

# **Quality of pre-primary education in Mauritius**

23-06-2017

Master's thesis Youth, Education and Society

Irene Timmermans (3951294)

University of Utrecht

1st assessor: R.A. van 't Rood

2nd assessor: C.F. Garandean

## **Abstract**

This study researches the quality of pre-primary education in Mauritius. Quality is important because literature points out that only good quality education has benefits for the child. Even more for early childhood education and care as it lays the foundation for future development and learning. Taking into account both the policy perspective and the daily practices of teachers, the study aims at researching the quality of both components. On policy level the National Curriculum Framework for pre-primary was analysed, and additional interviews were held with policy makers. Daily practices of teachers were observed using two measuring instruments, and afterwards teachers were interviewed both about their use of the National Curriculum Framework and their practices. The research findings point out that the quality of pre-primary education in Mauritius is relatively good, keeping in mind the context of culture, development of the sector and available resources. However, improvement is needed. Multiple recommendations are described for the pre-primary sector, guided by the need to take the individual child into account when providing for education. This principal needs to be more leading both in the National Curriculum Framework as the daily practices of teachers, making sure that relevant theories concerning early-childhood education are appropriately implemented in the classroom.

*Key words: education, early childhood education and care, quality education, early childhood development*

## Introduction

The island Mauritius is situated in the Indian Ocean east of Madagascar, and belongs to the continent Africa. In the year 1968 Mauritius was declared independent after a long time of colonization respectively by the Dutch, French and British. The British colonization brought important changes in society. One event which was of great importance was the abolishment of slavery in 1835.

Furthermore, during this period of colonization economic progress was shown, especially due to the cultivation of sugarcane. This economic progress resulted in an improvement of communication between Mauritius and other countries and the emergence of a sound infrastructure. The British had promised to capture the French culture which is why nowadays still a lot of French influences can be seen throughout the country (<http://www.govmu.org/English/ExploreMauritius/Pages/History.aspx>). Due to these waves of colonization and events Mauritius has turned into a country with an interesting mixture of cultures and religion (<http://www.lemeilleurdilemaurice.com/anglais/culture-in-mauritius/mauritius-and-religions/religious-culture-in-mauritius-a.html?lang=fr>).

In 1992 Mauritius became a democratic republic. Currently the country has a president, but political power lies with the Prime Minister and the cabinet. Since 24th of January 2017 the Prime Minister of Mauritius is Mr Pravind Kumar Jugnauth (<http://www.govmu.org>). Elections take place every five years, and several parties (including the ‘best losers’ to represent minorities) make up the government and the Assembly. The constitution is the supreme law, and protects the fundamental rights of its citizen which are for example freedom of conscience, and freedom of expression (<http://thecommonwealth.org/our-member-countries/mauritius/constitution-politics>).

Despite the political changes and growing economy, there are still steps to be made. *“There was an estimated 42,100 children in relative poverty out of a total of 285,900 children,”* measured in 2012 (Ministry of Finance and Economic Development, 2015). Mauritius wants to counteract its economic challenges and bring economic prosperity to the country. The Government of Mauritius wants to broaden their economic base to become resilient to global changes, envisioning Mauritius to be a knowledge based economy by 2025 (“innovative knowledge hub”). In the Education and Human Resources Strategy plan 2008-2020 priority is given to education as it is *“...the key element of economic and social advancement, and to meeting labour force needs.”* This resulted, among other things, in the development of an Action Plan for Tertiary Education in 2015, with advices (mainly for tertiary education) to shape education to the goal of the government (Van ‘t Rood, Bairstro, Danbalki & Haug, 2015). One of the key recommendations of the plan is the emphasis on pedagogical approaches which encourage constructivist teaching and learning. Furthermore, literature acknowledges the fact that investment in human capital, including education, generates future benefits and is therefore a good investment (Odit, Dookhan & Frauzel, 2010). Especially Early Childhood Education and Care [ECEC] is important because it lays the foundation for children's later academic success, health, and general well-being (Anderson et al., 2003). Therefore this study focuses on ECEC, specified to pre-primary education in Mauritius.

