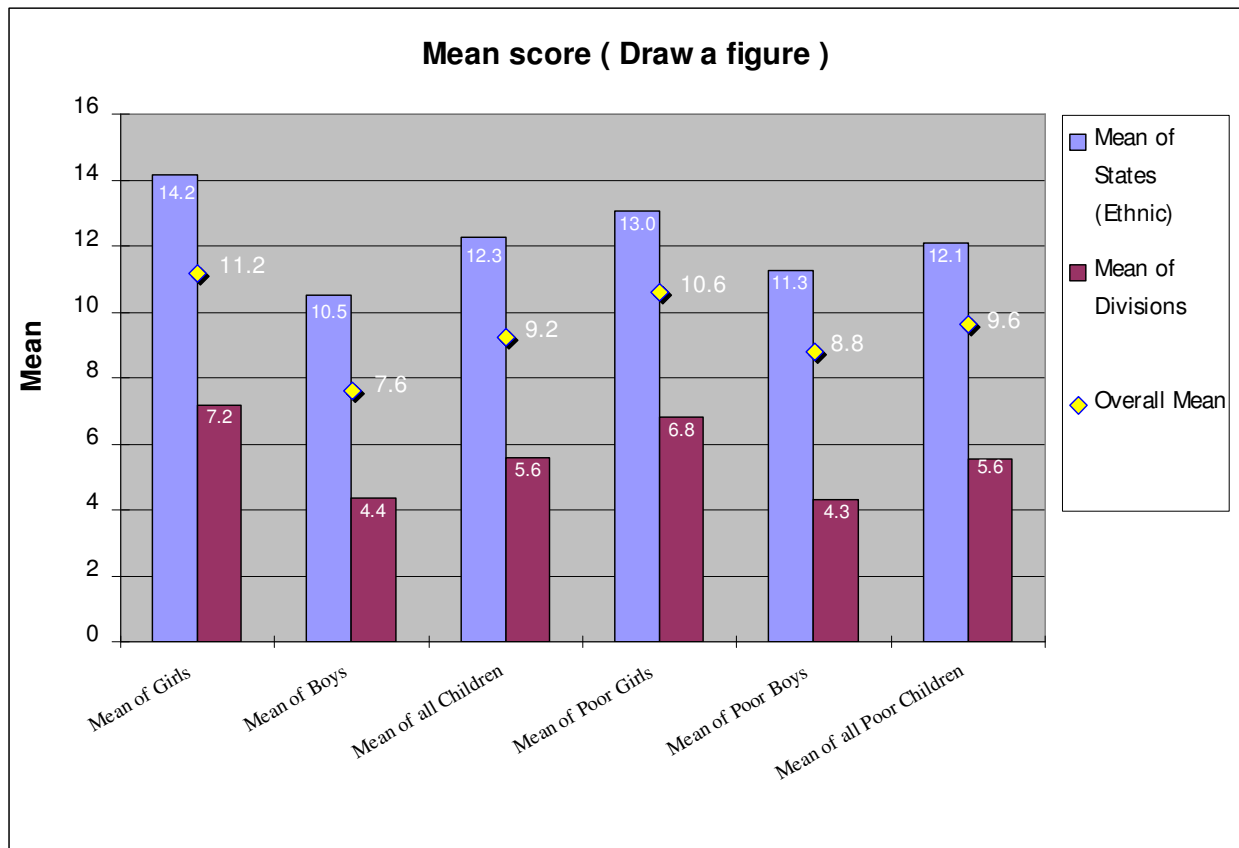


## Draw-a-Figure Tables & Graphs (1<sup>st</sup> Assessment – July to September 07)

Table of total number of children in Draw-a-Figure assessment ( 4<sup>6</sup> - 4<sup>8</sup> Cohort )

	Total Girls	Total Boys	Total Children (G+B)	Total Poor Girls	Total Poor Boys	Total Poor Children (G+B)
Total number of children in State	58	62	<b>120</b>	26	31	<b>57</b>
Total number of children in Division	44	56	<b>100</b>	17	17	<b>34</b>
Total children	<b>102</b>	<b>118</b>	<b>220</b>	<b>43</b>	<b>48</b>	<b>91</b>

Graph of mean score of children in Draw-a-Figure initial assessment



### Receptive Vocabulary: Analysis of initial assessment

Differences between States and Divisions have limited significance because of the different languages being used (Myanmar in Divisions & Shan, Karen, Kachin, Palaung, Paoh, Intha and HlaHu in the States).

Myanmar is written in Burmese abugida. The languages used in the Centres are detailed below:

B: Burmese abugida (derived from Mon and ultimately Brahmi script)

R: Roman

	Script	Written Form
Shan	B	Yes
Karen	B	Yes
Kachin	R	Yes
Palaung	B	Yes
Pa Oh	B	Yes
Intha	B	Yes
HlaHu	-	No

Within the States, boys scored better than girls with those children in poverty, both boys and girls, scoring lower than their peers. Within the Divisions, girls scored better than boys with those children in poverty, both boys and girls, scoring slightly lower than their peers.

As criteria for poverty was determined locally with some communities identifying three categories and others four, the value of aggregated data is somewhat limited.

### Draw-a-figure: Analysis of initial assessment (Based on the Goodenough Draw-a-Man Test)

Differences between States and Divisions can be read as differences between Ethnic minority groups and Bamar majority respectively. Due to the relatively cultural independence of this assessment, comparisons between States and Divisions are of interest.

1. Significant differences between boys and girls in both States and Divisions in favour of girls.
2. Highly significant difference between both boys and girls in States and Divisions in favour of States

Within the Divisions, those children in poverty, both boys and girls had slightly lower scores than their non-poor peers. Whereas, in the States, this was true for girls but the opposite was true for boys.

As criteria for poverty was determined locally with some communities identifying three categories and others four, the value of aggregated data is somewhat limited.

