

JULY 1, 2017



AGE VALIDATION OF LESOTHO ELDS OF CHILDREN BETWEEN 0 AND 5 YEARS

FINAL REPORT

ALASTAIR VAN HEERDEN;KOMBI SAUSI;JANE KVALSVIG
HUMAN SCIENCES RESEARCH COUNCIL



TABLE OF CONTENTS

TABLES.....	iii
FIGURES.....	v
PROJECT PERSONNEL	vi
ABBREVIATIONS	1
ACKNOWLEDGEMENTS	2
EXECUTIVE SUMMARY	3
INTRODUCTION.....	13
Aim of the age validation research	18
METHODS.....	19
Study Sites and Sample.....	19
Training of assessment teams	22
Recruitment of the sample	24
Ethical Considerations	24
Assessment tools.....	25
Data analysis	26
RESULTS.....	26
The Protocol for Child Monitoring – Infant/Toddler version (PCM-IT) disaggregated by geography and ecological zone	26
The Early Learning Outcomes Measure (ELOM) disaggregated by geography and ecological zone	34
Enhancing Early Child Development within the Family.	42
RECOMMENDATIONS	46
REFERENCES	50
APENDIX 1 – Lesotho Demographic Health Survey of 2014.....	54
APPENDIX 2 - Kingdom of Lesotho: National strategic plan for Integrated Early Childhood Care and Development (IECCD).....	65
APPENDIX 3 – Educational Strategic Plan (2005-2015).....	75

TABLES

Table 1. Summary of population density by district from 1986 till 2011 (Estimate).....	20
Table 2. Correlations between PCM scores and Child's Age (in months).....	27
Table 3. Factorial Analysis of Variance considering the impact of age, geography and ecology on overall PMC score	27
Table 4. Factorial Analysis of Variance considering the impact of age, geography and ecology on gross motor development	29
Table 5. Factorial Analysis of Variance considering the impact of age, geography and ecology on fine motor development.....	30
Table 6. Factorial Analysis of Variance considering the impact of age, geography and ecology on cognitive development	31
Table 7. Factorial Analysis of Variance considering the impact of age, geography and ecology on self-help.....	33
Table 8. Analysis of Covariance considering the impact of geography and ecology on overall ELOM scores adjusted for child age.....	35
Table 9. Analysis of Covariance considering the impact of geography and ecology on gross motor development adjusted for child age.....	36
Table 10. Analysis of Covariance considering the impact of geography and ecology on fine motor development adjusting for child age	37
Table 11. Analysis of Covariance considering the impact of geography and ecology on emergent numeracy and mathematics adjusting for child age.....	39
Table 12. Analysis of Covariance considering the impact of geography and ecology on cognition and executive functioning adjusted for child age	40
Table 13. Analysis of Covariance considering the impact of geography and ecology on emergent literacy and language adjusted for child age	41
Table 14. Caregiver support scale for all age groups	43
Table 15. Caregiver support scale for all age groups disaggregated by geography	44

Table 16. Factorial analysis of variance (ANOVA) considering the impact of ecology zone on parent support 46

Table 17. Descriptive statistics for the parent support scale by ecological zone 46

FIGURES

Figure 1. Overview of Lesotho sampling frame.....	21
Figure 2. Example of sample frame for Butha-Buthe	21
Figure 3. Overall PCM score disaggregated by age, geography and ecological zone.....	28
Figure 4. PCM gross motor development disaggregated by age, geography and ecological zone.....	30
Figure 5. PCM fine motor development disaggregated by age, geography and ecological zone.....	31
Figure 6. PCM cognitive development disaggregated by age, geography and ecological zone.....	32
Figure 7. PCM Self-help (adaptive behaviour) disaggregated by age, geography and ecological zone.....	34
Figure 8. Overall ELOM score disaggregated by age, geography and ecological zone... ..	35
Figure 9. ELOM gross motor development disaggregated by age, geography and ecological zone.....	36
Figure 10. ELOM fine motor development disaggregated by age, geography and ecological zone.....	38
Figure 11. ELOM emergent numeracy disaggregated by age, geography and ecological zone.....	39
Figure 12. ELOM cognitive development disaggregated by age, geography and ecological zone.....	40
Figure 13. ELOM emergent literacy disaggregated by age, geography and ecological zone.....	41
Figure 14. Frequency of play materials provided by caregivers to children	42

PROJECT PERSONNEL

Pumla Mkhiva Manager

Kombi Sausi Manager

Thaba-Tseka

Kaizer Mohobane Assessor

Kananelo Ngwenya Assessor

Qacha's Nek

Ntokoane Chobokoane Assessor

Mampooa Mpooa Assessor

Quting

Tumisang Mokheleli Assessor

Puseletso Phori Assessor

Maseru

Likeleli Letho Assessor

Relebohile Nyabanyaba Assessor

Butha-Buthe

Thato Mapetla Assessor

Litsepiso Khetsemene Assessor

Mokhotlong

Mthenjoane Mokoatle Assessor

Bokanang Seshemane Assessor

Researchers

Alastair van Heerden

Kombi Sausi

Jane Kvalsvig

Researcher Support

Penny Holding

Andy Dawes

Linda Biersteker

Patricia Wekulo

Institutional Support

Innovation Edge

Unicef Lesotho

Unicef South Africa

ABBREVIATIONS

EAs	Enumeration Areas
ECCD	Early Childhood Care and Development
ELDS	Early Learning Development Standards
ELOM	Early Learning Outcome Measures
FGDs	Focus Group Discussion
KII	Key Informants Interviews
IECCD	Integrated Early Childhood Care and Development
MOET	Ministry of Training and Education
NELDS	National Early Learning Development Standards
NGOs	None Governmental Organisations
PPS	Probability Proportion to Size
PSU	Probability Sampling Unit
PCM	Protocol for Child Monitoring – Infant/Toddler version
SPSS	Statistical Package for Social Scientist
SRV	Senqu River Valley
SSU	Secondary Sampling Unit
UNICEF	United Nations International Children's Education Fund

ACKNOWLEDGEMENTS

The authors would particularly like to thank:

- The advisory group from UNICEF and the Ministry of Education and Training for supplying the policy documents on which the standards approach is based and for helpful comments on the manuscript.
- COMSTAT consultancy for completing and preparing the content validation report on which this phase relied.
- The School of Public Health at the University of KwaZulu-Natal.
- Innovation Edge for agreeing to the use of the ELOM and supporting us with materials, equipment and training resources.
- The children and caregivers who gave their time and energy in demonstrating appropriate skills for their age, and their caregivers for supplying insights into those competencies that we could not test directly.

EXECUTIVE SUMMARY

Introduction

The Early Learning and Development Standards (ELDS) are a collection of statements that reflect contextualized expectations concerning what children should know and be able to do. The approach has the aim of guiding and gauging practice and policy and therefore has wide application and appeal to policy makers, parents, and practitioners. This report presents the age validated ELDS for children 0 to 5 years of age in Lesotho. The process utilises a methodology, called the Standards Approach.

The Standards Approach is often misunderstood. Kagan and Rebello (2005) caution against the use of the Standards Approach with only a superficial understanding as it may result in delays or even the total derailment of the development process. They recommended that “all individuals who participate in the development of standards be well-versed in the typology of standards, the specifics of what Early Learning and Development Standards are, and their potential uses”.

The present report gives an account of age validation of the tabulated standards, indicators and competencies for each of three age groups in the Lesotho ELDS. Literature and Policy Review principles relevant to age-validation of the standards were extracted from the documents and workshop presentations pertaining to Early Learning and Development Standards (ELDS). These principles helped guide the data collection methodology, analysis of the resulting data, and the formulation of conclusions and recommendations for this age validation study.

Review of the Literature, Policy documents and Workshop Presentations

The Ministry of Education and Training (MOET) has made strides towards embracing an integrated approach towards Early Childhood Care and Development (ECCD). The 2013 National IECCD Policy for Lesotho is a key document in this regard. It emphasises the need for the integration of early childhood services and includes active participation of sectors such as Education, Health, Nutrition, Protection and Sanitation both within Government and between Government and Non-Governmental Organisations (NGOs).

The thinking behind the creation of early learning standards is to create standards that have broad agreement in order to improve the learning environment for young children in the home and outside it, so that their development is safeguarded, promoted and optimized both privately and through state institutions. Kagan and Rebello (2005) list the following as the uses of a sound and comprehensive system of standards:

Improve Instruction: Standards can form the basis for revising the educational program for young children according to their needs and progress.

Improve Parenting Skills and Behaviours: Standards can be used to help parents see what is and can be realistically expected from young children; they can serve as the basis for parent materials or home-learning tools/packages.

Improve Diagnostic Screening Tools: Standards can provide the content for developing a short screening instrument to assess children's overall developmental level.

Improve Teacher Preparation: Standards can guide the development of curricula for teacher training programs by providing information about what teachers of young children should know and be able to do in their roles as teachers.

Evaluate Program Effectiveness: Standards can form the basis for selecting or developing instruments for assessing children's progress as part of a comprehensive evaluation of a program's effectiveness.

Monitor National Progress of Children and Families: Standards can be used to collect national data on performance of children to tell how the nation's children and families as a whole are doing.

Improve Public Knowledge of Children's Development: The standards can be used for public information materials, including TV and newspaper announcements, governmental fliers, and brochures for new parents.

Once age-related standards have been drawn up, they should then be subjected to the three-tier validation process recommended in the ELDS workshops. The first tier of the validation, - the content validation – has now been completed, leaving the way clear for the second tier of the validation – the age validation – that is the subject of this report. The final tier will research the predictive validity of the standards. Kagan (2008) defined validation in the context of the ELDS as “the extent to which your standards are what they say they are”. In the age validation, the question to be answered is: “Are the early learning standards we have developed too easy, too hard, or just right for the bulk (that is, 50%) of our children of a given age?” She suggested that a range of 40% – 60% of the children near the top end of the age would be the criterion to strive for, but if 90% of children could do the indicator task then the standard was too easy and should be dropped down to an earlier age. Conversely if only 20% of children were able to do the task then it was too difficult and should be put into a higher age category.

Aim of the present research

To conduct with scientific rigour an age validation of the ELDS for children from birth to five years in four different ecological zones, selected to represent the different cultural and economic environments within Lesotho.

Objectives

1. Conduct a desk review of the National IECCD Policy and Strategic Plan 2013/14 to 2017/18, ECCD curriculum, reports of the national ECCD studies, Lesotho Demographic Health Survey 2014, National Strategic Plan on Vulnerable children (April 2012-March 2017), the content-validated ELDS and other relevant documents.
2. Conduct informational interviews or consultation with members of the IECCD Multisectorial team and other stakeholders as advised to discuss methods and approaches to the study.
3. Prepare a research plan using a country wide representative sample and select age ranges of 0-17, 18-36 and 37-60 months.
4. Design scientifically appropriate assessment tools based on development indicators provided by the ELDS for children in the birth to five year age category. These assessment tools will include caregiver rating scales and parents/caregivers tools to be used with children from birth to 5 years.
5. Determine, through a scientific study, whether development indicators in the standards provided by the ELDS are appropriate for children in the country between 0-5 years.
6. Make recommendations to the Ministry of Education and Training on major and significant adjustments on the ELDS, primarily, in terms of age validity and related socio demographic factors.
7. Finalise the age validated ELDS with feedback from MOET Senior staff and Heads of programmes, the members of the Multi-sectorial team, and other relevant stakeholders.

Methods

A quasi-experimental cross-sectional study design was used to assess the appropriateness of standardized ELDS items for children from birth to 5 years of age.

Site selection and recruitment

After a week of site visits, six districts were selected to maximize the diversity of the sample namely, Maseru, Butha-Buthe, Mokhotlong, Quthing and Qacha's Nek and Thaba-Tseka. Each District was visited during a week-long field exercise. Multiple sampling strategies were reviewed. After considering the availability of children in each of the six districts the following approach was proposed in order to maximize diversity while maintaining scientific standards of repeatability. First, the largest town in each district was selected. A circle with a diameter of 10 kilometres was drawn with this large town at the centre. The boundary line demarcated the urban selection frame for each district. A second larger circle with a diameter of 20 kilometres was then drawn again with the large town at the centre. Any villages falling further than 10km from town but less than 20km away were sampled to collect standards of children living in a more rural environment. The six areas selected were then further subdivided into one of four ecological zones namely, Foothills, Mountains, Lowlands and Senqu River Valley. These zones provide a full spectrum of the diverse environments in which children of Lesotho are raised.

Assessment tools

Review of both policy and other ELDS related documentation suggested the use of both parent ratings and direct observation of children in the age validation process. Parent rating surveys were designed that included ELDS items appropriate for each of the three age groups. The parent ratings were supplemented with two child development instruments, already in use in Africa, for the tracking of children's development. These scales allow more finely grained analyses to be conducted. For the two younger age groups (0-17 months and 18-36

months) each child completed the Protocol for Child Monitoring – Infant/Toddler version (PCM). Children in the oldest group completed the Early Learning Outcome Measures (ELOM). A parent support scale was also included for parents of all children in the study. The interview and test materials were translated from English to Sesotho.

Selecting ELDS items

The content validated ELDS items were carefully reviewed by the research team and recommendations for the removal or inclusion of items discussed among the team. Criteria for retaining items included that they were clearly stated, testable and interpretable. Duplicate items were also removed where necessary and the final set of items examined to make sure that they were answerable within the attention span of child and parent (no longer than 90 minutes).

Data analysis

The data were captured in SPSS, and frequency tables compiled for the ELDS competency items. Separate tables were compiled for ELOM and PCM scales considering sex (boy vs girl), geography (rural vs urban) and ecology (the four ecological zones of Lesotho namely, Lowlands, Foothills, Senqu River Valley and the Mountains). Play materials and other support provided by caregivers was also analysed using frequencies and Analysis of Covariance (ANCOVA).

Results

The detailed results of the ELDS are presented in the accompanying report. Additional analyses performed on the ELOM and PCM are presented in this document. Both are disaggregated by age, geography (urban vs rural) and ecological zone (lowlands, foothills, mountains and Senqu river valley).

The two geographies

The same pattern was seen consistently across all developmental domains tested for by the PCM and ELOM. Young children in urban areas are performing significantly more poorly than rural children of an equivalent age. As children get older it is evident that the urban children begin catching up to their rural peers

and eventually, in many cases, begin performing better on sub-domain tests. One possible explanation for this pattern is that many of the urban caregiver – child dyads were selected from in and around Maseru. Many of the women were employed in the factories that skirt the city and, due to the long hours they work, are unable to care for their children directly. While high quality crèches are available in Maseru, for many of these women earnings are limited and so they turn to low quality care for their young children. Children are, in effect, under the supervision of an adult but receive limited stimulation, play and opportunity for age appropriate activity. On the other hand, rural children are possibly safer and allowed to roam more freely thereby developing locomotion, cognition and adaptive mental flexibility. As children age and prepare for school the skills they require appear to be more easily acquired in urban areas with the large gap in ability closed by five years of age.

The four ecologies

All land in Lesotho is over 1,500 m above sea level. The lowlands (1,500 - 1,800m in altitude) makes up about 15% of the country, the foothills (1,800 - 2,200m) accounts for about 10 - 15% of the area while the mountains (2,200-3,000m) make two thirds of the remaining land are. Finally, the Senqu River Valley is an extension of the lowlands into the Eastern Mountains along the Senqu (Orange) River.

Without intimate knowledge of the country, the patterns observed in ecological differences are harder to understand. In many cases, once accounting for urban vs rural differences the ecological zone differences become statistically insignificant. None the less differences were noted. Overall, children from the lowlands were less frequently able to complete the age appropriate ELDS items. Children from the mountains frequently outperformed those from the lowlands with children from the foothills and Senqu river valley performing slightly better in some domains (self-help / cognitive flexibility) and slightly more poorly on others (numeracy and mathematics). In some cases older children performed very well

on tasks such as numeracy and literacy in a particular area – such as children from the foothills scoring well on the emergent numeracy tests. These differences may be partially explained by one or two good teachers being available in an area from which children were sampled.

The ELDS

The overall results of each age validated item are presented in detail in the accompanying report. Across age groups children performed very well on items from the sub-domains of creativity, curiosity and locomotion. For example 87% of 30-36 month olds spend time creating own play activities. Other domains were a struggle for many of the Lesotho children samples. The items within the sub-domains of numeracy, science (naming plants, domestic and wild animals) and cultural heritage (oral heritage, heritage sites and National symbols) appear to be broadly difficult for children at the selected age. Secondary analysis was conducted on the parent-rating questionnaire for the three age cohorts (6-17 months, 18-35 months and 36-49 months) by geography (rural vs urban) with little variation emerging.