ECEC is organized in two separate systems; under 3 year olds are in the child care system by the Ministry of Women's Rights, Child development, and Family Welfare while the 3 to 5 year olds are in the pre-school system under the Ministry of Education and Human Resources, Tertiary Education and Scientific Research. A comparison study of Bennett in 2000 states that 90 percent of children go to pre-primary school in Mauritius. As of 2012 this number has risen to 98 percent, due to the provision of public schools and capitation grants to private schools (SABER Country Report, 2012). The Education and Human Resources Strategy plan 2008-2020 celebrates this high enrolment rate in pre-primary schools, but acknowledges that *"the issues of access to education has taken precedence over quality"*. Moreover, the document Education Reforms in Action 2008-2014 puts emphasis on good quality and the importance of early childhood education: *"The Ministry accordingly aims at ensuring that all children in the Republic of Mauritius above the age of 3 and up to the age of entry in a primary school have access to quality pre-school education, irrespective of the social or financial status of their family"*. To ensure and improve quality in pre-primary schools the Early Childhood Care and Education Authority [ECCEA] was established in 2008. This authority is concerned with ensuring that all pre-primary schools operate according to established norms and standards of quality. These standards must be met by private and public providers. As from January 2012, all pre-primary schools are registered and regulations and norms are respected. To support the daily practices of teachers, the ECCEA developed a National Curriculum Framework for pre-primary in 2010. In this framework guidelines are provided for teachers working in pre-primary schools, aiming at upgrading and standardising the quality of teaching. However, the SABER Country Report (2012) states that providing good quality education remains a concern. Therefore, the intention of this study is to research the quality of pre-primary education in Mauritius. Ultimately, recommendations will be given which can be used for the improvement of this specific educational sector, with the long term aim to strengthen the Mauritian economy.

## **Theoretical Framework**

### **Early childhood education and care**

ECEC programs include a wide range of arrangements providing care and education for children under the compulsory primary school age. Differences are found in for example policy-making authorities, funding, setting, amount of hours, the age group covered, the aim of the program and the curriculum (Kamerman, 2001). The SABER Country Report (2012) states that in Mauritius differences in pre-primary schools can be found in fees, facilities and teacher qualifications. The report also mentions that costs should not be an issue for parents, because education is free in Mauritius and parents get additional funds for their children.

**Value of ECEC.** ECEC is important because early childhood developmental opportunities establish the foundation for children's later academic success, health, and general well-being (Anderson et al., 2003). Education for the young child is designed to optimize development and improve cognitive and social-emotional functioning of children, which influences school readiness (Bennett, 2000; Howes et al., 2008). The study of Bennett (2000) confirms that the goal of pre-primary education in Mauritius is to prepare children for primary school. Even though effects differ per program ECEC has both short and long term effects on the development and academic readiness of the child (De Haan, Elbers & Leseman 2014; Leseman, Slot & Merkkänen, 2015). Significant lasting effects may decline over a longer period of time for the areas of cognitive abilities, school progress, and social behaviour, but investing in ECEC is still effective (Barnett, 2008). This is because benefits of high-quality child care do not only have positive effects on the child, but also on other members of society (Vandell & Wolfe, 2000). Children who receive quality ECEC are less likely to participate in criminal activities or substance abuse. Furthermore, positive long term effects include getting a higher education, better employment, and higher earnings (Magnuson & Duncan, 2016).

**Disadvantaged children.** Moreover, studies show that ECEC has the most impact on children from a disadvantaged background (Magnuson & Duncan, 2016; Melhuish, 2001). As their home situation is not ideal, it seems that these children gain more from ECEC programs (Burchinal, Peisner-Feinberg, Bryant & Clifford 2000). Also, ECEC is believed to be a protective factor for children at risk for impaired development due to low parental education, parental beliefs about childrearing, coming from a minority ethnic background, being raised in single parent homes, and living in poverty (Burchinal et al., 2000). However, children with a disadvantaged background are more likely to receive poor quality education. This could be due to social selection effects, meaning that higher quality schools are not accessible for low income groups (Burchinal et al., 2000; Leseman, Slot & Merkkänen 2015; Leseman & Slot, 2014). This accessibility is related to the distance of the school, the diversity within the school or school fees (Ansell, 2005). In Mauritius the schools in disadvantaged areas are called Zone D'Education Prioritaire [ZEP] schools, and get extra resources to improve quality.

As ECEC can function as a preventive strategy and give children a head start, it is important that all children receive quality education (Anderson, 2003; Blok, Fukkink, Gebhardt, & Leseman,

2005). However, breaking the cycle of disadvantage can only be done through high quality ECEC (Leseman & Slot, 2014), because the effectiveness of the program is highly related to the quality given (Burchinal et al., 2000; Leseman & Slot, 2014). Some studies even add that only high quality relates to better child outcomes, whereas poor quality does not have any benefits at all (Burchinal et al., 2000; Melhuish, 2001; Sylva et al., 2011; Van Huizen & Platenga, 2015). Therefore, it is necessary to define the concept of quality in early childhood care and education environments.