## Results from Second Assessment

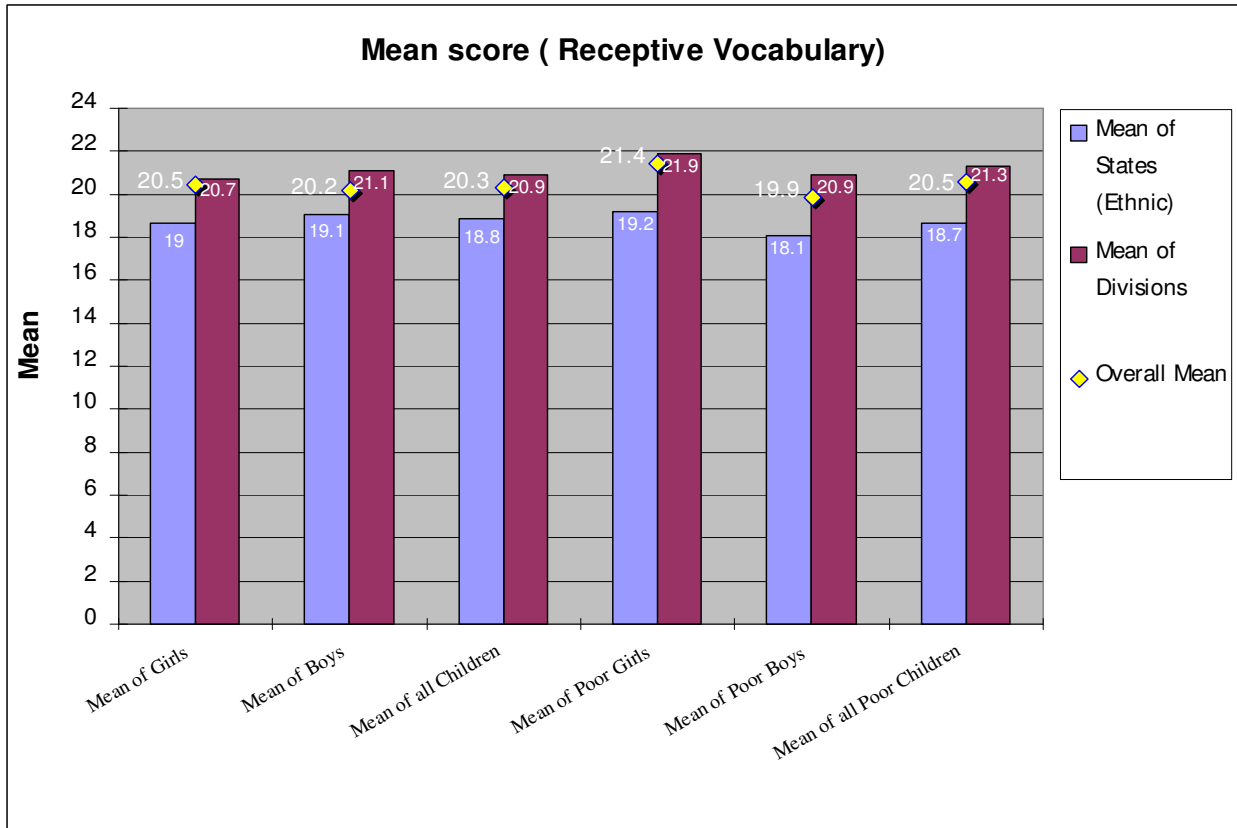
### Receptive Vocabulary Tables & Graphs (2<sup>nd</sup> Assessment – Dec 07 to Feb 08)

The results of the second assessment (children with six months experience of ECCD Centre) compared with same-age base-line results (children with no experience of ECCD Centre) are described below:

Table of total number of children in receptive vocabulary assessment ( 3<sup>6</sup> - 3<sup>8</sup> Cohort )

Children assessed	Total Girls	Total Boys	Total Children (G+B)	Total Poor Girls	Total Poor Boys	Total Poor Children (G+B)
Total number of children in State	28	25	<b>53</b>	12	11	<b>23</b>
Total number of children in Division	39	29	<b>68</b>	12	19	<b>31</b>
Total children	67	54	<b>121</b>	24	30	<b>54</b>

Graph of mean score of children in Receptive Vocabulary second assessment



**S** : > 5% & < 10% Significant change  
**HS** : > 10% Highly significant change

**Increase:** +  
**Decrease:** -

Receptive Vocabulary:

States (Ethnic minority) Increases/decreases calculated as a % of ceiling; total possible score 25:

Girls	+	<b>HS</b>
Boys	+	<b>HS</b>
All Children	+	<b>HS</b>
Poor Girls	+	<b>HS</b>
Poor Boys	+	<b>HS</b>
Poor Boys & Girls	+	<b>HS</b>

Scores have increased in all categories: increases are highly significant in all categories as detailed above.

Divisions (Bamar majority) Increases /decreases calculated as a % of ceiling; total possible score 25

Girls		<b>NS</b>
Boys	+	<b>HS</b>
All Children	+	<b>S</b>
Poor Girls	+	<b>S</b>
Poor Boys	+	<b>HS</b>
Poor Boys & Girls	+	<b>HS</b>

Scores have increased in all categories. Increases are highly significant for all boys as detailed above. Results are discussed in detail below