Recommendations

Modification of the age validity criteria

As was proposed in the South African NELDS process, we recommend a revision of the Lesotho ELDS based on the results of the age validation study that use category rather than cut-off scores. Moving away from cutoff-points we created four codes which will enhance the usefulness of the ELDS in Lesotho:

- A. **80% and over.** This denotes a competency which should be achieved by most healthy children in the age group, with the exception of the very young. It is important to investigate the reason why a child did not achieve an A category competency, and to refer if necessary. Because young children are difficult to test and may be shy with strangers, it is always possible that this is the reason why a child fails to demonstrate the competency.

- B. **50-79%**. These are likely to be competencies which are relatively new or close to being achieved, or not yet performed reliably. In developmental theory *the zone of proximal development* is the term that refers to these emerging competencies (Vygotsky). These are areas of development where the child should be supported by family members, community workers and early learning practitioners. This band is wide to cater for the wide age ranges envisaged for ELDS.
- C. **20-49%**. These are competencies likely to be achieved only by the older children in the age category, or those in very favourable environments. These are areas of competency which older children should be assisted to attain. Where there are environmental factors which make it difficult for children to reach their full potential, these should be addressed.
- D. **Less than 20%**. These are competencies that need to be reviewed and special attention given to the factors driving the low rate of attainment.

Using the ELDS to identify developmental stages

Certain domains and competencies come to the fore at different times in a child's development. Child development is a complex process that the Standards Approach has sought to simplify in order to make it operational at country level. However, we should not oversimplify, and risk loss of effectiveness. It is the stage rather than the age which is important in devising remedies.

Parental Support

There is a marked lack of support from parents for fine motor skills, language and literacy, numeracy and problem-solving as reflected in the play materials given to the children. Crayons, paints, safety scissors, puzzles, books, pick-up-sticks and board games are absent from the list of toys that are given to children. All can be made from low cost materials with the right training and skills. These would enhance fine motor skills, executive skills like planning and problem-solving and

engender an enjoyment in reading. Interventions like the Family Literacy Programme serve the dual purpose of awakening an interest in reading and in enriching family relationships around an enjoyable shared activity.

Simple Blunt Interventions

Heckman (2000) suggests simple solutions targeting the very young as one way to maximise limited financial resources. An example of a successful project it may be useful to consider in the context of Lesotho is the Finnish Cot project.¹ Started in the 1930s, the cot project has spread globally with the Thula Baba Box in South Africa having a model that could easily be adapted to the Lesotho context. In essence the idea is to give every new mother a cardboard box, or similar, printed with local motifs that is full of useful items to support the child in its first six months of life. The box and mattress can be used as the child's first bed and the contents of the box ensure that the child has basic cloths, food and play materials to stimulate its early development. This, or other similar ideas, may be a useful intervention to consider implementing in Lesotho as it goes hand in hand with the ethos of the ELDS. It may be possible to integrate this idea with the Department of Health's Mother-Baby pack initiative.

Monitoring Crèche quality

In some instance, particularly among young urban children, poor quality of care and low stimulation is hypothesised to be causing the gap seen between urban children and their peers living in more rural parts of the country. Additionally, urban mothers often work and employ child minders who are also responsible for cleaning the house and cooking the food. To make time for these tasks, the child often ends strapped to the back of the employee. It is suggested that the MOET put some resources towards monitoring the quality of all such crèches that seem

¹ <https://www.finnishbabybox.com/eu/en>

to be used by young women working in the factories surrounding Maseru as well as investing in parenting education for working mothers in urban centres.

INTRODUCTION

Early childhood is a critical period in human development (Shonkoff, Richter, 2013). Delayed or disrupted early development associated with impoverished nutritional, emotional and cognitive circumstances results in risks for ill health, diminished human capital, as well as social and psychological difficulties in adulthood (Shonkoff et al., 2013). In this regard, the Early Learning Development Standards (ELDS) as a curriculum related policy initiative is an important tool to help evaluate the physical, cognitive, social and emotional developmental stages disparities that exist in the country with regards to children from birth to five. Also, considering the complexities associated with the operationalization of appropriate development indicators in children from birth to five, the scientific age validation of the ELDS is necessary in order to determine whether such indicators are appropriate for children from birth to five and whether the indicators are valid, particularly, in terms of age, economic background and geographical location.

To fully benefit from future opportunities in life and become productive members of society, young children must possess age-appropriate developmental growth and learning skills by the end of childhood. Recent brain research suggests the need for holistic approaches to early childhood development that encompass young children's physical and intellectual well-being as well as their socio-emotional and cognitive development (Sayre et. al, 2014). School readiness curricula further emphasize the importance of physical health and well-being, social competence, emotional maturity, language and cognitive development, communication skills and general knowledge (Sayre et. al, 2014).

To this end, efforts are made to ensure that children under the age of 5 years old have access to ECCD services and importantly the MOET has focused on ensuring that Early Learning and Development Standards (ELDS) are in place to support the development of children. The standards were developed in line with multiple domains including physical development; cognitive development; social and emotional development; communication, language and literacy; approaches towards learning; and cultural development. Some countries have also included an additional dimension focused on moral and spiritual development, or arts and creativity. The standards are accompanied by specific and measurable indicators to measure children's development progress. They are unique in that they provide a systematic basis for an integrated approach to early childhood.

The Ministry of Education and Training (MOET) has made strides towards embracing an integrated approach to Early Childhood Care and Development (ECCD). The 2013 National IECCD Policy for Lesotho is one of the key documents that emphasise the need for integration in ECCD provision. We summarise it as well as other key policy documents below.

IECCD Strategic Plan

The aim of the IECCD strategic plan is to make sure that the development of children from birth to five years takes priority. The plan is the result of collaboration among several ministries and non-governmental, faith based and private sector organisations of the sectors of education, health, nutrition, sanitation, and the important stakeholders in the community.

With the help of UNICEF a consultative approach was adopted during the preparation of the strategic plan with information from four sources: consultative workshops, a situational analysis, research and key informant interviews. The strategic plan is the operational framework for implementing IECCD policy. It consists of the organisational framework and a detailed action plan for each of the

eight strategies to address the issues identified during the consultative process. The strategic plan set out the task for each activity or service, giving detailed information regarding responsible entities, indicators and targets and budget projections.

The Plan uses a rights-based approach derived from the Convention on the Rights of the Child, in accordance with the following principles:

- A focus on equity, with priority given to the most vulnerable and marginalised children
- A comprehensive, integrated and multisectoral service
- Child and parental rights.
- A service which is inclusive of children with disabilities or developmental delays, or from minority ethnic groups.
- High quality services

Drawing from the situation analysis, the strategic plan specifically focused on the findings that appear to be more urgent and developed action plans to address them. These are:

Issue 1: Birth outcomes

Issue 2: The critical years from birth to 36 months of age.

Issue 3: Children with developmental delays, malnutrition, HIV and AIDS or disabilities.

Issue 4: The availability of high quality preschool services to all

Issue 5: Protection of the rights of children and parents, especially those living in difficult circumstances.

Issue 6: High standards of training in all fields included in IECCD services.

Issue 7: A system for IECCD quality assurance and accountability.

Issue 8: Information which is easily accessible to parents and community member's containing the key messages to promote good parenting and child development.

Issue 9: An organisational structure for IECCD service

It notes that a major fundraising effort will be required to carry out in full the activities and services presented under the eight IECCD Strategies. This will involve an investment strategy, which includes expanding and focusing:

- Ministerial budgets;
- Civil society, private sector and community contributions; and
- International development partner investments in Lesotho's children and families
- It will be necessary to develop new types of funding support. For this reason, the *Kingdom of Lesotho Trust Fund for Young Children* will be established, and sources of support for the Trust Fund will be identified and secured.

Strategic plan for Education

The Situation Analysis set out the very real difficulties that Lesotho finds itself in: extreme poverty, a poorly educated population, an inadequate number of schools and teachers and few employment opportunities for young school-leavers. In spite of previous attempts to rectify the situation, change has been slow.

Strategic planners in the education sector are advocating for a new direction: towards a significant investment in technical and vocational training. The situation analysis found that the present curriculum is characterised by subjects that are predominantly academic, with minimum practical skills that are essential for the integration of graduates into the employment market. However, it is important to take into consideration the employment market in a country that currently has little heavy industry and few mineral resources, but many advantages in terms of service industries. It is, therefore, suggested that the way forward should also maintain a focus on academic skills. Countries like Switzerland, which are similarly mountainous and land-locked, without mineral resources, have created a booming tourist economy based on the natural beauty of the countryside and the interesting cultures and crafts of the people. Their situation does not preclude an economy based on such enterprises, or enterprises in other areas such as scientific,

digital and technical advances. With a small population, well-educated in science and mathematics on the one hand, and arts and culture on the other, Lesotho could have a thriving modern economy.

In the present age-validation of the standards that are proposed for very young children, the children of Lesotho are falling below the required standards mainly in the domains of fine motor skills, early literacy and numeracy. Parents do not appear to be encouraging cognitive development through the play materials that they provide for their children. Most children, therefore, enter the formal school system without adequate preparation for academic pursuits and this will affect their later employment prospects negatively in a modern world.

Health survey report of 2014

The report on the health survey of 2014 shows that a substantial number of households do not have access to clean water and sanitation. This particularly affects very young children who are most likely to be infected by soil-transmitted helminths under these circumstances, and for whom diarrhoeal infections are particularly serious. The report also shows that 72% of household members walk to the nearest health facility and 27% require more than two hours travel to get to a health facility. This suggests that treatment for children is likely to be delayed in many cases because of the difficulty of getting to a health facility, and in severe cases this could have fatal consequences.

From a child development perspective, the report raises several concerns.

Firstly, the under-five mortality rate is high, even for a low-income country. The report mentions many risk factors for children: such as birth complications and exposure to infectious diseases through inadequate vaccination rates.

Secondly, life expectancy for adults is low, and many children risk being orphaned which brings heightened social and emotional consequences. There are high levels of HIV amongst the adults and tuberculosis is prevalent both in combination with HIV and alone. For these infections and for a number of non-communicable

diseases, many respondents did not seek treatment even when the symptoms and risks were known. In the case of pregnancy and childbirth, maternal mortality is high, and there is insufficient preventive action in the form of antenatal visits to health-care centres and health providers for routine checks, which could prevent birth complications. The prevalence of obesity in women also poses a risk for heart disease and early death.

Thirdly, the prevalence of anaemia and stunting is high with implications for sub-optimal brain growth in the first two years of life, and of low energy for exploration and learning.

Aim of the age validation research

- To conduct with scientific rigour an age validation of the ELDS for children from birth to five years in four different ecological zones, selected to represent the different cultural and economic environments within Lesotho.

Objectives

1. Conduct a desk review of the National IECCD Policy and Strategic Plan, ECCD curriculum, reports of the national ECCD studies, Lesotho Demographic Health Survey 2014, National Strategic Plan on Vulnerable children (April 2012-March 2017), the content-validated ELDS and other relevant documents.
2. Conduct informational interviews or consultation with members of the IECCD multisectoral team and other stakeholders as advised to discuss methods and approaches to the study.
3. Prepare a research plan using a countrywide representative sample and select age ranges of 0-17, 18-36 and 37-60 months.
4. Design scientifically appropriate assessment tools based on development indicators provided by the ELDS for children in the birth to five year age category. These assessment tools will include caregiver rating scales and parents/caregivers tools to be used with children from birth to 5 years.

5. Determine, through a scientific study, whether development indicators in the standards provided by the ELDS are appropriate for children in the country aged between 0-5 years.
6. Make recommendations to the Ministry of Education and Training on major and significant adjustments on the ELDS, primarily, in terms of age validity and related sociodemographic factors.
7. Finalise the age validated ELDS with feedback from MOET Senior staff and Heads of programmes, the members of the Multi-sectorial team, and other relevant stakeholders.

METHODS

Study Sites and Sample

Data collection was tailored to each geographic location based on the anticipated challenges such as remoteness and/or accessibility. A representative sample that fully reflects the developmental potential of all children in Lesotho was required. In order to achieve this objective a sampling frame was designed that took into account a number of important factors. First, it was necessary to collect data both from children living in environments with good nutrition, high caregiver involvement and diversity of sensory stimulation as well as those from more deprived environments. Second, it was important to capture both urban and rural differences. Third, different ways of life as lived out in all ecological zones was sampled (Lowlands, Highlands, Foothills, and Senqu River Valley). Finally, as many as possible of the provinces were included.

Site selection started with a week of visits by the research team to six districts selected to maximize the diversity of the sample namely, Maseru, Butha-Buthe, Mokhotlong, Quthing and Qacha's Nek and Thaba-Tseka. Each District was visited during a week-long field exercise. Multiple sampling strategies were

reviewed. After considering the availability of children in each of the six districts the following approach was chosen in order to maximize diversity while maintaining scientific standards of repeatability. First, the largest town in each district was selected. A circle with a diameter of 10 kilometers was drawn with the town at the center of the circle. This circular boundary line demarcated the urban selection frame for each district. A second larger circle with a diameter of 20 kilometers was then drawn around the town. Any villages falling further than 10km from town but less than 20km were eligible for selection of children considered to be living in a rural environment. Table 1 presents an overview of the population density for selected Districts from 1986 till 2011 (Lesotho Bureau of Statistics). All village data on maps were collected and shared by the Lesotho Community Councils mapping project². Figure 1 and Figure 2 visually illustrate this strategy for the entire sample (Figure 1) and, as an example, Butha-Buthe (Figure 2).

Table 1. Summary of population density by district from 1986 till 2011 (Estimate)

District	Area A (km ²)	Population Census (C) 4/12/1986	Population Census (C) 4/14/1996	Population Census (C) 4/9/2006	Population Estimate (E) 4/16/2011
Butha-Buthe	1,767	106,880	109,905	110,320	105,403
Maseru	4,279	311,829	393,154	431,998	389,627
Mokhotlong	4,075	80,514	86,468	97,713	105,538
Qacha's Nek	2,349	69,517	72,886	69,749	63,910
Quthing	2,916	120,264	127,560	124,048	129,533
Thaba-Tseka	4,270	110,528	128,778	129,881	130,532
Lesotho	30,355	1,605,177	1,862,275	1,876,633	1,894,194