### **Definition of quality of ECEC**

Quality of ECEC is usually defined in two different concepts: structural quality and process quality (Currie, 2001; Howes et al., 2008; Fukkink et al., 2005; Leseman, Slot & Lerkkanen, 2015; Vandell & Wolfe, 2000). The structural and process component are intertwined and influence the overall quality of an early childhood care and education environment and therefore has effect on the early development of children (Currie, 2001; Ishimine, Tayler & Bennett, 2010; Van Huizen & Platenga, 2015).

**Structural quality.** Structural quality entails the static program characteristics, defined with the so-called “iron-triangle” which includes group size, children-to-staff ratio and required staff’s qualifications (Leseman, Slot & Lerkkanen, 2015). Additional components are for example funding, the location of the school, and professional development of teachers (Kamerman, 2001).

Furthermore, an important part of structural quality is the content and activities provided for the young child, which are reflected in the curriculum (Leseman & Slot, 2014). Two concepts make up the curriculum: content and pedagogy. Content entails the subjects that children have to learn, and pedagogy concerns the methods used in teaching this content. Relevant to content, currently the holistic development theory is dominant in education. The document Education Reforms in Action 2008-2014 affirms that pre-primary education in Mauritius also values this theory. The holistic development entails that different developmental areas should be implemented in education, including personal and social development, language and communication, knowledge and understanding of the world around us, creative expression, and physical development and movement (Slot, 2016).

Practically this implies that activities always have multiple goals covering multiple areas of development (Brouwers, 2010). Regarding the area of language and communication, it seems that Mauritius has difficulties juggling the country’s different languages. The SABER Country Report (2012) states that because the language spoken at home and at school differs children sometimes do not understand instruction given by teachers. Children speak mostly Kreol (a language derived from French) at home, but English and/ or French is required at school. Moreover, different countries put emphasis on different areas of development resulting in a difference between soft skills (related to the social-emotional development) or hard skills (related to academic skills including language and math). However, a combination of both is optimal for child development (Slot, 2016). According to the SABER Country Report (2012) pre-primary education aims both at ‘*developing literacy and numeracy skills*’ and ‘*promoting cognitive, emotional, social, spiritual and moral development*’. Bennett (2002)

on the other hand states that reading and writing skills are viewed as skills to be learned before children enter primary school at age 5.

Good pedagogy, the other concept defining the curriculum, is centered around constructivism as described by Vygotsky and Piaget. Constructivism entails that children construct their own knowledge by actively engaging in activities (Brouwers, 2010). For young children this means learning through play in a stimulating environment, implying that children should be able to choose between different playful activities or play in corners (Brouwers, 2010). This is also known as ‘free play’. Several studies affirm that play stimulates and enhances physical abilities, social skills, language, and understanding emotions (Tannock, 2007). Both Vygotsky and Piaget see play as a tool for children to discover the world. Piaget puts emphasis on internalizing moral values and Vygotsky on interaction with peers and adults and language acquirement (in: Bjorklund & Brown, 1998). According to this pedagogy, teachers provide opportunities to play and place stimulating materials in the classroom (Howes, 1995; Stipek & Byler, 2004). Nowadays, technology also plays an important role in the classroom. As society is more and more technology based and present in the daily life of the child, it is suggested that computers have educational value for children provided that this is done in a playful manner (Plowman & Stephen, 2005). This is also acknowledged by the Education and Human Resources Strategy Plan 2008-2020, which states that technology skills have to be implemented in education to prepare children for the job market.

A last important aspect of structural quality is assessment, both of the program and of children. As assessing children is intertwined with the instruction given it simultaneously provides information about the ECEC program and teaching strategies used (Espinosa, 2005; Maxwell & Clifford, 2004; Shephard, 1994). Assessment therefore might be the most important tool for improving instruction (Espinosa, 2005). It also gathers valuable information on the individual performance of the child and gives indicators on how to individualize the curriculum (Espinosa, 2005; Maxwell & Clifford, 2004). For these reasons teachers should assess regularly (Maxwell & Clifford, 2004). Appropriate assessment tools for young learners include observational notes, checklists, rating scales, portfolios, observations, oral readings, and interviews (Espinosa, 2005; Shephard, 1994).