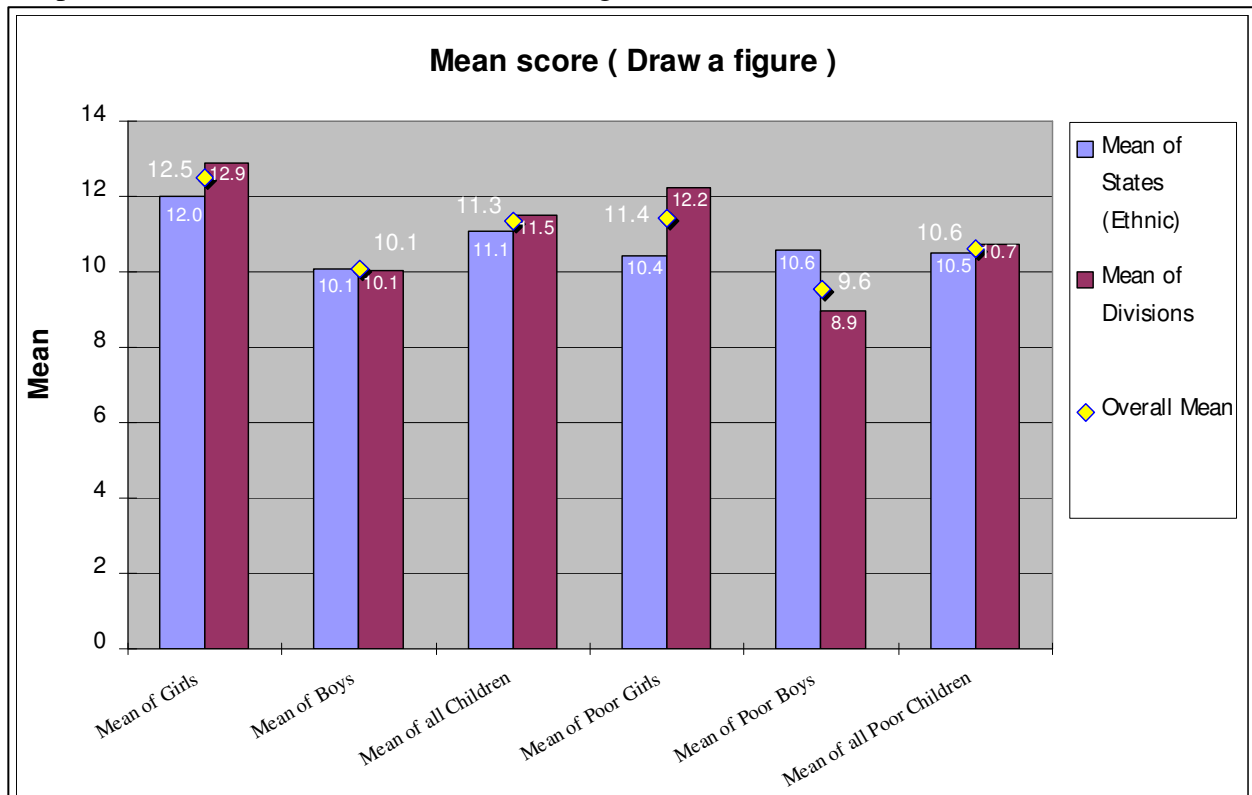
## Draw-a-Figure Tables & Graphs (2<sup>nd</sup> Assessment – Dec 07 to Feb 08)

The results of the second assessment (children with six months experience of ECCD Centre) compared with same-age base-line results (children with no experience of ECCD Centre) are described below:

Table of total number of children in Draw-a-Figure assessment ( 4<sup>6</sup> - 4<sup>8</sup> Cohort )

Children assessed	Total Girls	Total Boys	Total Children (G+B)	Total Poor Girls	Total Poor Boys	Total Poor Children (G+B)
Total number of children in State	73	67	<b>140</b>	37	23	<b>60</b>
Total number of children in Division	83	73	<b>157</b>	46	38	<b>84</b>
Total children	156	140	<b>297</b>	83	61	<b>144</b>

Graph of mean score of children in Draw-a-Figure second assessment



States (Ethnic minority) Increases/decreases calculated as a % increase of ceiling; total possible score 40

Girls	–	<b>S</b>
Boys		<b>NS</b>
All Children		<b>NS</b>
Poor Girls	–	<b>S</b>
Poor Boys		<b>NS</b>
Poor Boys & Girls		<b>NS</b>

For minority ethnic children, scores, for the most part, were little changed. (see Annex 1 for more detail).

Divisions (Bamar majority) Increases/decreases calculated as a % increase of ceiling; total possible score 40

Girls	+	<b>HS</b>
Boys	+	<b>HS</b>
All Children	+	<b>HS</b>
Poor Girls	+	<b>HS</b>
Poor Boys	+	<b>HS</b>
Poor Boys & Girls	+	<b>HS</b>

Scores have increased in all categories. Increases are highly significant in all categories as detailed above, and discussed below.

### Discussion of results

#### Receptive vocabulary:

Minority girls had poorer starting performance than minority boys.

All children (boys, girls, poor boys, poor girls) in minority areas improved highly significantly in receptive vocabulary. The gap between girls and boys was reduced as a result of a 28% increase in scores<sup>3</sup> for girls as opposed to a 20% increase for boys. Similarly the gap between poorest children and others was reduced to a large extent as a

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<sup>3</sup> see Annex 1

result of an increase of 31% for poor girls and 26 % for poor boys as opposed to the general increases for girls and for boys described above.

Care practices indicate that, prior to ECCD programme, most pre-school children were left in care of older siblings or left in a sheltered corner of the fields while mothers were working. In these circumstances, appropriate verbal stimulation is most unlikely.

Majority girls had better starting performance than majority boys

All children in majority areas improved in receptive vocabulary performance although their level of improvement was less dramatic. The improvement for non-poor majority girls was minimal (3%). They already had relatively high vocabulary skills on entry in comparison to boys. The gap between girls and boys was reduced as a result of a 3% increase in scores for girls as opposed to a 15% increase for boys. Similarly the gap between poorest children and others was reduced to a large extent as a result of an increase of 9% for poor girls and 16 % for poor boys as opposed to general increases for girls and for boys described above.

Because of the limitations of the assessment due to different languages being used, it is only possible to make limited direct comparison between scores in States and scores in the Divisions, but a comparison of % gains within the above cohorts is more meaningful. However, combining scores that are coming from different languages within the cluster has also some limitations, e.g. the word for “head” in Shan may be more difficult than it is in another minority language and we are not able to enable weightings which would render these results more meaningful.

Nevertheless, we are able to confidently assert that, within the limits of initial cohort size (see above), six month’s experience of ECCD has been of considerable benefit in the development of this basic building block of language and that the poorest children appear to have had greatest benefit. It will be interesting to see in the next six month assessment if this effect has “plateaued out” as might be expected.

These results suggest that a stimulus deficit for all cohorts of minority children has been identified and that such children in similar contexts may be in particular need of support to develop linguistic abilities in their mother tongue. When considering minority children who will be experiencing ECCD or preschool in their home language, and then transitioning into primary education in another language, early transition could therefore be particularly damaging. This will also be an important issue to consider for children entering primary in an unfamiliar language without benefit of early childhood intervention. Further investigation is needed in this area.

**Draw a figure:**

Direct comparison of scores between States and Divisions has reasonable legitimacy due to the relatively culture-free nature of this assessment.

The initial assessment produced much higher results in the States than in the Divisions with base-line scores for majority children in all categories around 50% lower than their minority counterparts. It should come as no surprise that, in some areas of development, minority ethnic children are more advanced than their peers, particularly as it has been commented that in many areas in the dry zone where we are working with majority children, deprivation has been assessed as more severe, if different, from that in some of the areas where we are working with ethnic minority children.

Minority girls (including those in the poor cohort) scored higher than their male counterparts.