² <https://sites.google.com/site/geowikia/projects/lesotho-community-councils>

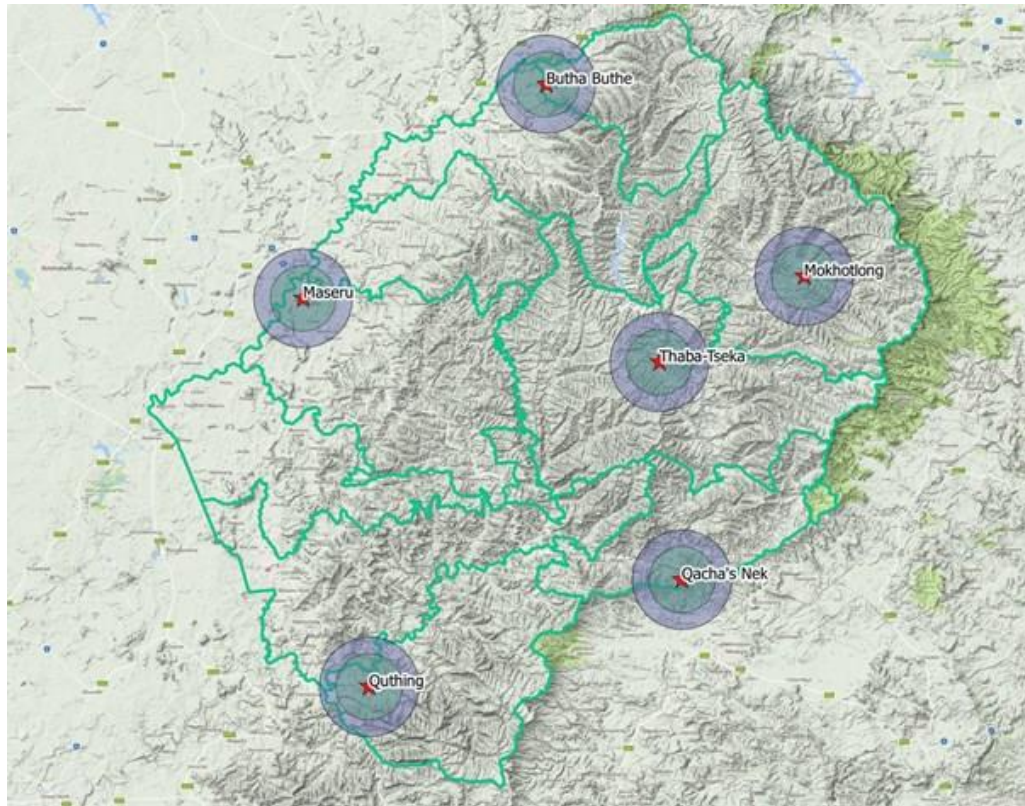


Figure 1. Overview of Lesotho sampling frame

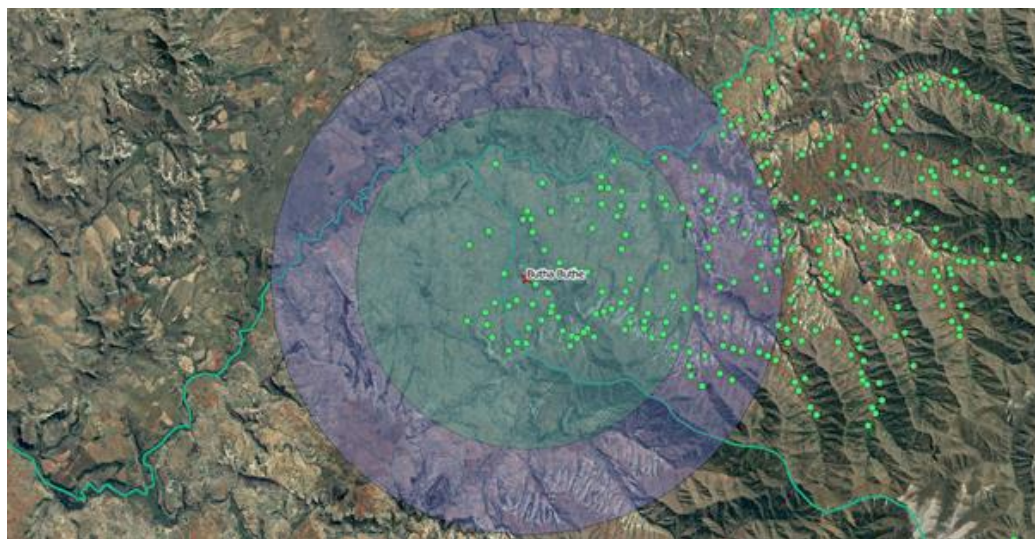


Figure 2. Example of sample frame for Butha-Buthe

Training of assessment teams

Twelve research assistants were trained intensively over a three week period to assess the development of very young children to a high standard of inter-tester reliability. They were trained to use different instruments for the three age groups: structured observations, three different parent questionnaires (one for each of the target age groups) and two scales for measuring child development (one for children up to the age of three, and one for four to five year olds).

They were first introduced to the purpose of the study and the importance of developing a reliable set of standards specific to Lesotho, on which education curricula for preschool facilities, training programmes for preschool educators, and parenting programmes could be based. The need for testing children in a standardized way and for recording their responses reliably was emphasized, and it was explained that careless testing could result in the Ministry of Education being given unreliable information.

Next, the trainers discussed with them the need for a strict code of ethics particularly when working with children based on the general principle of "Do no harm." Parents should be fully informed of the purpose of the study and the way in which information should be gathered. If they did not want their child to participate, their decision should be accepted cheerfully.

The need for absolute confidentiality was explained to the trainees, to avoid children being labelled as "clever" or "not clever" or "naughty" on the basis of a brief interview with them, a label that might unfairly alter the way that their family treated them subsequently. For the same reasons they were to resist discussing individual children with teachers, or anyone outside the research team. Similarly children should be treated with respect in the testing situation, however unco-operative they might be, and not ever threatened with punishment or mocked.

Children who are anxious in the testing situation should be comforted and encouraged, but not forced to continue if they failed to settle. Suspected disabilities should be referred to the research leaders for evaluation and possible referral.

From this general preparation, the trainers moved on to familiarizing the trainees with the instruments they would be using, the purpose and characteristics of each instrument and the way in which it should be administered. To avoid confusion trainees were fully trained on each instrument in turn,

In the case of the ELOM which was the most complex of the measures, a training video was shown to the trainees in which they were introduced to the manual and the test kit, and were able to view children being tested. Then the trainees interviewed one another until they were familiar with the sequence of tasks and the materials being used. They then worked in pairs, assessing children under supervision from the trainers in local preschool facilities until each assessor had tested three children and watched his or her partner assess three children. The afternoons were devoted to critically reviewing the morning testing and discussing problems and uncertainties. A quiz was used to test trainees on the finer points of the test administration.

The training for the PCM and the Parent Ratings and Child Observations followed the same format, although training videos were not available for these.

Finally, the trainers prepared the assessment team for the practicalities of the data collection expeditions: communication in the field, provisioning and equipment, supervision and reviews during data collection, incident management and support.

Trainers explained the recruitment procedures that would be used in this age validation study, to ensure that all age groups were equally represented in each ecological zone, and the consent forms and procedures were discussed.

By the end of the training period the assessment team recruited by HSRC showed a good understanding of the purpose and procedures of data collection, interacted well with the children, their parents, and the communities where training took place.

Recruitment of the sample

In each of the six districts, a stratified purposive sample was used to access children in each of the three age categories (0-17 months, 18-36 months, 37-60 months). One-hundred (100) children were selected in each of the identified age ranges. Within each age category the sample was further stratified by gender (male and female) and ecological zone (Lowlands, Highlands, Foothills and Senqu River Valley). These regions were also classified as either rural or urban (as described earlier) to further nuance the analysis. The sample is not large enough to disaggregate by gender, geography and ecology at the same time and all analyses will be either by gender, geography or ecological zone.

Ethical Considerations

Ethical approval was obtained from the HSRC Research Ethics Committee. Parents or primary caregivers were given an information document explaining the purpose of the study and the contact details of the researchers. If the caregiver consented to participate in the study, the study was explained in detail and the caregiver requested to sign a consent form. The information linking the study number with the name of the case will be kept in a locked cupboard at the HSRC for the next 5 years.

Assessment tools

The ELDS workshop documents recommended for the age validation process suggest the use of parent ratings, coupled with direct observation of children. In the present age validation study the Parent Rating interview, in addition to questions to the caregiver, had items where the children were asked to respond to the assessor directly, either verbally or by demonstrating a skill. Separate age appropriate rating scales were devised for each age group. In the two supplementary measures, the Protocol for Child Monitoring (PCM), and the Early Learning Outcomes Measure (ELOM), the assessors worked directly with the children, and observed and recorded their responses. These supplementary measures were fine-grained analyses of child development, and were designed for use in large-scale studies in Africa. The PCM for 0 – 3 year olds, is the most recent version of the Kilifi Development Inventory developed in Kenya, but used in African countries. It has two scales, the locomotor and the eye-hand co-ordination scale, which measure key milestones in the gross and fine motor development of very young children. The ELOM was developed in South Africa last year for 5 year olds and covers a wide range of capabilities appropriate to this age group, particularly those which would facilitate a smooth transition into the formal education system.

For the age validation of the Lesotho ELDS there were certain limitations on the choice of items to be included in the study. Firstly, the child assessment process was not to exceed one hour in duration to prevent fatigue on the part of the child. Secondly, the items selected for testing needed to reflect the unique structure and content of the Lesotho Early Learning and Development Standards. Thirdly, the items needed to be clearly stated so that their intention was clear to the caregiver, and the inter-assessor reliability of the scoring had to be high.

The length of the assessment: The standards document contained over 90 standards. From these the research team carefully shortlisted items suitable for the parent-rating interview which were not covered by the two structured assessment procedures, the PCM and the ELOM.

Retaining the structure and content of the Lesotho ELDS: We included one or more item from each age group in each sub-domain and component so that all the aspects of child development from the Lesotho framework were included. There were a few exceptions in cases where the youngest children could not be expected to demonstrate a capability although it might be present in a rudimentary form. The sub-domain “Reflection and Interpretation” under the domain “Approaches to Learning” was an example of this.

Data analysis

The data were captured in SPSS, and frequency tables compiled for the competency items. Separate tables were compiled for the ELOM and PCM-IT scales for the purpose of comparing children from urban / rural and the four ecological zones on socio-economic indicators and on test scores.

RESULTS

The Protocol for Child Monitoring – Infant/Toddler version (PCM-IT) disaggregated by geography and ecological zone

The PCM is one of the two developmental measures devised independently of the ELDS programme, and included in this study to give alternative ways of assessing developmental standards. The PCM was administered to children in the lower two age categories, namely 6 – 17 month and 18 – 35 month categories. The scale measures motor ability, cognition and self-help (cognitive flexibility that is later expressed as executive function).

There were significant positive correlations between age in months and developmental scores in all the categories measures by the test (see Table 2).

Table 2. Correlations between PCM scores and Child’s Age (in months)

	Correlation coefficient	Number tested	Significance
Gross Motor Skills	0.73	114	<.001
Fine Motor Skills	0.55	101	<.001
Cognition	0.66	180	<.001
Self-help	0.68	179	<.001

Then, correcting for the effects of age, we analysed the scores by urban vs rural geographies and the four ecological zones of Lesotho to establish whether there were differences in child development in these different areas. There were no significant gender differences. Table 3 and Figure 3 show the statistically significant difference of age and ecology on PCM total scores. Unsurprisingly the younger age group score lower than the older age group. Differences do exist between urban and rural children but they are not significant. Children from the lowlands score well below their peers from the other three zones.

Table 3. Factorial Analysis of Variance considering the impact of age, geography and ecology on overall PMC score

Source	Sum of Squares	df	F	Sig.
Corrected Model	60694	7	13.88	.000
Intercept	637781	1	1020.58	.000
Age Category	20459	1	32.74	.000
Urban/Rural	1497	1	1.65	.204
Ecology	20730	3	11.06	.000

Age by Urban/Rural	5073	1	5.60	.022
Age by Ecology	2226	3	1.19	.324
Error	12093	102		

Geographic Model ($R^2 = 0.65$) Ecological Model ($R^2 = 0.47$)

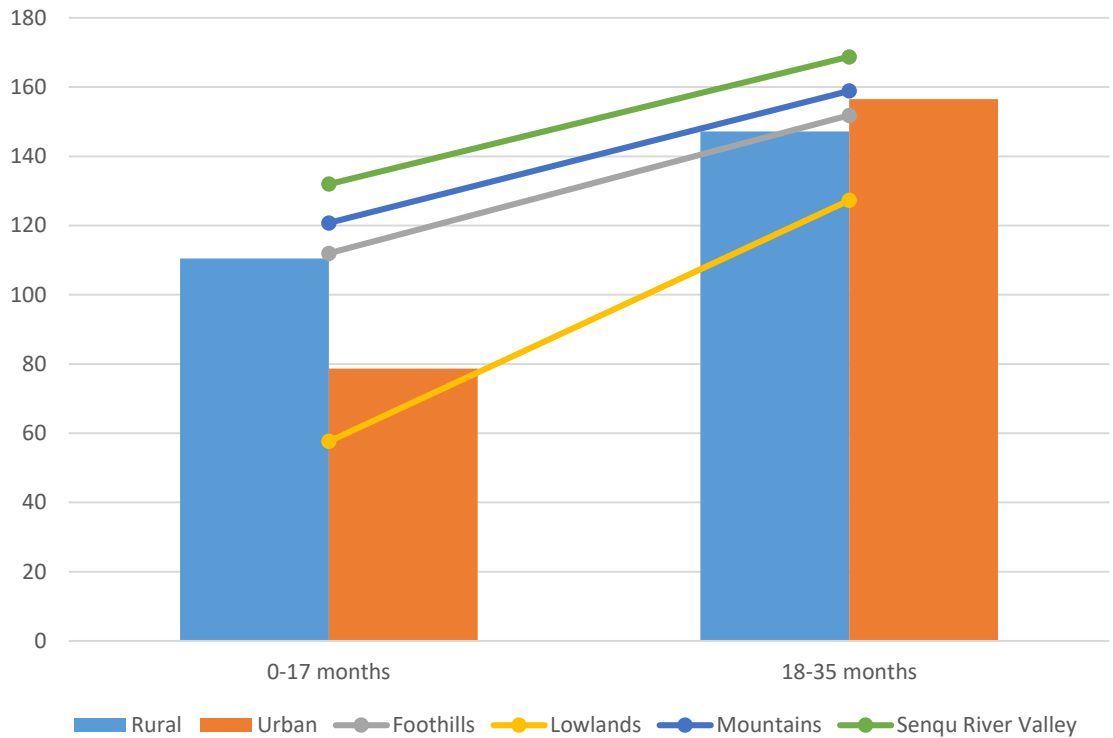


Figure 3. Overall PCM score disaggregated by age, geography and ecological zone.

Table 4 and Figure 4 present a similar pattern with age and ecology having statistically significant differences in patterns of gross motor development. There is also a significant interaction between age and geography with young urban children scoring worse than their rural peers but catching up and scoring similarly by 35 months of age. Not considering age, lowlands children performed significantly below their peers on the gross motor assessment.

Table 4. Factorial Analysis of Variance considering the impact of age, geography and ecology on gross motor development

Source	Sum of Squares	df	F	Sig.
Corrected Model	9548	3	26.85	.000
Intercept	369211	1	3114.02	.000
Age Category	8695	1	73.34	.000
Urban/Rural	168	1	1.42	.236
Ecology	1434	3	4.228	.007
Age by Urban/Rural	840	1	7.09	.009
Age by Ecology	354	3	1.044	.376
Error	12093	102		

Geographic Model ($R^2 = 0.44$) Ecological Model ($R^2 = 0.47$)

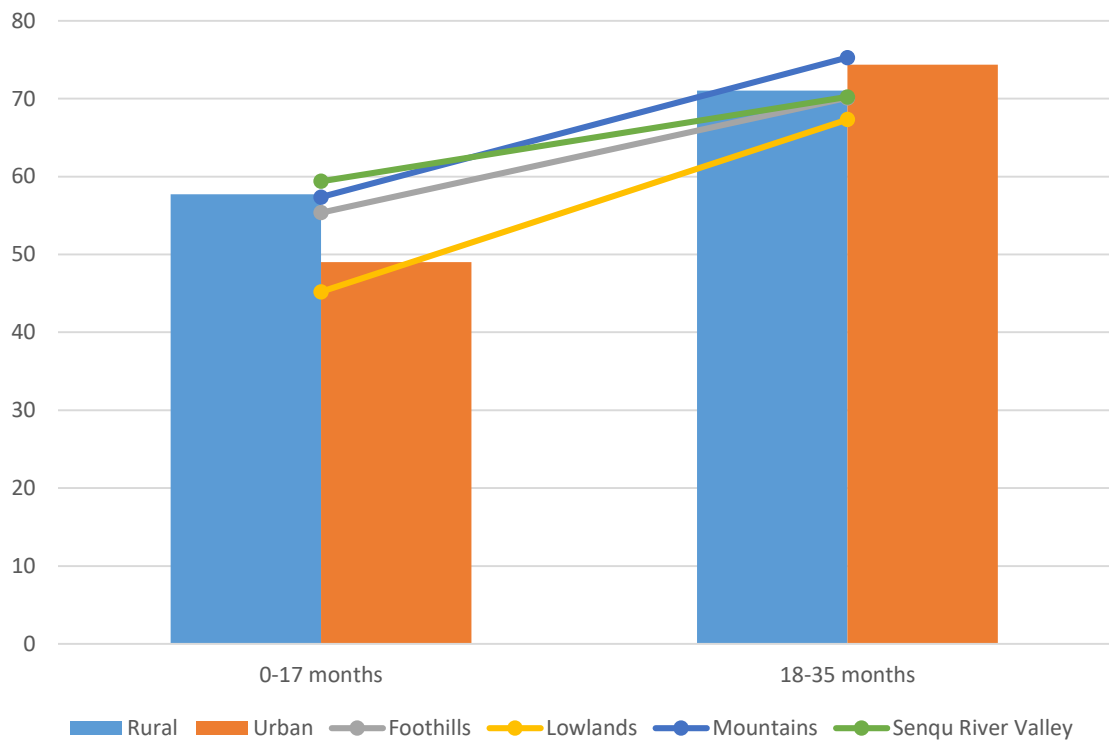


Figure 4. PCM gross motor development disaggregated by age, geography and ecological zone.