After six months, decreases were significant (6-7%) for minority girls as detailed above. Reports from assessors indicated that minority girls were initially very highly motivated and excited by opportunity to use crayon and paper so initial motivation may have been higher than after six months when the novelty of crayon and paper had worn off. Hence the initial results may have been inflated

Majority girls (including those in the poor cohort) scored considerably higher than their male counterparts.

Majority boys and girls had caught up with their minority peers after six months of ECCD, with the poorest girls exceeding their minority counterparts but poor boys still trailing slightly behind their minority counterparts.

A particular feature noticed in the drawing tests was the hyperactivity of the majority boys, many of whom wanted to draw a car or lorry, whereas minority boys were much more biddable.

It was noticed that food brought by majority children often consisted of commercially produced crisp-type “snacks” with a high level of coloured additives which are suspected as having an adverse effect on concentration and behaviour, whereas, minority children, invariably brought a more nutritious snack with rice, vegetables and, perhaps, a little fish.

### **Overall observations**

From the start, boys preferred more active pursuits in the Centres (e.g. climbing frame) whereas girls were observed to be more comfortable with passive pursuits like drawing.

Minority ethnic children appeared to be less assertive than Bamar children. It was reported that majority boys reacted positively to socialization aspects of the curriculum and after six months were much more biddable, which contributed to the highly significant improvements in outcomes. The results beg the question of the desirability of “biddability”, but we do know that this quality is much appreciated by Grade 1 primary school teachers and we know from previous programmes that this is one of the reported

differences between children who have experienced ECCD and those who have not. We may have uncovered a factor in early personality development (lack of assertiveness) which accounts for some of the difficulties experienced by minority ethnic groups - but which has had a counter effect in this assessment.

Girls, generally, on entry to ECCD Centres were reported as being developmentally more advanced than boys in:

- social development (confidence and ability to establish rapport with assessor)
- comprehension (understanding the instruction)
- visuo-motor-perceptual skills.

The exception to this was vocabulary acquisition of minority girls but it is not clear why this was the case.

The assessments support the view that minority ethnic children benefit considerably from language activities described above, which develop the basic building blocks of vocabulary. Poor children appear to draw particular benefit from such activities

The results so far indicate that minority ethnic boys and girls are ahead of their non-minority peers in visuo-motor perceptual skills, for whatever reason, on entering ECCD, and may have reached a developmental plateau ahead of their majority counterparts. If expansion of base-line data confirms that this is the case, there may be an argument for introduction of written script, for purpose of familiarization, in the ECCD Centres in the States to a greater extent than at present. It has been suggested, by some staff, that minority children derive particular benefit from observation in a rural environment in which awareness of surroundings is part and parcel of daily life

The model of ECCD support provided in the States and Divisions was broadly the same, and proved effective in filling in the biggest 'gaps' in skills found in different groups of children, bringing all the children close to a common strong level of abilities (acknowledging the lack of equivalence between the various languages being used).

The assessments support the view ECCD which is in mother tongue and which also promotes key pre-literacy skills can have strong positive impact on these skills. These early childhood development interventions are particularly important to enable the poorest children to reach the levels of linguistic, conceptual and motor ability needed to start learning literacy skills. This suggests that access to this type of ECCD service could be vital for children likely to be disadvantaged by learning literacy in another language.

### **Future Developments**

We intend to expand the programme to adjacent villages where spaces have been identified (e.g. monasteries) for enabling ECCD activities in at least two townships; one in the States (Karen) and one in the Divisions (Myanmar). This will afford an opportunity to improve the base-line data.

In addition, the above expansion should enable some clarification of the hypothesis that the 4.6-4.8 minority cohort had reached a visuo-motor perceptual plateau ahead of their majority counterparts and may be ready earlier for more advanced “paper and pencil” work than currently in use at the Centres (e.g. copying more advanced shapes/ introduction of script).

While our advocacy policy will continue to follow developmentally appropriate practice and be one of not encouraging formal literacy skills too quickly in the early years, the reality is that minority children at Grade 1 are faced with a curriculum that very quickly promotes these skills in Myanmar language and also moves ahead very quickly. We may, therefore, have to consider, particularly for those children whose minority language script is Burmese abudiga, introduction of minority language script earlier and at a more advanced level than currently practiced.

There are plans for a substantial Emergency ECCD programme in the Irrawady (Delta) Area (almost entirely Karen) which should enable an opportunity to assess the effect of Cyclone Nargis on this area of child development and whether there is a substantial regressive element in the social / emotional domain as a result of the cyclone e.g. do children have less confidence ?

## Annex 1

### Receptive Vocabulary

Increase / decrease expressed as % of ceiling (25)

**NS** (Not significant) < 5%

5% < **S** < 10% (Significant)

**HS** > 10% (Highly significant)

(Average Raw Scores & Differences)

States

Ass	G	B	C	PG	PB	PC
First (base-line)	12.1	14.0	12.9	11.4	11.7	11.5
Second ( 6 months)	19.0	19.1	18.8	19.2	18.1	18.7
Difference	+6.9	+5.1	+5.9	+7.8	+6.4	+7.2
% D (rounded up)	+28	+20	+24	+31	+26	+29
	<b>HS</b>	<b>HS</b>	<b>HS</b>	<b>HS</b>	<b>HS</b>	<b>HS</b>

Divisions

Ass	G	B	C	PG	PB	PC
First (base-line)	19.9	17.3	18.6	19.6	16.8	18.1
Second ( 6 months)	20.7	21.1	20.9	21.9	20.9	21.3
Difference	+8	+3.8	+2.3	+2.3	+4.1	+3.2
% D (rounded up)	+3	+15	+9	+9	+16	+13
	<b>NS</b>	<b>HS</b>	<b>S</b>	<b>S</b>	<b>HS</b>	<b>HS</b>

**Draw-a-figure**

Increase / decrease expressed as % of ceiling (40)

**NS** (Not significant) < 5%**S** 5% < **S** < 10% (Significant)**HS** > 10% (Highly significant)Average Raw Scores and Differences  
States

Ass	G	B	C	PG	PB	PC
First (base-line)	14.2	10.5	12.3	13.0	11.3	12.1
Second (6 months)	12.0	10.1	11.1	10.4	10.6	10.5
Difference	-2.2	-0.4	-1.2	-2.6	-0.7	-1.6
% D (rounded off)	-6	-1	-3	-7	-2	-4
	<b>S</b>	<b>NS</b>	<b>NS</b>	<b>S</b>	<b>NS</b>	<b>NS</b>