Table 5 and Figure 5 show that lowlands children are also performing significantly lower on fine motor coordination tasks than their peers. The same pattern is evident geographically with younger rural and older urban children performing best at the fine motor tasks.

Table 5. Factorial Analysis of Variance considering the impact of age, geography and ecology on fine motor development

Source	Sum of Squares	df	F	Sig.
Corrected Model	10574	3	17.65	.000
Intercept	139061	1	696.16	.000
Age Category	10175	1	50.94	.000
Urban/Rural	360	1	1.80	.183
Ecology	5691	3	13.37	.000
Age by Urban/Rural	574	1	2.88	.094
Age by Ecology	135	3	.32	.813
Error	17179	89		

Geographic Model ($R^2 = 0.38$) Ecological Model ($R^2 = 0.56$)

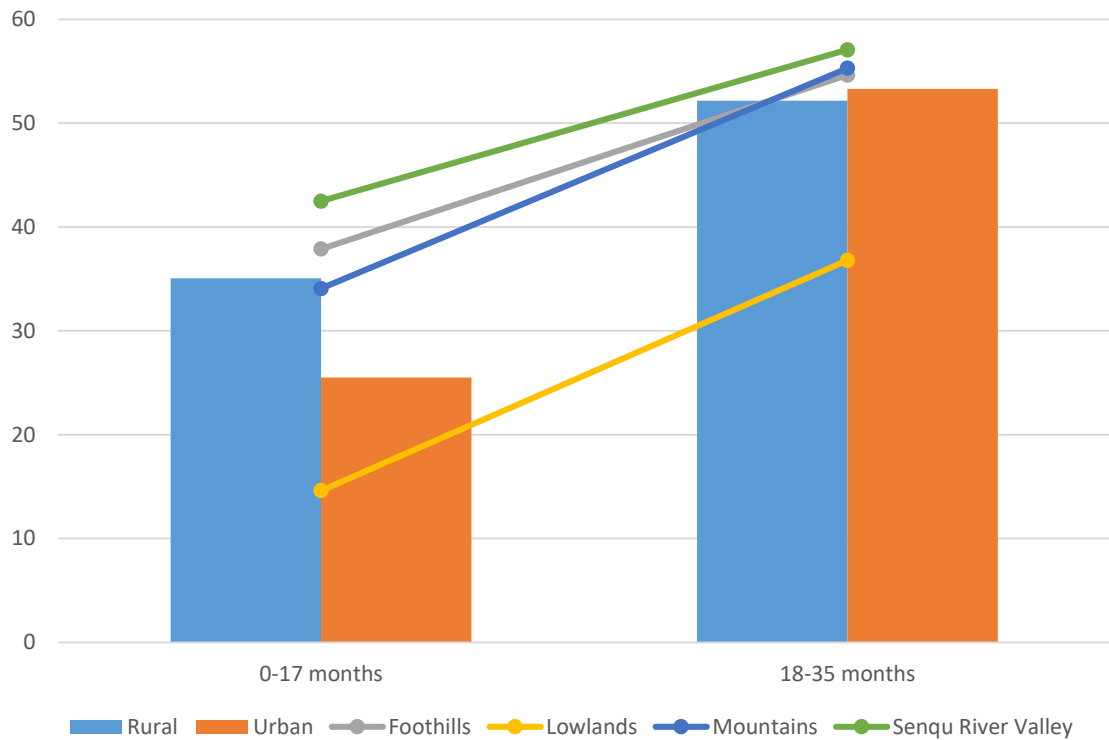


Figure 5. PCM fine motor development disaggregated by age, geography and ecological zone.

Table 6 and Figure 6 present a slightly different pattern of cognitive development. Now, only age is statistically significant with older children performing superiorly to younger children. No interactions or differences by geography or ecology were found. Senqu River Valley children continue to perform as well on the cognitive assessment as they did on tests of locomotion.

Table 6. Factorial Analysis of Variance considering the impact of age, geography and ecology on cognitive development

Source	Sum of Squares	df	F	Sig.
Corrected Model	812	3	24.17	.000
Intercept	10055	1	898.24	.000

Age Category	782	1	69.82	.000
Urban/Rural	0	1	0.01	.953
Ecology	61	3	1.87	.137
Age by Urban/Rural	22	1	2.00	.160
Age by Ecology	43	3	1.29	.278
Error	1746	156		

Geographic Model ($R^2 = 0.32$) Ecological Model ($R^2 = 0.34$)

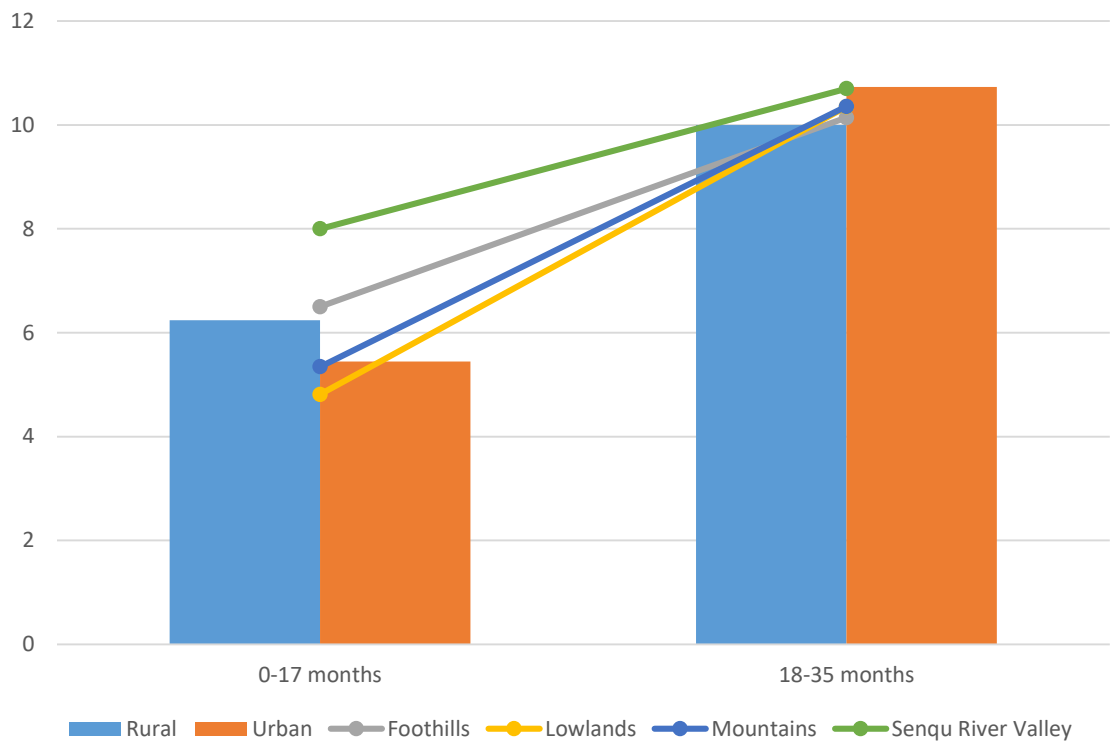


Figure 6. PCM cognitive development disaggregated by age, geography and ecological zone.

Table 7 and Figure 7 show a wide variation in scores by age, geography and ecological zone. Interactions between age and geography were once again identified with the pattern of younger urban children performing worse and then

catching up by 35 months. Senqu River valley score significantly higher than lowlands children across all ages.

Table 7. Factorial Analysis of Variance considering the impact of age, geography and ecology on self-help

Source	Sum of Squares	df	F	Sig.
Corrected Model	3846	3	32.98	.000
Intercept	22736	1	584.91	.000
Age Category	3738	1	96.15	.000
Urban/Rural	93	1	2.38	.125
Ecology	826	3	8.11	.000
Age by Urban/Rural	170	1	4.37	.038
Age by Ecology	120	3	1.18	.320
Error	6025	155		

Geographic Model ($R^2 = 0.39$) Ecological Model ($R^2 = 0.48$)

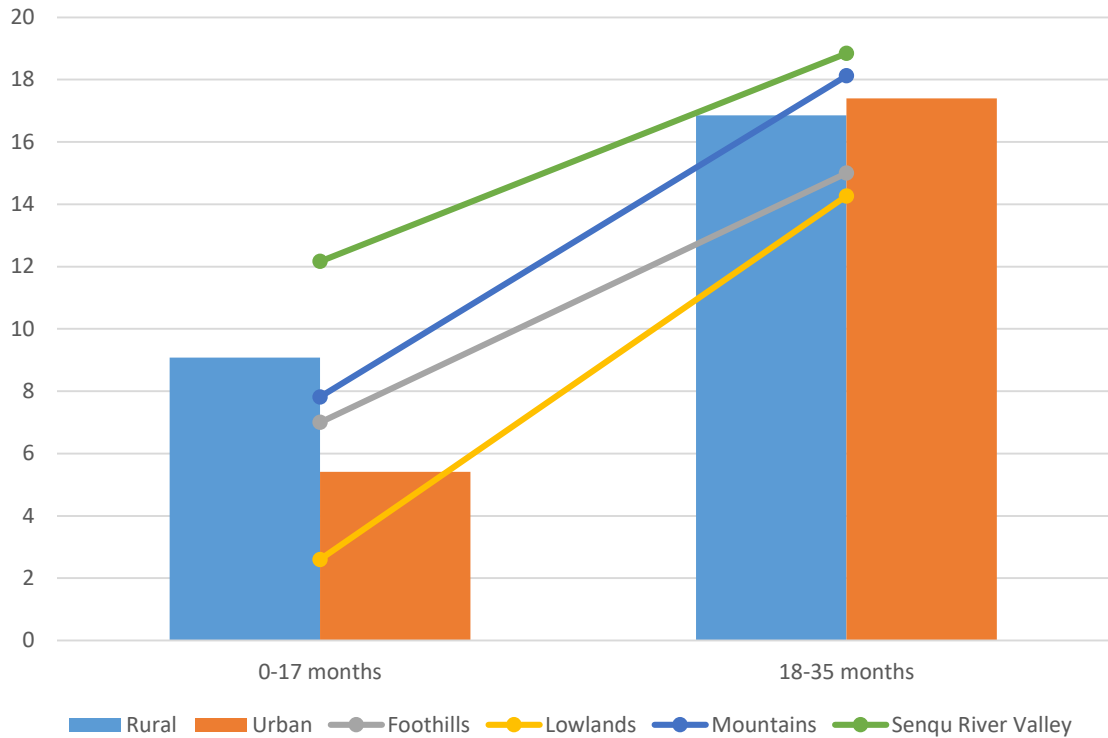


Figure 7. PCM Self-help (adaptive behaviour) disaggregated by age, geography and ecological zone.

The Early Learning Outcomes Measure (ELOM) disaggregated by geography and ecological zone

The ELOM test was administered to the 36-60 month olds. The analysis for the ELOM test was conducted in a similar fashion to the PCM-IT analysis. There were significant effects of age and geography and ecological zone. Unlike with the PCM-IT, a gender differences was found for one of the sub-domains. Girls scored significantly higher on tests of gross motor locomotion than did similarly aged boys. All other sub-domains showed no gender differences. Table 8 and Figure 8 summarize overall ELOM scores. Older children performed significantly better on the ELOM than did younger children. Once accounting for age, no differences were found by geography or ecological zone on the ELOM total. Although not statistically significant, older children from the foothills continue the pattern that

was found among younger children performing more poorly than similarly aged peers.

Table 8. Analysis of Covariance considering the impact of geography and ecology on overall ELOM scores adjusted for child age

Source	Sum of Squares	df	F	Sig.
Corrected Model	1196	2	3.22	.047
Intercept	310	1	1.67	.201
Age in Months	1192	1	6.41	.014
Urban/Rural	20	1	0.11	.743
Ecology	575	3	1.10	.378
Error	11714	63		

Geographic Model ($R^2 = 0.09$) Ecological Model ($R^2 = 0.11$)

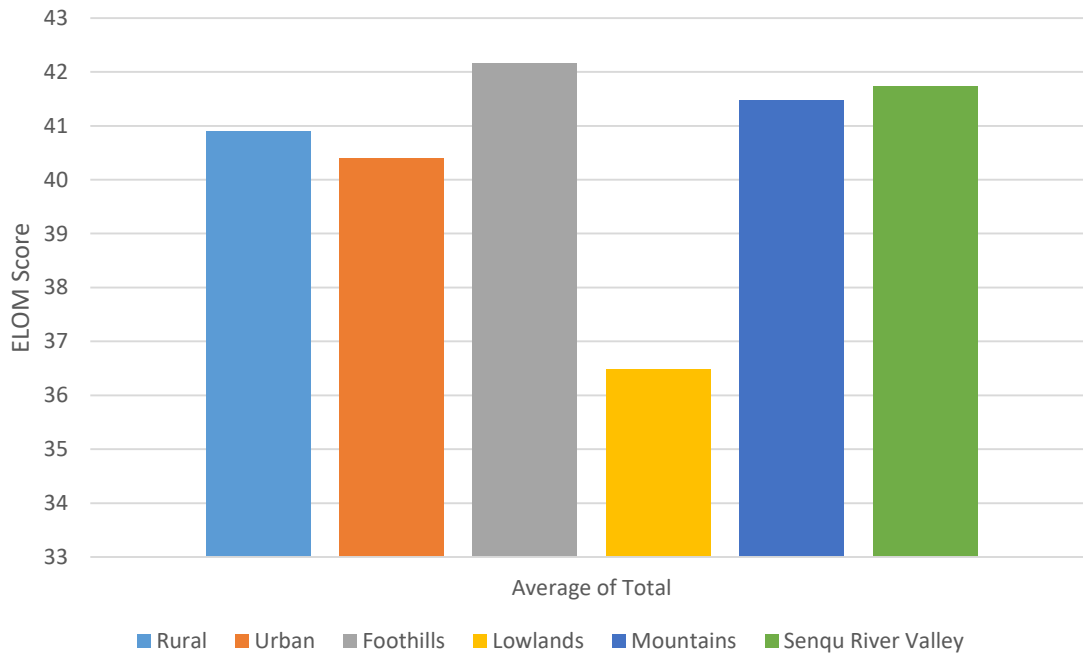


Figure 8. Overall ELOM score disaggregated by age, geography and ecological zone.

Table 9 and Figure 9 show that by the age of 4 to 5, very few gross motor differences exist by age, geography or ecological zone. At this age most gross motor development has 35

concluded and it becomes a less important milestone measure than it is for younger aged children.

Table 9. Analysis of Covariance considering the impact of geography and ecology on gross motor development adjusted for child age

Source	Sum of Squares	df	F	Sig.
Corrected Model	40	2	1.69	.194
Intercept	8	1	.67	.417
Age in Months	36	1	3.04	.086
Urban/Rural	1	1	.056	.814
Ecology	100	3	3.17	.031
Error	741	63		

Geographic Model ($R^2 = 0.05$) Ecological Model ($R^2 = 0.14$)

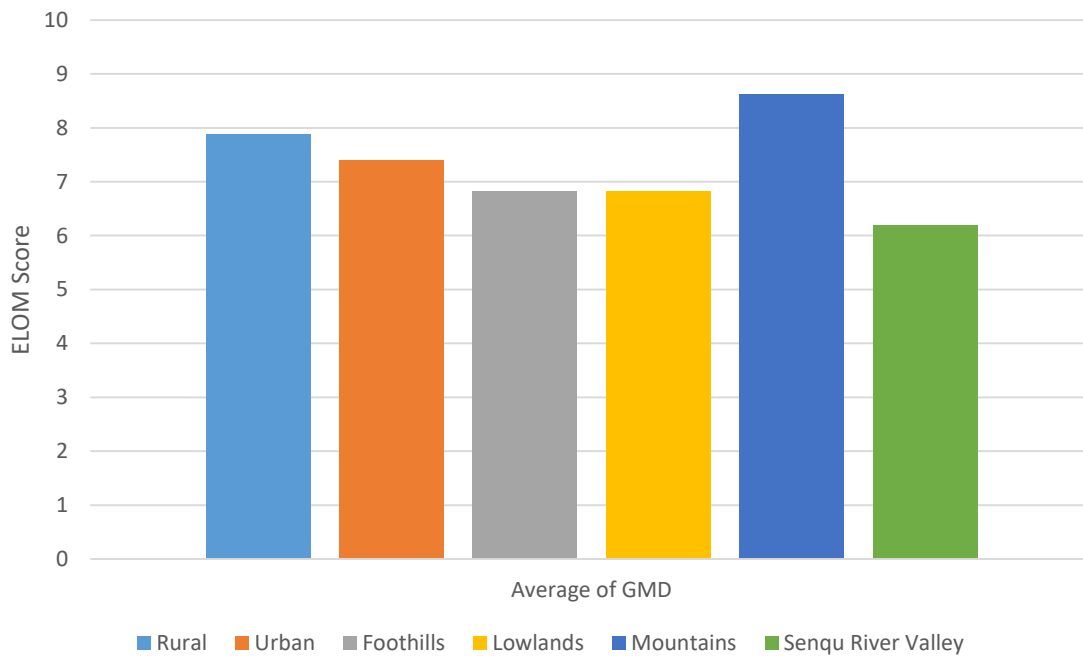


Figure 9. ELOM gross motor development disaggregated by age, geography and ecological zone.

Fine motor ability was still found to differ by age in this upper age category. This is not surprising as children continue to develop their fine motor ability until around the age of 6. Table 10 and Figure 10 show these differences with children from the Senqu River Valley scoring higher than children from other zones. The difference was, however, not statistically significant.

Table 10. Analysis of Covariance considering the impact of geography and ecology on fine motor development adjusting for child age

Source	Sum of Squares	df	F	Sig.
Corrected Model	73.033a	2	3.464	.037
Intercept	19.702	1	1.869	.176
Age in Months	72.104	1	6.839	.011
Urban/Rural	.424	1	.040	.842
Ecology	35	3	1.11	.351
Error	664.166	63		

Geographic Model ($R^2 = 0.10$) Ecological Model ($R^2 = 0.18$)

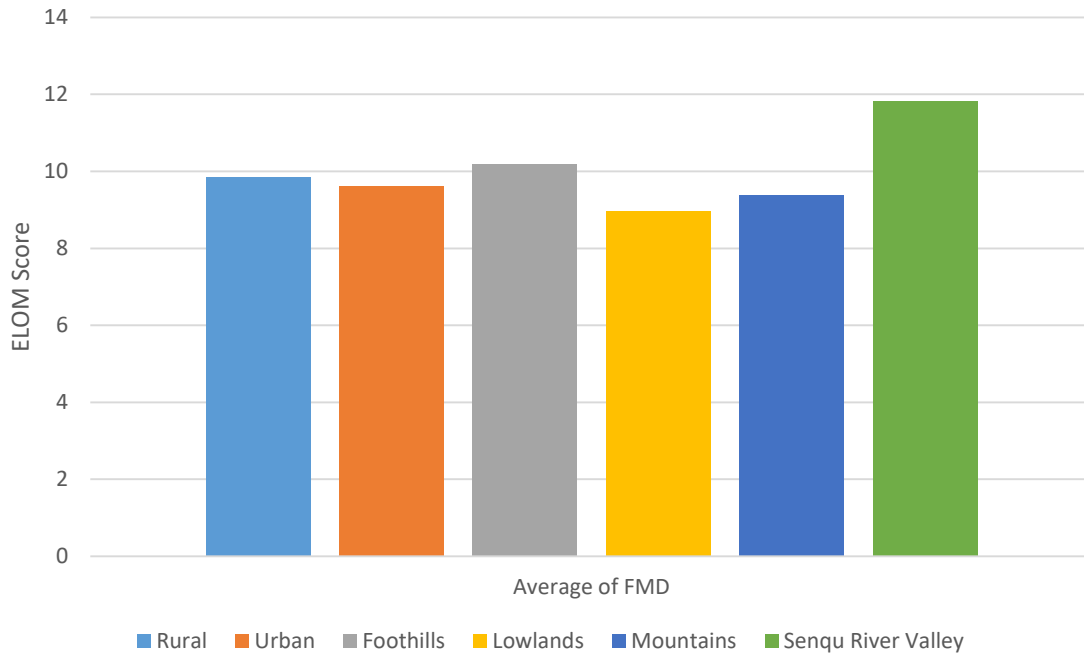


Figure 10. ELOM fine motor development disaggregated by age, geography and ecological zone.

A similar pattern exists for emergent numeracy and mathematics with age being the only statistically significant variable. Table 11 and Figure 11 show the results. Although the foothills appear to be doing much better it should be noted that the difference is only about 0.9 of point between foothills and the worse performing region (lowlands).

Table 11. Analysis of Covariance considering the impact of geography and ecology on emergent numeracy and mathematics adjusting for child age

Source	Sum of Squares	df	F	Sig.
Corrected Model	66	2	2.18	.121
Intercept	22	1	1.43	.236
Age in Months	66	1	4.35	.041
Urban/Rural	4	1	0.26	.615
Ecology	14	3	0.30	.827
Error	949	63		

Geographic Model ($R^2 = 0.07$) Ecological Model ($R^2 = 0.08$)

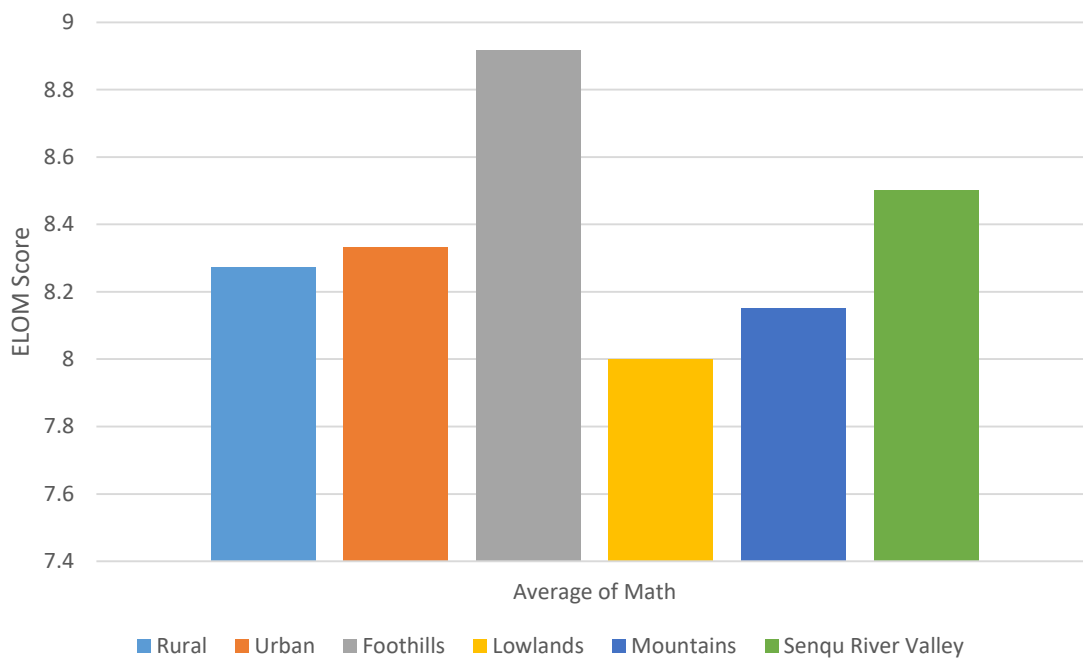


Figure 11. ELOM emergent numeracy disaggregated by age, geography and ecological zone.

As with gross motor no statistically significant differences were observed by age, geography or ecological zone (Table 12 and Figure 12).

Table 12. Analysis of Covariance considering the impact of geography and ecology on cognition and executive functioning adjusted for child age

Source	Sum of Squares	df	F	Sig.
Corrected Model	42.516a	2	1.910	.157
Intercept	14.828	1	1.332	.253
Age in Months	34.191	1	3.071	.085
Urban/Rural	15.476	1	1.390	.243
Ecology	72	3	2.26	.090
Error	701	63		

Geographic Model ($R^2 = 0.06$) Ecological Model ($R^2 = 0.13$)

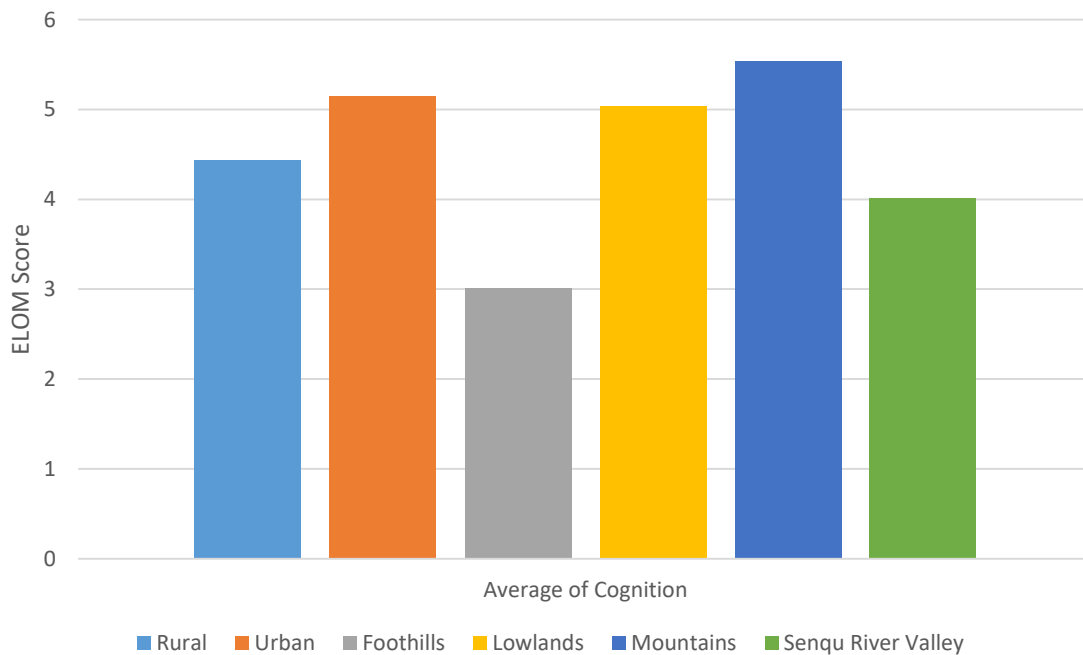


Figure 12. ELOM cognitive development disaggregated by age, geography and ecological zone.

As seen with emergent numeracy, emergent literacy varied significantly by ecological zone (Table 13 and Figure 13). The same pattern emerges for literacy as was seen for 40

numeracy with children from the Foothills performing best and those from the lowlands performing worst.

Table 13. Analysis of Covariance considering the impact of geography and ecology on emergent literacy and language adjusted for child age

Source	Sum of Squares	df	F	Sig.
Corrected Model	43	2	.79	.459
Intercept	4	1	.13	.721
Age in Months	37	1	1.36	.248
Urban/Rural	2	1	0.06	.811
Ecology	228	3	3.08	.034
Error	1730	63		

Geographic Model ($R^2 = 0.02$) Ecological Model ($R^2 = 0.15$)

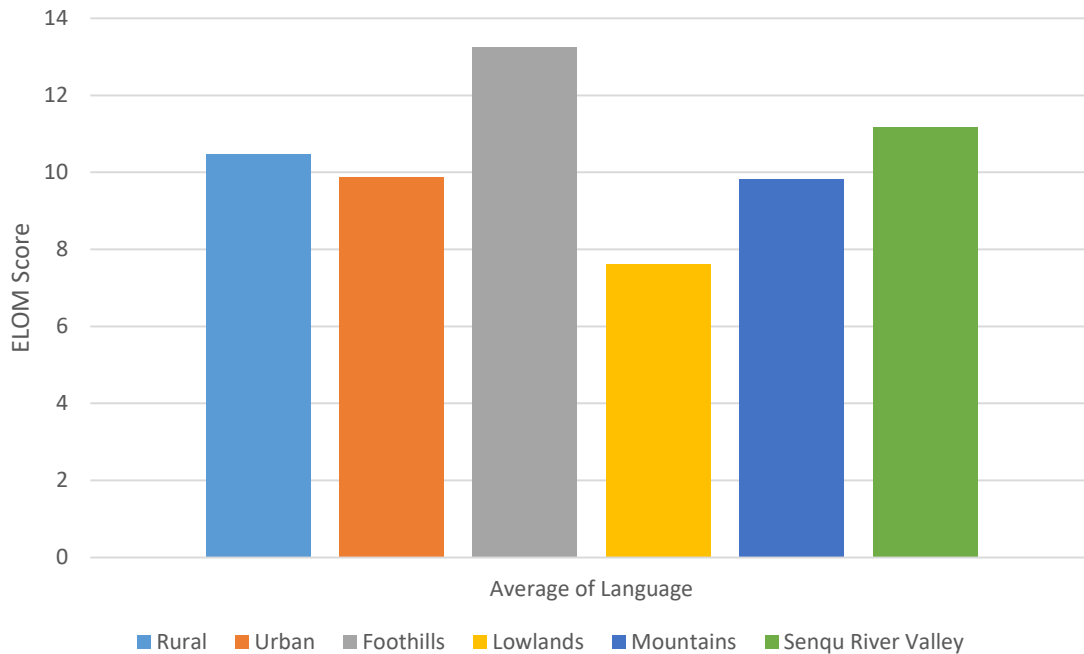


Figure 13. ELOM emergent literacy disaggregated by age, geography and ecological zone.

In summary, the analyses of these two independent tests shows that age related skills and competencies differ markedly from place to place.

Enhancing Early Child Development within the Family.

Of the activities that caregivers mentioned in the Parent Rating interview, *providing play materials* was consistently high across the three child age groups, with toy cars (78 mentions) and dolls (63 mentions) being the most popular items, followed by balls (40 mentions). Possibly because of the way the caregivers' attention was directed to "play materials", books were only mentioned twice in the interviews, but it is significant that there was no mention of crayons or scissors which would stimulate fine motor skills, and only one caregiver mentioned puzzles. *Taking the child to religious meetings* was the next most frequently mentioned activity, even for the youngest children. Very few caregivers had seen fit to impart cultural and patriotic information and possibly it was viewed by caregivers to be more suitable for older children.

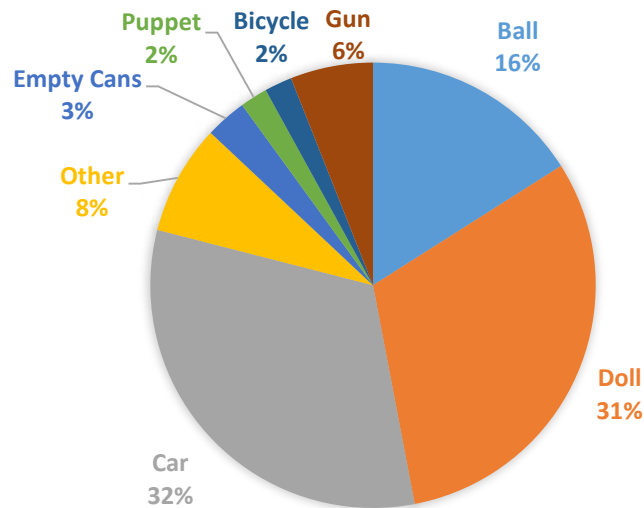


Figure 14. Frequency of play materials provided by caregivers to children

Table 14. Caregiver support scale for all age groups

Caregiver/Parent action	12 – 18 months	30 – 36 months	54 – 60 months
Parents provide play materials for children	76.9	78.8	78.8
Have you, in the last week, shown your child some new things?	13.9	16.8	10.4
Have you, in the last week, shown your child how to do something new?	17.6	15.2	14.2
Do you have rules for keeping your child safe when travelling in a car or truck?	21.8	43.6	46.6
Do you have rules for keeping your child safe when meeting strangers?	23.6	30.6	53.3
Do you have rules for keeping your child safe when going away from home?	16.3	20.1	50.0
Do you tell your child about the culture of the Basotho people?	6.2	13.3	29.3
Do you tell your child about the country of Lesotho?	3.1	5.3	17.8
Do you take your child to family gatherings?	34.3	48.7	57.0

Do you take your child to religious meetings?	62.1	74.1	76.6
---	------	------	------

There was very little difference between the level of individual supportive activities in urban and rural areas.