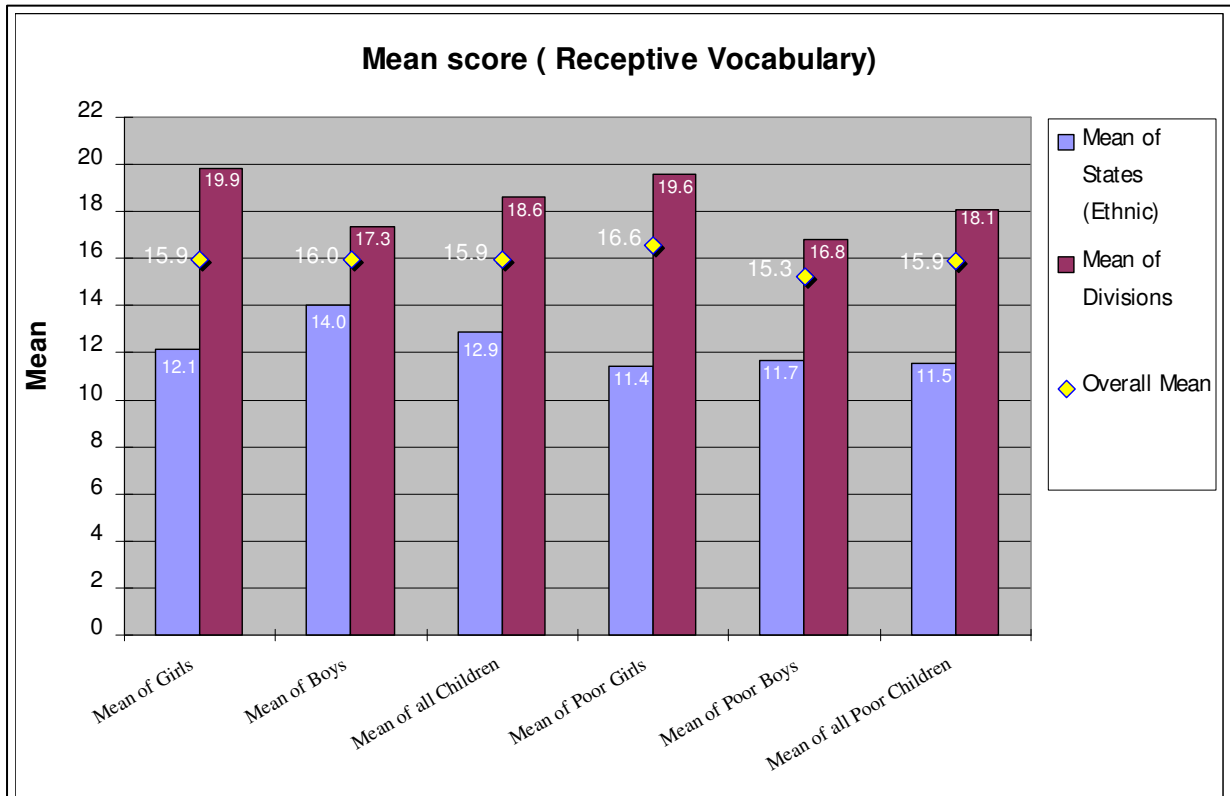
## Divisions

Ass	G	B	C	PG	PB	PC
First (base-line)	7.2	4.4	5.6	6.8	4.3	5.6
Second (6 months)	12.9	10.1	11.5	12.2	8.9	10.7
Difference	+5.7	+5.7	+5.9	+5.4	+4.6	+5.1
% D (rounded off)	+14	+14	+15	+14	+12	+13
	<b>HS</b>	<b>HS</b>	<b>HS</b>	<b>HS</b>	<b>HS</b>	<b>HS</b>

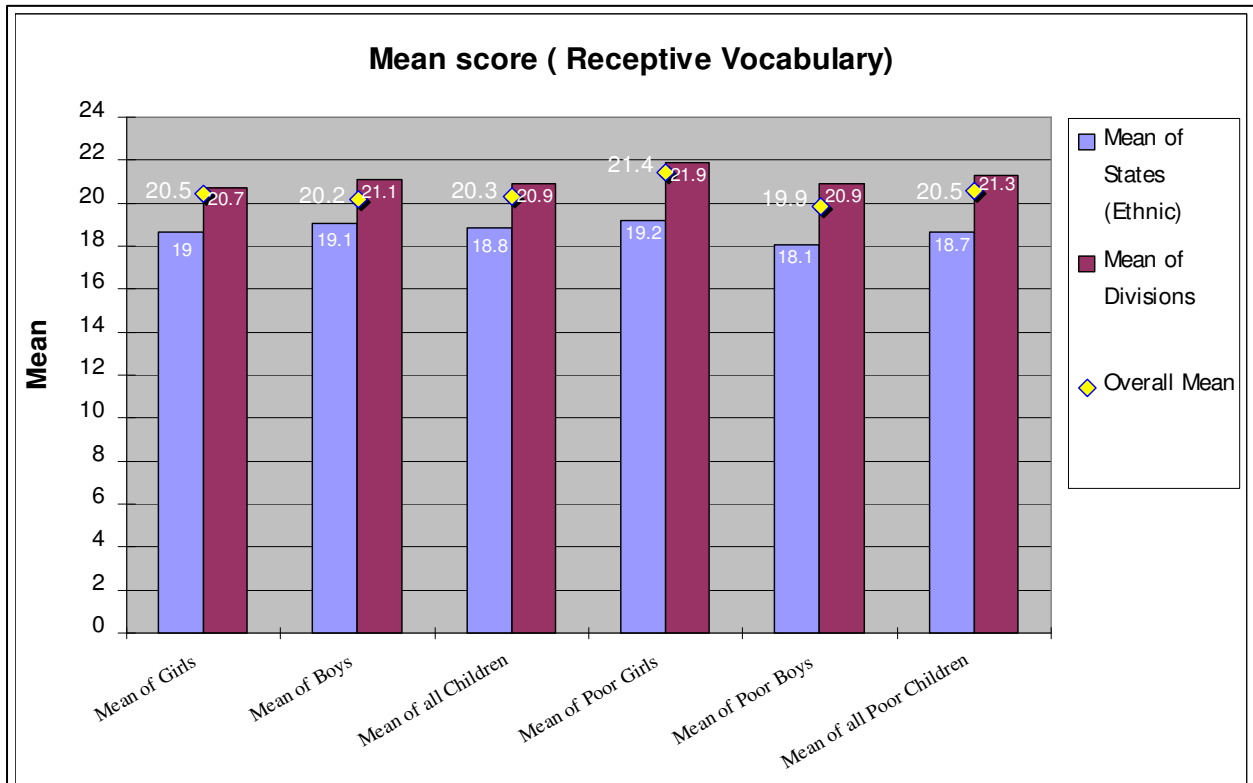
## Annex 2: Summary results presented by category