Table 15. Caregiver support scale for all age groups disaggregated by geography

Caregiver/Parent action	Rural	Urban	Statistical Significance of the difference $2 \times 2 \chi^2$
Parents provide play materials for children	74.8	85.4	p=.046 adjusted using Bonferroni method
Have you, in the last week, shown your child some new things?	15.6	19.8	ns
Have you, in the last week, shown your child how to do something new?	24.3	25.3	ns
Do you have rules for keeping your child safe when travelling in a car or truck?	37.5	34.9	ns
Do you have rules for keeping your child safe when meeting strangers?	43.6	28.0	p=.016 adjusted using Bonferroni method

Do you have rules for keeping your child safe when going away from home?	35.3	31.5	ns
Do you tell your child about the culture of the Basotho people?	13.6	14.3	ns
Do you tell your child about the country of Lesotho?	7.1	10.9	ns
Do you take your child to family gatherings?	47.4	51.6	ns
Do you take your child to religious meetings?	74.8	69.5	ns

The 11 caregiver/child activities formed a caregiver support scale (Cronbach's alpha of 0.71) with a high score showing that the caregiver had given support to the child through more of these activities. There were no significant differences between the rural and urban samples on this caregiver activity measure but two of the individual items showed significant urban/rural differences (see Table 15 above). More caregivers in urban areas provided play materials to their children and more caregivers in rural areas gave cautionary advice about encounters with strangers. By contrast, the analysis of the caregiver activity scores for the four ecological zones showed that the respondents in the Foothills had significantly higher scores on this Caregiver Support Scale.

Table 16. Factorial analysis of variance (ANOVA) considering the impact of ecology zone on parent support

Source	Sum of Squares	df	F	Sig.
Corrected Model	155	3	11.03	.000
Intercept	2813	1	601.01	.000
Ecology	155	3	11.03	.000
Error	978	209		

R² = 0.14

Table 17. Descriptive statistics for the parent support scale by ecological zone

Ecological Zone	Mean	Std. Deviation	N
Mountains	3.4	2.2	116
Lowlands	3.5	2.6	36
Senqu River Valley	4.1	1.7	30
Foothills	6.0	1.7	31
Total	3.9	2.3	213

RECOMMENDATIONS

1. We suggest that the Ministry of Training and Education (MOET) focus on fewer and more easily measurable goals – especially among younger children, so that in future years when the MOET institutes interventions it will be simpler to quantify the impact.
2. There is a marked lack of support from parents for fine motor skills, language and literacy, numeracy and problem-solving as reflected in the play materials given to the children. Crayons, paints, safety scissors, puzzles, books, pick-up-sticks and board games are absent from the list of toys that are given to children. These would enhance fine motor skills, executive skills like planning and problem-solving and engender an

enjoyment in reading. Interventions like the Family Literacy Programme serve the dual purpose of awakening an interest in reading and in enriching family relationships around an enjoyable shared activity.

3. It would appear that very few caregivers introduce very young children to cultural and patriotic ideas, and these concepts may be more appropriately introduced these in primary school when children have more experiences outside the family circle to draw on.
4. In some instance, particularly among young urban children, poor quality of care and low stimulation is hypothesised to be causing the gap seen between urban children and their peers living in more rural parts of the country. It is suggested that the MOET put some resources towards monitoring the quality of all such crèches that seem to be used by young women working in the factories surrounding Maseru.
5. As was proposed in the South African NELDS process, we recommend a revision of the Lesotho ELDS based on the results of the age validation study that use category rather than cut-off scores. Moving away from cutoff-points we created four codes which will enhance the usefulness of the ELDS in Lesotho:

Frequency codes for age validity:

- A. **80% and over.** This denotes a competency which should be achieved by most healthy children in the age group, with the exception of the very young. It is important to investigate the reason why a child did not achieve an A category competency, and to take further action if necessary. Because young children are difficult to test and may be shy with strangers, it is always possible that fatigue or shyness is the reason why a child fails to demonstrate the competency.
- B. **50-79%.** These are likely to be competencies which are relatively new or close to being achieved, or not yet performed reliably. In developmental theory *the zone of proximal development* is the term that

refers to these emerging competencies (Vygotsky). These are areas of development where the child should be supported by family members, community workers and early learning practitioners. This band is wide to cater for the wide age ranges envisaged for NELDS.

- C. **20-49%**. These are competencies likely to be achieved only by the older children in the age category, or those in very favourable environments. These are areas of competency which older children should be assisted to attain. Where there are environmental factors which make it difficult for children to reach their full potential, these should be addressed.
- D. **Less than 20%**. These are competencies that need to be reviewed and special attention given to the factors driving the low rate of attainment.

- 6. In a resource limited setting the question is often how to use the available resources to effect the greatest impact. Investing in the early years of a person's life is now known to be one of the most effective strategies available. As Heckman (2000) suggests simple solutions targeting the very young makes sound economic sense. An example of a successful project that may be useful to consider in the context of Lesotho, is the Finnish Cot project.³ Started in the 1930s, the cot project has spread globally with the Thula Baba Box in South Africa having a model that could easily be adapted to the Lesotho context. In essence the idea is to give every new mother a cardboard box, or similar, printed with local motifs that is full of useful items to support the child in its first six months of life. The box and mattress can be used as the child's first bed and the contents of the box ensure that the child has basic cloths, food and play materials to stimulate its early development. This, or other similar ideas, may be a useful

³ <https://www.finnishbabybox.com/eu/en>

intervention to consider implementing in Lesotho as it goes hand in hand with the ethos of the ELDS.

REFERENCES

Biersteker, L. and Kvalsvig, J. 2007 Early childhood development and the home-care environment. pp159-190. In Dawes, A. Bray, R. and Van der Merwe, A. Cape Town: HSRC Press. ISBN 978-0-7969-2177-2

Dawes, A, Kvalsvig, J., Rama, S. & Richter, L. (2004a). Indicators of children's psychosocial development in the early childhood. Phases 1 & 2 Report for UNICEF. Cape Town: Child Youth and Family Development, Human Sciences Research Council.

Dawes, A, Kvalsvig, J., Rama, S. & Richter, L. (2004b). Indicators of children's psychosocial development in the early childhood. Phase 3 Report. For UNICEF. Cape Town: Child Youth and Family Development, Human Sciences Research Council.

Dawes A, Bray R. and van der Merwe A (2007) Monitoring Child Well-Being: a South African rights-based approach. Cape Town: HSRC Press

Department of Education (2008) National early learning standards for Birth to four (NELDS)

Heckman, J.J. (2000). Policies to foster human capital. *Research in Economics* 54(1), 3–56.

Holding P.A. (2005) Guidelines for assessment in Child development research: Putting principles into practice. Facilitators manual 5th edition - 2005

Holding PA, TaylorHG, Kazungu SD, Mkala T, Goma J, Mwamuye B, Mbonani L and Stevenson J (2004) Assessing cognitive development in a rural African

population: development of a neuropsychological battery in Kilifi District, Kenya. *Journal of International Neuropsychological Society*, 10, 246-260.

Kagan S and Britto PR (2004) Concept Paper on Early Learning and Development Standards, July 20, 2005

Kagan S and Britto PR (2005) Process Guidelines: Steps to developing standards for early learning.

Patricia K. Kariger, Rebecca J. Stoltzfus, Deanna K. Olney, Sunil Sazawal, Robert Black, James M. Tielsch, Edward A. Frongillo, Nadra S. Ali, Sabra S. Khalfan, Ernesto Pollitt^c and Jane Kvalsvig The validity of a parent report motor scale for use with infants and toddlers^d. Submitted 2008

Kvalsvig JD, Liddell C, Qotyana P, Shabalala A and Reddy A. (1991) Communication and teaching in the home; a study of Zulu and Sotho preschoolers. *Early Child Development and Care*, 1991, 74, 61-81.

Kvalsvig JD, C Liddell, A Shabalala and P Qotyana. (1994) Defining the cultural context of children's everyday experiences in the year before school. In Dawes A & Donald D (Eds) *Childhood and Adversity in South Africa*, 1994, Cape Town, David Philip.

Kvalsvig JD (1998) Critical interactions between social conditions and other factors in facilitating intellectual development. In *In view of School: Preparation for and*

adjustment to school under rapidly changing social conditions. Johannesburg: Goethe Institute.

Kvalsvig J. 2002 Intestinal nematodes and cognitive development. In (eds) Holland C and Kennedy M. Series Title: World Class Parasites, Kluwer Academic Press.

Kvalsvig 2003 Bringing Literacy skills to young children: a qualitative evaluation of the Family Literacy Project, October 2003.

Ministry of Education (New Zealand) (1996) Te Whariki: Early Childhood Curriculum. Wellington: Learning Media Ltd.

Rault-Smith J, Seleti J, and Viviers A. (2008) ELDS: Early Learning and Development Standards *Validation to Implementation* Workshop. Bangkok, Thailand February 11th – 15th 2008. Pretoria: UNICEF and the Department of Education.

Rebello P (2004) Guidelines and key considerations: Summary of Early Learning Standards. Workshop presentation: Bahia, Brazil, July 19th-22nd, 2004.

Shipley K and McAfee JG (1992) Assessment in speech-language pathology. San Diego: Singular Publishing.

Stoltzfus RJ, Kvalsvig JD, Chwaya HM, Montresor A, Albonico M, Tielsch JM, Savioli L, Pollitt E Effects of iron supplementation and anthelmintic treatment on motor and language development of Zanzibar preschool children. *British Medical Journal*, 2001, 323; 1389.

Young ME (2004) An outcome measure for ECD. Workshop presentation: Bahia, Brazil, July 19th-22nd, 2004.

(2004) Thailand Early Childhood Behavioural Competency (3-4-5). Workshop presentation. *Validation to Implementation* Workshop. Bangkok, Thailand February 11th – 15th 2008.

APENDIX 1 – LESOTHO DEMOGRAPHIC HEALTH SURVEY OF 2014

The 2014 Lesotho Demographic and Health Survey (LDHS) was the 3rd survey to be conducted in Lesotho in partnership with the worldwide Demographic and Health Surveys program. It presents updated estimates of basic demographic and health indicators such as the fertility rates, maternal mortality rates, sexually transmitted diseases, patterns of recent behaviour condom use and other contraceptive methods, and the prevalence of HIV infection. The report acknowledges the support of many international stakeholders: the Global Fund to Fight AIDS, Tuberculosis and Malaria, the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), the United Nations Population Fund (UNFPA), the United Nations Children’s Fund (UNICEF), the United States Agency for International Development (USAID), the World Health Organization (WHO), and the World Bank. The Lesotho Bureau of Statistics was responsible for the sample frame. The data collection took place from 22 September to 7 December 2014. The information gathered through the LDHS is intended to inform policy makers and program managers in evaluating and designing programs for improving for improving the health of the country’s population. The sampling frame that was used for this project was adopted from a prior 2006 Lesotho population and housing census. The sampling frame excluded nomadic and institutional populations such as person in hotels, barracks and prisons.

The Ministry of Health recruited 100 field workers who underwent a 4 weeks training course on the interviewing techniques and fieldwork procedures.

There were three questionnaires (men, women and household) on population and health issues relevant to Lesotho. The Household Questionnaire listed all members of, and visitors to, the selected households. Basic demographic

information was collected on the age, sex, marital status, education, and relationship to the head of the household of people staying overnight in the household. For children under age 18, the parents' survival status was recorded. The data obtained in the Household Questionnaire were used to identify women and men eligible for individual interviews. The Household Questionnaire also collected information on characteristics of the household's dwelling unit, such as source of water, type of toilet facilities, materials used for the floor of the dwelling unit, and ownership of various durable goods.

The Women's Questionnaire was used to collect information from women age 15-49 on the following topics:

- Background characteristics (age, education, media exposure, and so on)
- Birth history and child mortality
- Knowledge and use of family planning methods
- Fertility preferences
- Antenatal, delivery, and postnatal care
- Breastfeeding and infant feeding practices
- Vaccinations and childhood illnesses
- Marriage and sexual activity
- Women's work and husbands' background characteristics
- Knowledge, awareness, and behaviour regarding HIV/AIDS and other sexually transmitted infections
- (STIs) Adult mortality, including maternal mortality
- Knowledge, attitudes, and behaviour related to other health issues (for example, tuberculosis, diabetes, breast and cervical cancer)

The Men's Questionnaire was administered to all men aged 15-59 in the subsample of households selected for the male survey. It covered much of the same information as the Woman's Questionnaire although not the questions on reproductive history or maternal and child health. The field workers also measured blood pressure, heights and weights and haemoglobin, and recorded HIV infection in the smaller sample. All electronic data files for the 2014 LDHS were transferred via IFSS to the MOH central office in Maseru, where they were

stored on a password-protected computer. Secondary editing using CPro software and data processing were completed in February 2015.

HOUSING CHARACTERISTICS AND HOUSEHOLD POPULATION

This review will focus on the salient findings from the data collected on households.

Drinking water: Urban and rural areas have different sources of water: 77% of rural households have access to an improved source of drinking in water, compared with 97% of urban households. Where households do not have accesses to clean water they often treat it by boiling.

Sanitation: Sanitation is an important aspect of health as it reduces diarrheal and parasitic infections. The recommended structure is pit latrine with a slab to secure the base. Although the number of households without a toilet facility has dropped, almost 38% of households have no access to a toilet.

Household population and composition 31,406 individuals stayed overnight in 9,402 sample households in the 2014 LDHS. Fifty-three percent of them (16,727) were female, and 47% (14,679) were male; 39% were under the age of 15.

Birth registration: The proportion of children under age 5 whose births are registered with the government has declined slightly since 2009 (from 45% in 2009 to 43% in 2014). This is a cause for concern as birth registration would give children greater access to government services.

Distance to a healthy facility: In any community, it is important that the healthy facilities and services be placed near the people. However, approximately 72% of household members walk to the nearest health facility and for 27% of respondents travelling to the health facility takes longer than 120 minutes.

CHARACTERISTICS OF THE RESPONDENTS

This section of the report serves to unpack the different characteristics of the respondents. This is relevant for it helps the researcher to understand clearly the factors that affect the use of reproductive health services, contraceptive use, and other health behaviours. A total of 6,621 women age 15-49 and 2,931 men age 15-

59 were interviewed in the 2014 LDHS. There are more people in the younger age groups. Forty-two percent of women and 47% of men are in the 15-24 age group, and 31% of women and 28% of men are in the 25-34 age group. The important themes that emerged from this section were education, literacy, and exposure to mass media, employment, health insurance and tobacco use.

Education: Only 19% of women and 16% of men have completed secondary school.

Trends

- Younger respondents have more education. Women aged 15-19 are nearly twice as likely than older women to have attended at least some secondary school (72% versus 39%), and the pattern is similar for men (53% versus 33%) (**Tables 3.2.1 and 3.2.2**).
- Men living in rural areas are more likely not to have attended school than their female counterparts (11% versus 1%).
- Educational attainment varies widely by district. Sixty-seven percent of women and 58% of men in Maseru have at least some secondary education. In contrast, only 39% of women and 19% of men in Thaba-Tseka have at least some secondary education.
- Women and men in the highest wealth quintile are more likely to have completed secondary education; 42% of women and men in the highest wealth quintile completed secondary school compared with 2% of women and 1% of men in the lowest wealth quintile. The literacy rate increases with wealth, rising from 92% of women in the lowest quintile to 99% in the highest quintile.

Mass media: The mass media play a huge role in the dissemination of information about HIV/AIDS, the use of contraceptives and other health related issues like circumcision. Both men and women from the ages of 15 to 49 are likely to get information about health related matters through the media, mainly radio. However, about one third of the population sampled have no regular exposure to any mass media

Healthy Insurance: Most of the people in Lesotho do not have Health insurance, as it is expensive. People who are employed and live in urban areas and can therefore afford insurance constitute only 2% of the population.

Tobacco Usage: Ninety-two percent of women and 58% of men reported that they do not use any tobacco products. Among those who use tobacco products, the majority of women use snuff, whereas nearly all the men smoke cigarettes. Among men who smoke cigarettes, one in six men (16%) reported smoking 10 or more cigarettes in the 24 hours prior to the interview.

MARRIAGE AND SEXUAL ACTIVITY

This part of the report addresses the issue of marriage. It puts forward information on marital status, polygyny, age at first marriage, and age at first sexual intercourse for both women and men. Related questions for the survey were relevant to help determine the extent to which women are exposed to the risk of pregnancy.

Age at first marriage: Whilst marriage is viewed as universal social norm in Lesotho, women marry more than 5 years earlier than men do on average. The median age at first marriage is 20.3 years for women and 25.9 years for men.

Polygamy: Most of the women reported that they were not involved in a polygamous relationship, whilst 5% said that they did not know whether they had co-wives, and 2% reported that their husband had more than one wife.

Sexual Initiation: Age at first marriage is widely considered a proxy indicator for the age at which women are first exposed to the risks inherent in sexual activity. However, the median age at first sexual intercourse is 1.8 years earlier than the median age at first marriage for women and 6.4 years earlier for men, indicating that both women and men engage in sex before marriage.

Postponing marriage but not sex: The survey reports that women and men in Lesotho are waiting longer to get married, but not to initiate sex. Since 2004, the median age at first sexual intercourse has changed little among women (18.7 years in 2004 versus 18.5 years in 2014), while for men, it has increased from 19.1 years to 20.3 years and for men from 25.0 years to 25.9 years.

Several factors determine the number of children that a woman bears: the age at which she begins child bearing, how long she waits between births, and her fecundity.

Total fertility rate: The current total fertility rate in Lesotho is 3.3 children, which is the same as the rate in 2009 and slightly lower than the rate in 2004 (3.5 children). Fertility levels are markedly lower among urban women, highly educated women, and women in wealthy households. Birth intervals continue to increase in Lesotho and the median interval has grown from 42.4 months in 2004 to 45.8 months in 2014.

Age at first birth: The median age for women at first birth in Lesotho has increased by about 5 months since 2004, when it was 20.5 years. The survey shows that educated women have their first child later. Women with more than secondary education begin child bearing almost 5 years later than do women with no education. Women in the lowest wealth quintile have their first birth 2 years earlier, on average, than women in the highest quintile.

Fertility preferences

The information on fertility preference is important to assist family planning agencies to assess the desire for children, the extent of mistimed and unwanted pregnancies, and the demand for contraception to space or limit births.

From the survey it was established that fifteen percent of women currently wanted to have another child soon but a higher percentage wanted to wait for at least two years. Fifty-eight percent of women and 40% of men did not want another child. Almost two thirds of women with two living children do not want any more children.

The survey showed that of all the births that had taken place five years prior to the survey, 49% were wanted the time of conception, 30% were mistimed, and 22% were unwanted.

Family Planning

The report establishes that couples use various contraceptive methods to try to limit or space the number of children they have.

A large number of women in Lesotho now engage in the use of modern contraceptives and nearly two thirds (63%) of the users obtain them from public sector facilities. These include male and female sterilization, injectable contraceptives, intrauterine contraceptive devices (IUCDs), contraceptive pills, implants, female and male condoms, the Standard Days Method, and emergency contraception. Most married woman use the long lasting injectable contraceptives, and this usage grew from 35% in 2004 to 46% in 2009 and 60 % in 2014. Overall, 70% of married women used modern contraceptive methods.

However, 22% of women revealed that they had stopped using a particular type of contraceptive within a year of starting them for health-related reasons, possibly side effects.

INFANT AND CHILD MORTALITY

This chapter of the report presents information on levels, trends and differentials in perinatal, neonatal, infant and under 5 year's mortality rates. The information of infant and child mortality is relevant to a demographic assessment, as it can be an indicator of the country's socio-economic development and quality of life.

In the five years prior the survey, the under-5 mortality rate was alarmingly high at 85 deaths per 1000 live births, and the infant mortality rate was 59 deaths per 1000 live births. It is noteworthy that worldwide in low-income countries the average under 5 mortality rate was 75 in 2015, and only 7 per 1000 live births in high income countries (WHO 2015).

MATERNAL HEALTH CARE

Health care services during pregnancy, childbirth and delivery are priorities in the National Strategic Development Plan and the Health Sector Strategic Plan formulated by the Ministry of for the survival and well-being of both the mother and the infant, in particular antenatal care monitoring screening for any

complications. Women should have a suitable and safe facility for delivery, which meets all health standards and needs.

Ninety –five percent of women who gave birth before the survey was conducted received antenatal care from a skilled provider for their most recent birth. However only 41% had their antenatal visit during the first trimester and only 74% had the recommended four or more visits. Almost all of the women reported that their blood pressure (99%), blood samples (97%) and urine (83%) were taken during antenatal care visit to ensure that all vital health signs were stable during the course of the pregnancy.

CHILD HEALTH

This section of the report addresses information on child health after the babies have been born. It presents information on birth weight and vaccination status for young children. It also pays its attention to the prevalence or, and treatment practices for three common childhood illnesses which are acute respiratory infection, fever and diarrhoea.

The survey established that 68% of children aged 12-23 months had received all basic vaccinations. Five percent of children under the age of five years had symptoms of an acute respiratory infection in the two week prior to the survey, and 63% these children had been taken to a health facility or health provider for advice or treatment. Fifteen percent of the under-fives had a fever in the 2 weeks before the survey, and 61% of these children were taken to a healthy facility or health provider.

The report states that 12% of children who were under the age of five experienced diarrhoea just before the survey, and 75% of these received oral rehydration therapy.

NUTRITION OF CHILDREN AND ADULTS

The report specifically looks at the feeding practices for children under five. This includes breast-feeding and feeding with solid /semi solid foods. The report also covers the diversity of foods fed and the rate at which they are fed. It also

addresses the relevant aspects of the nutritional status of women and men age 15-49.

The survey established that 33% of children under the age of 5 years were stunted, 3% were wasted, 10% were underweight and 7% were overweight, according to WHO standards. Only 11% of children between the ages of 6-23 months met the minimum acceptable dietary standards. Forty-eight percent of women were overweight or obese and 12% of men.

Another alarming finding was that large numbers of both adults and children suffered from anaemia: more than half of the children between the ages of 6 and 59 months were anaemic; 27% of women and 14% of men were also anaemic.

HIV-RELATED KNOWLEDGE, ATTITUDES AND BEHAVIOUR

Prevalence rates of HIV are high in Lesotho and only 39% of women and 31% of men had a good understanding information about the modes of HIV transmission and prevention.

Eighty-two percent of women and 74% of men understood the meaning of mother to child transmission of HIV and that HIV could be transmitted during childbirth or through breast-feeding. Eighty-seven percent of women and 70% of men respectively knew that a mother taking special drugs could reduce the risk of mother to child transmission.

The survey reported that 92% of the respondents knew where to get an HIV test but not all of them had gone for testing. Only 58% of women and 36% of men were tested in the 12 months prior to the survey.

WOMENS EMPOWERMENT

About half of currently married women are employed compared with 83% of currently married men. About one-third of the women who receive cash earnings decide for themselves how earnings will be used while 62% decide on use of earnings jointly with their husbands. About one third of women own a house, and 28% own land. By contrast, only one in four men owns a house or land. Thirty-

three percent of women and 40% of men believe that a husband is justified in beating his wife in at least one of the five circumstances specified in the interview.

ADULT AND MATERNAL MORTALITY

Drawing from the sibling survival model the LDHS measured only the timing and not the cause of death, and childbirth related deaths refers to deaths within 2 months after a birth.

Mortality rates reduce somewhat after the age of 15. For women and men who have reached the age of 15, the probability of dying before the age of 50 is 44% and 48% respectively. For men the risk of dying young can be attributed to a variety of causes, but for women, childbirth is a specific risk. The survey showed that the current levels of fertility and mortality during the 2014 LDHS indicated that 1 in 32 women will die from pregnancy or childbearing.

TUBERCULOSIS (TB)

TB is seen as one of the top ten causes of morbidity and mortality in Lesotho. Most of the participants in the survey who tested positive for HIV also suffered from TB.

The survey established that very few people knew that TB was caused by a microbe. Only 13% of women and 12% of men knew this. On the other hand, approximately 85% of women and 75% of men knew that TB can be transmitted through the air by coughing and breathing.

NON-COMMUNICABLE DISEASES

In the survey there were questions about breast cancer, cervical cancer, diabetes and hypertension. Results showed that one in ten women respondents had had a clinical examination for breast cancer in the 12 months prior to the survey and 11% had had a pap smear in the same period. Ninety-one percent of women and 87% of men indicated that they had heard about diabetes before but only 43% of women and 53% of men knew the symptoms of diabetes. The report also indicated that 19% of women and 13% of men had hypertension. Of those who indicated

they had hypertension, only one in five women and one in seven men had the hypertension controlled by medication.

LIMITATIONS OF THE STUDY

The report was limited in that it did not include adults in nomadic and institutional frameworks like prison, barracks and hotels, or the elderly. It is also recommended that in future fieldworkers are trained to ask for reasons for a particular stance on a health issue because this would give an indication of how to devise interventions.

APPENDIX 2 - Kingdom of Lesotho: National strategic plan for Integrated Early Childhood Care and Development (IECCD)

The aim of the IECCD strategic plan is to make sure that the development of children from birth to five years takes priority. The plan is the result of collaboration among several ministries and non-governmental, faith based and private sector organisations of the sectors of education, health, nutrition, sanitation, and the important stakeholders in the community.

The plan is in effect the operational framework for implementing IECCD policy. It consists of the organisational framework and a detailed action plan for each of the eight strategies of the IECCD plan. The strategic plans set out the task for each activity or service giving detailed information regarding responsible entities, indicators and targets and budget projections. With the help of UNICEF a consultative approach was adopted during the preparation of the strategic plan with information from four sources: consultative workshops, a situation analysis, research and interviews.

The consultative workshops took place from 2- 23 March 2011 in seven communities, in the cities of Leribe, Maseru, Quthing and Thaba Tseka districts with a number of relevant stakeholders present at each.

The situation analysis on children and families was commissioned by UNICEF and ECCD and took place in Lesotho from May –August 2011. To ensure that it would be a comprehensive and fruitful endeavour it used a survey to assess the status of children and families in Lesotho, IECCD services and the human, financial and training resources to support them, and relevant policies regarding IECCD. This was a valuable contribution based on relevant and tangible issues.

Research and Interviews: Information from published studies and key informant interviews supplemented the findings. Unfortunately parent interview which would have added depth to the findings were not included in the process

A rights-based approach

The strategic plan gives a succinct summary of the history and governance of Lesotho along with its demography. Of concern is the fact that approximately 58% of the population live below the national poverty level (a figure that has possibly risen over the years after these findings) and families with young children struggle to cater for all their needs. The Kingdom of Lesotho is a staunch supporter of the Convention on the Rights of the Child and this strategic plan supports the concept that all parents, grandparents, adoptive parents and legal guardians should be able to access and participate in high-quality and cost effective IECCD services. The kingdom of Lesotho strives to give special attention to all children without discrimination, in accordance with the following principles:

Provide comprehensive, integrated and multisectoral IECCD services

- IECCD plays a **foundational role** in ensuring Lesotho's children will be healthy, well nourished, well developed and capable of achieving success in school and life.
- Holistic child development requires that children develop in a balanced manner in all areas: perceptual, language, cognitive, physical (gross and fine motor), social and emotional development, including the ability to regulate their behaviour.
- Multisectoral coordination and integrated ECCD services will include two or more of the following sectors: health, nutrition, sanitation, education and protection. Special attention will be given to including allied sectors, such as agriculture, local government, rural development, workforce training and economic development, gender services, and others as needed.
- Every effort will be made to ensure that IECCD services will be universal, high in quality, comprehensive, and will respond to local needs, languages and cultures, with special attention to Xhosa, Baphuthi and Ndebele communities.

- Public, private sector and civil society organisations at District and Community Council levels will use an integrated service approach to maximise the use of existing human and material resources and to provide high-quality services at the lowest possible cost to the greatest number of children and families.
- New vertical and horizontal multisectoral coordination will be developed, most especially at the level of Community Councils along with support from District and Central levels.

Focus on equity, with priority given to the most vulnerable and marginalised children

- All children from birth to five years of age will be eligible for IECCD services included in this policy, with priority given to vulnerable children living in poverty and/or with developmental delays, malnutrition, HIV and AIDS or disabilities.
- Respect for all ethnic groups will be the hallmark of IECCD services, and outreach services will be developed to ensure minority groups are included. All IECCD services will be provided in the home language.

Provide child-centred and family-focused services

- All IECCD services will be child-centred, focusing on the individual needs and status of each child with respect to development, health, nutrition, education and protection.
- IECCD services will also be family-focused to ensure the full participation of parents, including both fathers and mothers, in activities regarding them and their children, including service planning, implementation and oversight.
- Children and youth will participate in planning, implementing and assessing IECCD services that affect them and their younger brothers and sisters. Promote child and parental rights and ensure all children are included in IECCD services

The IECCD policy strongly advocates for child and parental rights.

- Parents will be fully informed about services offered to them and their children, and parental consent will be secured for all services provided to them.

- Parents, legal guardians and adoptive parents have primary obligations as the first and most important caregivers and teachers of their children.
- Strong and enduring relationships between parents and IECCD services will be fostered.

All IECCD services will be inclusive and enrol children with disabilities, developmental delays or from minority ethnic groups.

- As in the CRC, legal protection will be extended to all children and parents.
- Child protection services will be provided for all children, with a special focus on Lesotho's most vulnerable children.
- Services for social protection, including cash transfers and conditional cash transfers, will give special attention to children from birth to 5 years living in difficult circumstances. Ensure strong community involvement in community IECCD services
- An IECCD Committee of the Community Council will help to identify local needs and objectives, and to plan, manage, implement and oversee all local IECCD services.
- Community Councils and IECCD Committees will be accountable and will prepare annual reports, plans and budgets and submit them to District Councils and national ministries.
- Community partnerships and support networks will be developed among public, private sector and civil society organisations to provide sufficient high-quality IECCD services.

Quality assurance

- IECCD service standards and regulations will be reinforced or developed and enforced.
- High-quality educational curricula, materials, methods, and media will be developed in all local languages and used in pre- service and continuous in-service training.
- Through monitoring and evaluating services, IECCD inputs, outputs and outcomes will be measured.

All the above principles that the strategic plan adheres to appear to be relevant and to inform the implementation of a proper IECCD policy.

Drawing from the situation analysis, the strategic plan specifically focuses on the findings that appear to be more urgent. These are:

Issue 1: Birth outcomes urgently need to be improved and parent education is required.

It was found that there is a high level of maternal mortality and children born infected with HIV. This then raised an important concern that pregnant women and their partners need intensive preconception, antenatal and neo-natal education.

Issue 2: Services are lacking for the critical years from birth to 36 months of age.

The strategic plan policy takes note of the fact that the first three years of life are crucial for optimal brain growth and cognitive development. Therefore, there is a need to provide services that promote early stimulation and good nutrition through parent education and support.

Issue 3: Lesotho has a high level of children with developmental delays, malnutrition, HIV and AIDS or disabilities.

Another key finding was that children who have developmental delays, nutritional deficits, HIV or disabilities should be identified as early as possible so that remedial treatment and support can be made available. It is therefore important that clinic staff, community workers and early child development practitioners are trained to identify these conditions, and to link the affected families to the relevant welfare and services as a matter of urgency.

Issue 4: Preschool services have varying quality, and children living in poverty are often unable to access quality preschool services.

Many studies have shown that exposure to quality preschool education for children from three to five years improves educational outcomes for children living in disadvantaged circumstances reducing grade repetition which is costly for the school system and changing the life course of the children for the better. However, at present, most of the children from poverty stricken families do not have the opportunity to experience quality preschool services.

Issue 5: The rights of children and parents need to be protected, and especially those living in difficult circumstances.

Child and parental rights and responsibilities are not well understood in all homes. Existing policies for child protection, vulnerable children and children with disabilities need to focus more sharply on children from birth to six years of age. Child and social protection services are required for children and parents to ensure that all children have access to protection when necessary.

Issue 6: Pre- and in-service training is inadequate for all fields included in IECCD services.

There is a visible gap between the services that need to be provided and the people responsible for providing those services. It is important that IECCD professionals are well-trained, mentored and monitored to ensure high standards in all IECCD services.

Issue 7: No system currently exists for IECCD quality assurance and accountability.

A major and important finding that the strategic planning presents is the fact that there is no system in place for quality assurance. This requires immediate attention. A system is required for IECCD monitoring, evaluation, and follow-up planning to ensure IECCD programmes meet their goals and objectives.