### A. Receptive Vocabulary

First assessment

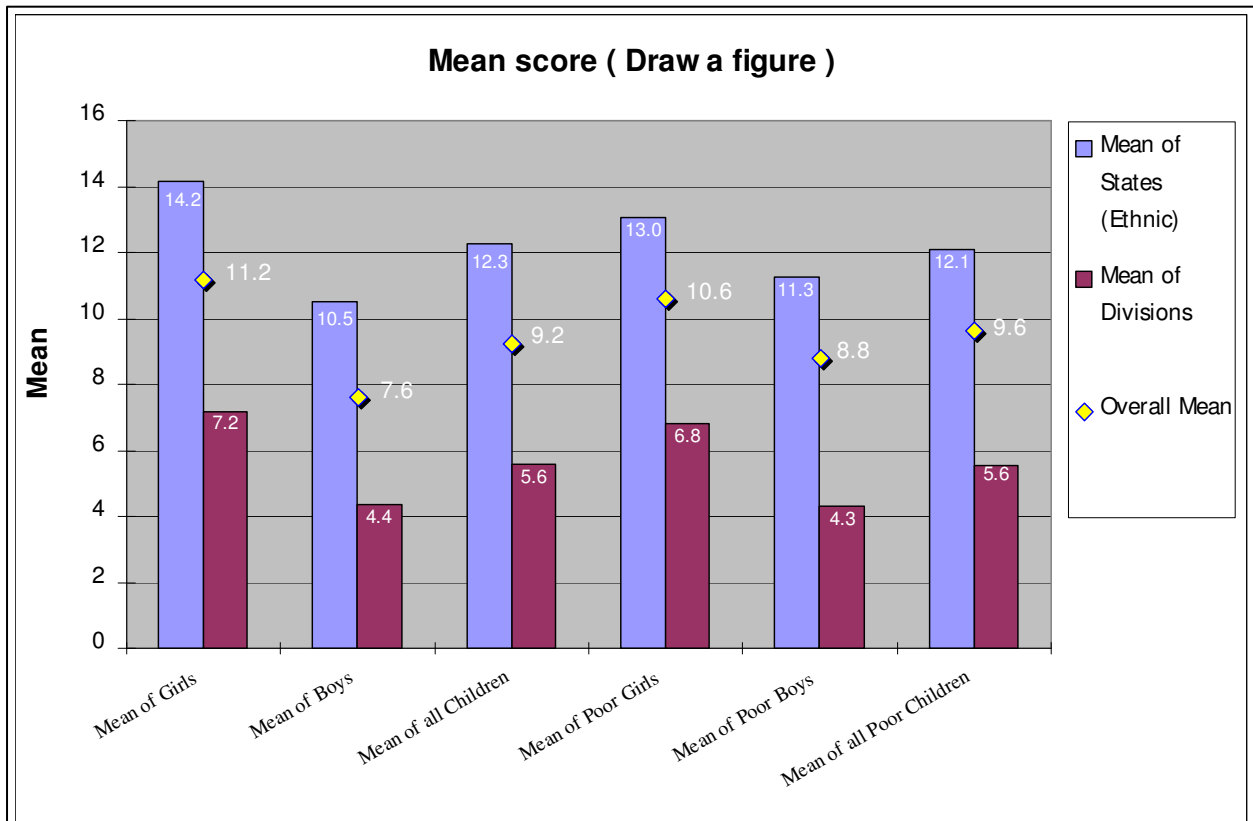


Second assessment

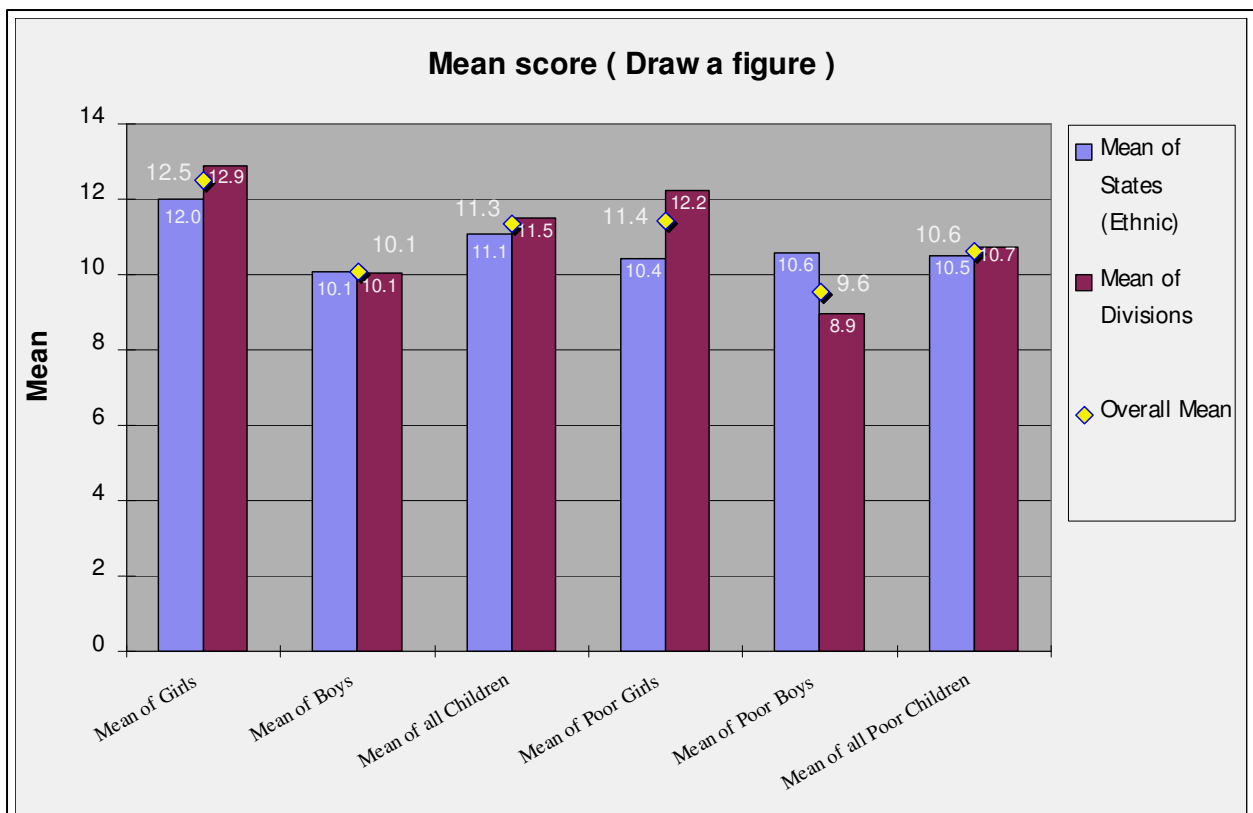


## B. Draw-a-Figure

### First assessment



### Second assessment



### Annex 3: Detailed description of assessment exercises

#### Instructions Prior to Assessment:

- Find a quiet private area in centre (preferably blocked off by partitions so that teachers and children cannot observe the activity) This is important as we do not want teachers to teach to this activity
- Spend some time with child to put the child at ease e.g. “What is your name?” “Do you have any brothers or sisters?” “What are their names?” “What do you like to do in the centre?” etc etc

#### Receptive Vocabulary material



#### When the child seems relaxed:

- Roll out two pictures (girl & boy) and say, “Which one do you like best?”
- Select the chosen picture and roll up the other one. Turning to the selected picture, say :

“Can you show me the head?”

- If the child does this successfully, respond, “Good girl (boy)” and proceed down the ranked (for difficulty) list until four successive failures then terminate the assessment:

1. Head
2. Hand
3. Mouth
4. Nose
5. Leg
6. Eye
7. Shirt or Blouse
8. Ear
9. Cheek
10. Hair
11. Forehead
12. Fingers
13. Neck
14. Eye- brow
15. Shoulder
16. Thumb
17. Chin
18. Knee
19. Toes
20. Palm
21. Little finger
22. Lips
23. Big toe
24. Toe nail
25. Arm

- If the child is unable to point to the head, gently take her / his hand & finger and place it on the head in the picture then continue to the next item until four successive failures then terminate the assessment.
- If still no response proceed to second assessment (Draw-a-figure) if that has to be done, otherwise terminate as described below.
- If the child at any point is apprehensive or afraid or confused, immediately terminate the assessment as described below.

Raw Score Ceiling 25

## Draw-a-Figure

When the child seems relaxed:

- Ask the child to draw “The very best man or lady you can draw and try to fill the whole page”.
- If the child is apprehensive or afraid or confused, terminate as below
- If the child starts drawing respond, “Good girl” or “Good boy”. If the child stops say, “Can you put anything more in the drawing to make the man (lady) better?”

Always encourage any effort with “Good girl” or “Good boy”.

- Continue like this until you are sure the child is finished then terminate as below
- If the child draws nothing then say, “Perhaps you would like to draw your mummy or daddy”
- If still no response, say “Perhaps you can draw your teacher or a friend?”
- If still no response, terminate as below

Raw Score Ceiling 40

After the assessment is over, encourage the child to speak about what they like at ECCD, and spend some time playing a game with the child or teaching e.g. “same and difference” between the two pictures. A few words which the child did not know can be taught using the pictures.

This should be fun for the child as should the whole assessment

## Summary Sheet

Village:

Age: Years and Complete months

P: Poor(est) E: Minority ethnic Language S: States D: Divisions M: Male F: F

|

**Annex 4: Scoring sheets**

Scoring sheet for Receptive Vocabulary assessment

(One point for each correct item)

Discontinue after four failures

Scores can be recorded in order on the back of the page used for drawing the figure:

Correct √

Wrong /

Like this:

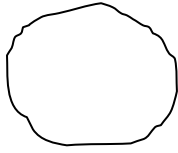
√  
√  
√  
√  
/  
√  
/  
/  
/  
/

Total Score 5

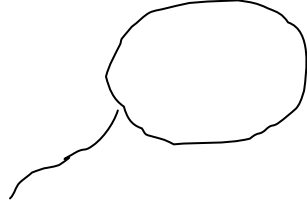
Raw Score Ceiling 24

Draw-a-figure

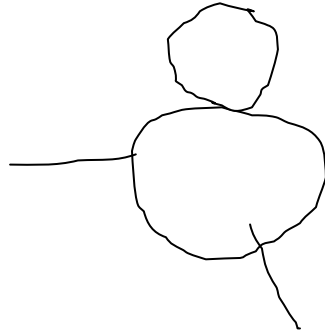
1 point each for body / head / each arm /each leg  
Additional point for appropriate relationship to body



1 point

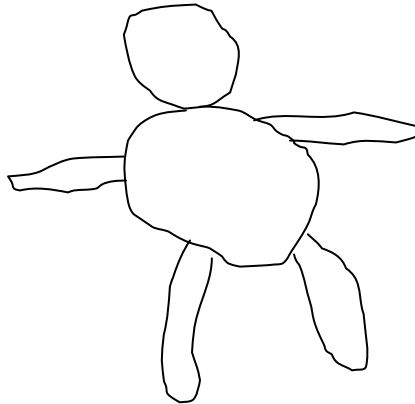


2 points



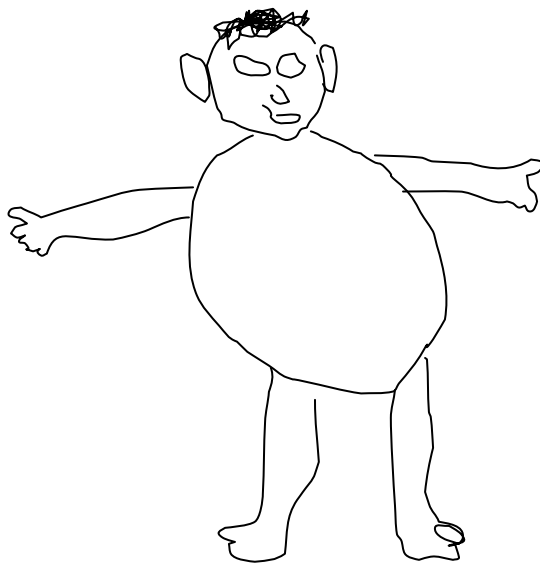
7+1\* points

Extra point for two dimensions except body & head:



Total: 15+1  
\*(see below)

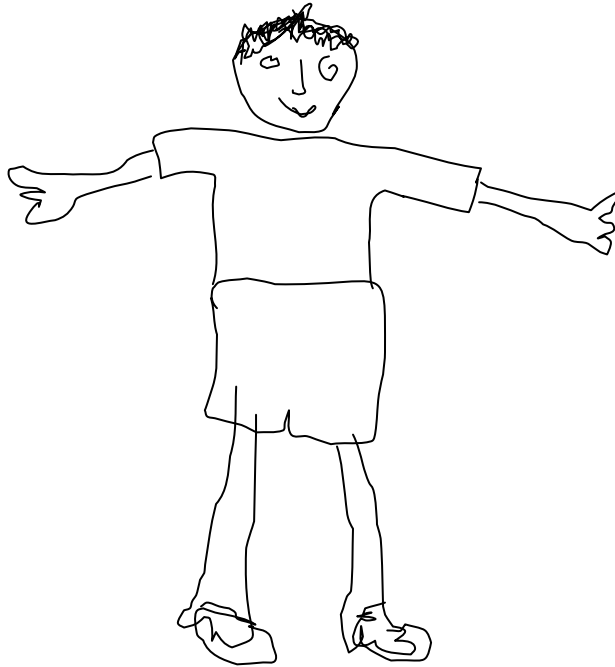
Extra points: nose mouth eyes (2) ears (2) fingers (2) toes (2) hair (1)



Total: 26+1 \*(see below)

The example immediately above and those below are given in case we are able to follow the 4.6 cohort into school. It is unlikely children in ECCD Centres will produce drawings of such maturity

Extra Point for each item of clothing



Total: 31+1\*

An additional point is given for

- other features e.g. buttons / hat /teeth etc (1 point for each-maximum 7)
- \*the overall proportions are right
- the figure fills more than three quarters of the page.

Raw Score Ceiling: 40

## Summary Sheet

Village:

Age: Years and Complete months

P: Poor(est) E: Minority ethnic Language S: States D: Divisions M: Male F:  
Female

Draw-a-figure Score:

Receptive Vocabulary Score

## **Annex 5: School readiness checklist applied at end of ECCD cycle**

### Language

#### Listening

- Can listen attentively to a story for 10 – 15 minutes
- Can listen to another child talking for 5 minutes

#### Speaking

- Speaks clearly enough for adults to understand
- Speaks in 3 or 4 word sentences
- Asks questions with the proper word order and endings
- Uses the command forms
- Uses the polite form
- Uses the appropriate pronouns
- Uses the negative
- Can talk about an experience understandably
- Can answer questions from a story
- Can tell the events in a story in sequence
- Can carry on a conversation with a friend or an adult
- Uses new vocabulary in sentences

#### Reading

- Can think of rhyming words
- Can think of words which start with the same sound
- Understands that print carries meaning
- Can recognize her own written name
- Can recognize her classmates written names
- Tells the story from a book
- Pretends to read a story, pointing to the words
- Recognizes Myanmar letters & numbers
- Recognizes English letters & numbers
- Reads simple words

#### Writing

- Can trace a pre-drawn line, shape, etc.
- Can copy a pre-drawn line, shape, etc.
- Can trace own name
- Can copy own name
- Can trace Myanmar letters and numbers
- Can copy Myanmar letters and numbers
- Can trace English letters and numbers
- Can copy English letters and numbers
- Can write words on her own

## **Intellectual**

- Recognizes 4 or more colors
- Recognizes 4 or more shapes
- Recognizes differences in size
- Can order objects from small to large
- Understands opposites (hot & cold, heavy & light, small & big, etc.)
- Understands positionals (above & below, beside, behind, through, on top, etc.)
- Counts objects to 20
- Understands how many are left in a counting song
- Can arrange numbers in order
- Can classify objects
- Can match things that are the same
- Understands the concept of 3, 4, or 5
- Understands more and less
- Can make patterns
- Knows the daily schedule
- Knows what happened yesterday
- Can build a block enclosure
- Can follow directions with 3 or 4 parts

## **Emotional**

- Wants to come to school
- Shows independence by eating, getting her own drinks, toileting, & dressing herself
- Can express anger with words rather than fighting
- Can express sadness with words
- Shows interest in classroom activities
- Smiles and seems happy most of the time
- Knows how to get comfort when hurt or scared
- Understands different emotions (happy, sad, angry, fear, love, etc.)
- Shows curiosity.

## **Social**

- Occupied during free play
- Initiates activity or play with others
- Joins in an ongoing play situation
- Resolves play conflicts in a positive manner
- Shows concern for someone in distress
  
- Shows happiness for someone experiencing pleasure
- Shares with others
- Takes turns well
- Cooperates with adults and other children
- Helps another child

Pretends by replaying familiar experiences or stories  
Assigns roles or takes roles in pretend play  
Takes on characteristics, actions, and language related to the role  
Uses elaborate and creative themes, ideas, and details when playing

## **Physical**

### Large Muscles

- Runs with control over speed and direction
- Runs backwards
- Jumps over obstacle, landing with 2 feet
- Hops forward on one foot
- Climbs up and down climbing equipment easily
- Can kick a ball
- Can throw and catch a ball
- Can throw an object into a box, basket, etc. from a distance
- Can jump from a low object
- Can do a somersault
- Can control arm movements for easel painting, drawing in sand, etc.
- Can move legs in rhythm to beat
- Can clap hands in rhythm to beat
- Can balance walking on a low plank or wall

### Small Muscles

- Shows hand preference, right or left
- Turns knobs, etc. easily
- Pours liquid into glass without spilling
- Picks up and inserts objects easily
- Can thread beads & other objects
- Uses drawing or writing tools with control
- Uses scissors with control
- Pounds in nails with control
- Can put in the pieces of a puzzle

## **Moral**

- Respects adults
- Polite
- Cares for those who have problems
- Honest & truthful
- Treats the disabled and those younger than himself equally (as he treats himself)