Issue 8: Parents and community members should be informed about the Policy and receive key messages to promote good parenting and child development.

A Social Communications Plan is required to ensure key child development messages for parents are reinforced using community radio, television, mobile phones, social media, booklets, banners and brochures.

Issue 9: An organisational structure for IECCD services is urgently needed.

An organisational framework is required to ensure that the Strategic Plan is fully implemented. A central multisectoral IECCD Council is needed, and a system for the decentralisation of services at the District and Community levels. The roles, responsibilities and fiscal requirements of this system need to be defined.

Action Plan

The IECCD policy set out the vision, mission and goals for the children of Lesotho so that they are born in caring loving spaces and nurtured during their early years. The IECCD planners then proposed strategies intended to address the key issues emanating from the consultative process, situational analysis, research and interviews. For the purposes of this review it should be noted that only one of the action plans will be presented as an example of the strategic approach adopted.

First, the Strategy and its objectives are introduced, followed by a chart that lists: the services and activities under the strategy; the tasks pertaining to each service or activity; the implementing agencies and activity deadlines; the operational indicators, measures of completion and targets; and the budget allocated to each task.

Example: Strategy 3

Ensure vulnerable children with developmental delays, malnutrition, HIV and AIDS or disabilities receive early childhood intervention services
Objective
<ul style="list-style-type: none">• Place a special emphasis on neonatal screening and the development in stages of early childhood intervention (ECI) services for children with low birth weight, developmental delays, malnutrition, HIV and AIDS and disabilities and their parents.• Give special attention to children and mothers with malnutrition and HIV and AIDS, and ensure that infected infants and young children receive antiretroviral (ARV) treatment, nutritional supplements and developmentally appropriate stimulation⁵ to prevent and overcome developmental delays, and their parents or guardians receive parent education and support.• Conduct early child screenings to identify all vulnerable children and ensure rapid referrals, assessment for ECI eligibility, and enrolment in ECI services.• Develop comprehensive and feasible ECI services in stages, including programme planning, preparation, training, piloting with evaluation and monitoring, revision and expansion of services.

Lead Ministries for Strategy 3

Early Childhood Intervention (ECI) services will be conducted through a partnership between the

MOH, MOSD and the MOET, with help from the Department for National IECCD Policy Implementation. The involvement of the public health establishment is critically important because physicians and nurses identify and serve many high-risk infants and children as well as children with developmental delays, malnutrition, chronic diseases such as HIV and AIDS, disabilities and typical behaviours. The participation of the education establishment is equally important with respect to: the provision of special education services; the training of early intervention specialists; the provision of services for children with atypical behaviours, such as the autism spectrum; and the inclusion of children with delays and disabilities and their families in all available education services, such as inclusive day-care centres, special education services, and inclusive pre-schools.

An outlined financial and implementation strategy was tabled, to show the activities that the policy is supposed to follow.

The Organisation of the IECCD system

The strategic plan sets out an organisation chart that shows the structure of the system. It gives a brief detail of what each entity is all about. The entities are as follows:

1. National Multisectoral IECCD council.
2. IECCD international partner committee
3. IECCD policy implementation department
4. District multi-sectoral IECCD committees
5. Community IECCD committee

The strategic plan then puts forward the proposed activities to implement the policy, and the projected budget for each strategy for the departments for a 5 year period. It emphasises how important it is for all development partners, civil society organisations and private sector organisations to provide full or partial

support for innovative activities, such as the development of new curricula and materials, the improvement of pre- and in-service training programmes, preparation and implementation of pilot projects, and special research and evaluation projects.

It notes that a major fundraising effort will be required to carry out in full the activities and services presented under the eight IECCD Strategies. This will involve an investment strategy, which includes expanding and focusing:

- Ministerial budgets;
- Civil society, private sector and community contributions; and
- International development partner investments in Lesotho's children and families

Kingdom of Lesotho Trust Fund for Young Children

It will be necessary to develop new types of funding support. For this reason, the *Kingdom of Lesotho Trust Fund for Young Children* will be established, and sources of support for the Trust Fund will be identified and secured.

The following types of funding will be sought for this fund:

- Core governmental funding and a major donation to begin the Fund;
- International development partners;
- International businesses, including factories and food, clothing and furniture stores;
- National payroll tax on international businesses;
- Extraction taxes on natural resources;
- Exportation taxes on factory goods;
- Donations from Basotho businesses and associations, including banks, taxi associations, transport associations, insurance companies, stores and others;
- Tax abatement on businesses for their support of IECCD services;
- Support from charity organisations and individual benefactors; and
- Fundraising activities, such as auctions, dinners, etc.

Adoption of IECCD Centres

A system for “adopting” community-level IECCD Centres will be developed. Banks, insurance companies, car dealerships, chain stores, corporations and other businesses will be invited to provide core funding for IECCD Centres located in communities with high levels of young children in need. It is hoped that IECCD Centres will develop a close relationship with their adopting organisations. In some cases, communities may decide to name their IECCD Centre in honour of their sponsors.

IECCD Monitoring and Evaluation Indicators

The IECCD Strategic Plan includes the input, output and outcome indicators that will be used to assess the implementation and impact of the IECCD Policy and Strategic Plan. Input indicators will focus on investment, personnel and material inputs, gathered on a service-by-service basis through cost studies and project reports.

Each calendar or fiscal year, a Monitoring and Evaluation Report will be prepared using data gathered by the ECD Management Information System (located in the Department for National IECCD Policy Implementation), the various ministries and several surveys, project reports and small special studies.

Once established, the Department for National IECCD Policy Implementation will develop a full plan for monitoring and evaluation based on the indicators selected for this Strategic Plan. A more refined list of measures will be developed as well as a number of Monitoring and Evaluation Manuals that are included in this Strategic Plan.

The National Multisectoral IECCD Council will review the Annual Monitoring and Evaluation Report in order to assess progress, challenges and results. They will give their guidance to the Department for National IECCD Policy Implementation.

APPENDIX 3 – EDUCATIONAL STRATEGIC PLAN (2005-2015)

The preamble of the strategic plan notes that the government of Lesotho encompasses the availability, provision and access to basic education as an essential developmental goal. Education is viewed to be an integral part of social and economic development and it is regarded by the government as a fundamental human right. It is also regarded as a very important aspect of mid-level employment.

This strategic plan was intended to provide the Ministry of Education and Training with an effective planning instrument that also proved to be long term over the period of 2005-2015. It is divided into three parts. Part one puts forward the plans context and broad objectives. Chapter 1 indicates the macroeconomic and social context of Lesotho, and gives an overview of the education and training sector. Chapter 2, then puts forward the strategic plan, mission, vision goals and objectives that are drawn from key documents like vision 2020, Poverty Reduction Strategy and Public Sector Improvement and Reform Programme.

Part Two of the Plan covers the education sector's main strategic programmes and cross-cutting issues. It presents a situation analysis, main policies, strategies, critical challenges, and planned activities (with target indicators) over the 2005-2015 Strategic Plan period. Only Chapter 3, which deals with the Integrated Early Childhood Education, and Chapter 11 on Institutional Capacity Considerations, will be examined in this review, being the sections of the strategic plan that are relevant to this report.

Lastly, Part Three on Implementation Framework and Financing begins with Chapter 12 on Implementation Framework, presenting the Government's planned approaches for the execution of the Strategic Plan, covering such areas as

implementation prioritisation, funding modalities, Strategic Plan implementation structure, monitoring, reporting and evaluation, and the implementation framework with a log frame. Part Three ends with Chapter 13 on the Costing and Financing of Plan.

Part 1

Strategic Plan Context

This part of the strategic plan provides geographical information about Lesotho and its estimated 2.2 million people as the population figure. From the brief geographical highlights and social context information, the most striking issue in this section is the extreme poverty.

Most males work in the mining industry in South Africa, and others are employed in textile and clothing industries. It details a number of government initiatives, for instance the Thetsane Industrial Area of Maseru which was facilitated in an effort to create more jobs through textile industry investment. This was partially motivated by export opportunities in the United States through the provisions of the African Growth and Opportunities Act (AGOA). Under the AGOA terms, Lesotho textiles and clothing have unlimited access to the US market, an opportunity that, in 2002, recorded a 40 percent increase in the exportation of these commodities. It is important to note that Lesotho has experienced an economic downturn that has left many people unemployed and in deep poverty.

The strategic plan points out the conditions that need attention when addressing challenges in the country: education being the most important. There is pressure for an expansion of education in Lesotho. Statistics indicate that an increasing number of pupils complete their primary education, but children from disadvantaged backgrounds are still at risk. The curriculum is thought to contain an excessive number of academic subjects with little attention to the practical skills

that are essential for the integration of graduates into the employment market. The system of evaluating examinations proved to be vulnerable to anomalies, resulting in high rates of repetition and dropouts. Although the educational infrastructure seemed to be improving, there are still schools, especially at the primary level, without all the necessary facilities.

The main difficulty the average child from a poor family faces is the transition from primary to secondary school. Only 73% of students who finish their primary have the opportunity to proceed to secondary education. This was possibly due to the high pupil to teacher ratio; inadequately trained teachers; and weak and overcentralized school management systems. In addition, the workforce in the education sector has been severely impacted by the HIV and AIDS.

Chapter 2 discusses the mission, goals, and objectives of the Education sector. The government of Lesotho has participated in a number of intervention forums on how best to improve education service provision. This has in turn had a positive effect leading to the government of Lesotho redefining its goals, objectives and priorities for the education sector.

Two of the forums that have provided a positive impact, are the Education for All (EFA) process and the Millennium development goals. These have played a pivotal role in encouraging the government of Lesotho to ensure the development of basic education:

- i) Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children;
- ii) Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to and complete, free and compulsory primary education of good quality;
- iii) Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes;

- iv) Achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults;
- v) Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality;
- vi) Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills

All these stipulations are rooted in the fundamental values about basic human rights for every individual:

1. *access*, which emphasizes commitment to universal provision of opportunities for a defined minimum level of education
2. *equity*, which stresses the need to ensure that the distribution and utilization of opportunities in education would be fairly targeted in order to reach the disadvantaged groups in society
3. *learning achievement*, which entails the necessity to focus on well-defined learning accomplishments as a major outcome of the education process. In this Strategic Plan, this principle is strongly linked to *relevance*, *effectiveness* and *efficiency* which, together, help to define the *quality* aspects of education.

Partnerships emerge as an important consideration in educational service provision as the government is not able to provide all relevant resources, there is a need to invite other providers to assist not only in meeting the cost of provision but also in directly participating in decision-making processes.

The Millennium development goals have a set of targets that are recommended for the government of Lesotho to follow. Lesotho should strive to *Eradicate extreme*

poverty and hunger; Achieve Universal Primary Education; MDG Promote gender equality; combat HIV/AIDS, malaria and other diseases.

The Lesotho National Vision 2020 acknowledges the important role of the educational sector in achieving all set goals:

By 2020, Lesotho shall be a stable democracy, united prosperous nation at peace with itself and its neighbours. It shall have a healthy and well-developed human resource base. Its economy will be strong, its environment well managed and its technology well established

Two of the main strategies of the National Vision 2020 directly relate to the education sector, namely,

1. Well-developed human resource base

Upgrading/establishing educational and training institutions; create research, science and technology institutions; reform curriculum/materials according to employment needs; promote concept of mentoring of SMEs by big enterprises. The approach includes:

- i. Providing incentives to retain good [personnel],
- ii. Formulating policy to develop high level expertise for export,
- iii. Exploring possibilities of using expertise of Lesotho citizens abroad or working in international organisations;
- iv. Developing career guidance; engage in active talent search (incl. sports, arts and scientific research; promote social development;
- v. Develop a national fund for Education and HRD; include Basotho culture and values in curriculum; promote special education and universal basic literacy).

2. Technologically well-equipped Lesotho

Providing effective research for application of science and modern technology; allocate sufficient resources for research and development (R&D); allocate resources for implementation of ICT programme for schools and health institutions; promote IT applications; use IT to ensure information rich society.

The Government recognises the strategic importance of Information Communication Technology (ICT) in national development, in general, and education service provision, in particular. It sees the existing knowledge or information gaps (the so-called *digital divide*) between itself and the advanced world as a development constraint that needs to be addressed. At the level of strategy, the Government, the private sector, and researchers in tertiary institutions are expected to play their parts in transforming Lesotho into an ICT-literate society.

Part 2

Strategic Programmes and Cross-cutting Issues

In this section, the strategic plan outlines a number of different issues that are pertinent when it comes to the education of the people of Lesotho. These issues include Integrated Early childhood development, basic education. It presents the situation analysis of the issues, highlighting the roles that they play in the Ministry of Education, as well as presenting some of the policies that have been designed to address them.

1. Integrated Early Childhood Care and Development.

From the situation analysis that was carried out, the strategic plan articulates that the first few years of any child are crucial for development and cognitive learning (0-6 years). However, the plan notes that the majority of the children do not have access to services that assist in their wellbeing and development. This is further exacerbated by poverty, depriving them of the chance to develop optimally. The

Government of Lesotho recognizes the importance of the early years of life as a foundation for human development and lifelong learning through the Integrated Early Childhood Care and Development. As such, the 1991/92-1995/96 Education Sector Development Plan stipulated that all children from 2 to 6 years of age should have access to integrated early childhood education by the year 2000, a target that was not reached. The Government of Lesotho remains committed to supporting IECCD providers, especially for the pre-school years from 2 to 6 years. The role of IECCD Unit at the MOET headquarters is basically facilitative and, thus, is not involved in direct delivery of field services. It is responsible for the following functions.

- a) Planning of IECCD programme activities countrywide;
- b) Policy formulation and implementation;
- c) Establishment and regulation of IECCD centres;
- d) Training of personnel involved in IECCD provision, including local committee members;
- e) Monitoring, supervision and evaluation of IECCD activities;
- f) Development of curricula;
- g) Establishment of appropriate structures for implementation of the IECCD programme;
- h) Feasibility and needs assessment studies; and
- i) Social mobilisation, advocacy and infrastructure dissemination.

Based on the above, the strategic plan puts forward the main policy objectives and strategic plans on IECCD that affirm that the government of Lesotho will make sure that the educational needs and services of each child in ECD will be met. Prior to the formulation of the strategic plan, it is noted that in 1998 an IECCD formulation plan was put in place, however it appeared to have a number of challenges.

Critical Challenges

In the light of the above, the following are the critical challenges during the Strategic Plan period:

- a) Accelerating inclusive access to IECCD
- b) Improving the quality of IECCD programme.
- c) Capacity building and empowerment of all stakeholders, particularly the private sector and NGOs to assume an enhanced role in IECCD services provision through training and upgrading of knowledge and skills
- d) Mobilisation of the requisite resources for IECCD through, inter alia, improved collaboration and networking/partnerships among and between local and international stakeholders
- e) Establishment of an appropriate and sustainable IECCD organizational structure at national and district levels

Having outlined the challenges of the strategic plan, it puts forward the objectives and strategies which the strategic plan for 2005-2015 intends to fulfil. These include educating parents, families and communities about ECD and initiating cognitive learning for their children. As well as providing basic services to facilitate the IECCD.

Institutional Capacity Considerations

Given the many institutional and human resource capacity limitations that still face the education sector as revealed in the respective chapters of this Strategic Plan, the Government has decided to place institutional reforms and capacity strengthening as part of its strategic goals during the period 2005-2015.

These goals include:

a) Decentralisation:

In its effort to improve service delivery through institutional capacity strengthening, the MOET shall strive to put in place an *effective* and *efficient*

education delivery system. This shall be founded on a decentralised mode in partnership with local authorities, and target the untapped resources and skills

b) Capacity Strengthening

The capacity and retention part of this strategic plan is a priority and is attainable through (a) Human resource development and management; (b) improve management culture and styles within a decentralized context; and (c) institutionalise stakeholder engagement and networks in educational services delivery.

c) Administrative support

The Government's strategic objectives in the area of administrative and support services are twofold. Firstly, it is to provide timely and accurate financial information to MOET management.

Secondly, to provide administrative and technical support that would enable smooth and effective operations of the education sector.

Implementation Phase

This is the last part of the strategic plan and it presents the importance of funding in order to make the policies come into fruition. It shows a step by step approach of implementing the policy. To monitor its progress and development the strategic plan also emphasizes on the importance of a monitoring and evaluation indicator.