**Process quality.** Process quality relates to children’s daily experiences while involved in activities and in interaction with peers, teachers and materials. It encompasses physical, emotional, social and educational aspects of the school day (Howes et al., 2008; Leseman, Slot & Lerkkanen, 2015). Also, it may be defined as experiences that help children become competent members of society (Leseman & Slot, 2014). The most important indicator for process quality is the teacher-child relationship (Currie, 2001; Howes, 2008). Burchinal and Cryer (2003) even state that early childhood education practices are of high quality when the teacher reflects sensitive and stimulating caregiving, regardless of any other aspect of quality. Children who are in a good relationship with their teacher are more competent to explore their environment and will thus learn more (Howes, 1995). Moreover, the teacher-child

relationship can moderate child characteristics in relation to early school outcomes and have a mediating effect (Burchinal et al. 2000; De Haan, Elbers & Leseman 2014).

### **Policy level**

Policy makers have an important influence on the daily practices of ECEC programs, as they determine many features of the programs and thus its quality (Leseman, Slot & Lerkkanen, 2015; Mashburn et al., 2008). For example, policy determines which children are eligible for ECEC programs, what the required qualifications for the teachers are, or the approaches used to monitor program quality (Mashburn et al., 2008). Therefore, a multi-faceted perception on quality of pre-primary education in Mauritius is needed. In addition, the Ecological Systems Theory of Bronfenbrenner (1979) states that different external factors and influences at multiple levels have an impact on the development of the individual child. Hereby Bronfenbrenner (1979) takes into account influences on micro, meso, exo and macro level, which describe the distance of a factor to the child. For example, a factor on macro level is the culture of a country which indirectly influences the development of the child. On micro level the parents of a child have a more direct influence. Related to ECEC parents have an important influence on the quality of education. This is due to the parent's cultural child-rearing beliefs, their perceptions of quality, and their degree of social and cultural integration influence the choice of an ECEC school (Leseman & Slot, 2014). These choices are even more influenced by poverty or stress, resulting in lesser attention to the child's safety and well-being, and therefore the quality of education and care children receive. Consequently, the amount of family engagement is seen as a key component in quality ECEC (Douglass, 2011; Englund, Luckner, Whaley & Egeland, 2004). For this reason, a parallel study by Cerunne Bouts researches the perceptions of parents and teachers on pre-primary education, specifically their views on learner centered teaching (see: master's thesis Cerunne Bouts).

In the current study two levels of the Ecological Systems Theory of Bronfenbrenner (1979) are taken into account. On micro level the role of the teachers, at exo level the relevant policy makerse who are involved in pre-primary education in Mauritius.

In Mauritius policy for pre-primary education is in the hands of the Early Childhood Care and Education Authority [ECCEA], which was established with the Early Childhood Care and Education Authority Act in 2007. In 2010, the ECCEA developed the National curriculum framework for pre-primary [NCF]. This framework was created to standardize and monitor quality of pre-primary schools. In this document certain principles are described which should shape the daily practices of teachers. Although it is considered a good practice to have a curriculum framework, Oberhuemer (2005) adds a striking critique: *"Any attempts to impose a standardised curriculum must be regarded as inadequate"*. Oberhuemer (2005) believes that in a civil society, goals for ECEC should be mutually agreed upon, and educators should have the freedom to follow individual pathways to achieve these goals. Additionally, the SABER Country Report (2012) states that although policies exists and are implemented, this does not automatically lead to desired outcomes for ECEC. Monitoring and data



collection is needed in order to sustain quality in schools. For these reasons, it is important to look into this document and the organization who implemented and presumably monitors the use of the document.

### **Research question**

In the current study the following question is central: ‘What is the quality of pre-primary education in Mauritius?’ In order to answer this overall question, three sub-questions are formulated:

- 1) How does the National Curriculum Framework contribute to the quality of pre-primary education?
- 2) How is the National Curriculum Framework used in the daily practices of pre-primary environments?
- 3) What is the overall quality of pre-primary education environments?

Hypothesizing about the quality of pre-primary education in Mauritius it could be expected that a good curriculum provides a solid framework for daily practices in the schools, provided that teachers have freedom in using the curriculum. Therefore the relationship between policy and daily practices is central to this study, and findings will ultimately be translated into recommendations for optimal pedagogical practices for these two levels involved in pre-primary education in Mauritius.

### **Method**

#### **Type of research and procedure**

For this study a mixed-method approach was used, with both quantitative and qualitative elements. The quantitative elements entailed using two different observational instruments, the ECERS-R profile and the NCKO-Kwaliteitsmonitor Interactievaardigheden (translated into the Interaction competencies measuring scale) to observe the daily practices of pre-primary classrooms. The qualitative elements included a document analysis of the National Curriculum Framework and interviews with three different stakeholder groups. The document analysis was applied to survey on what theories and concepts the framework is based, interviews with policy makers provided for more information about the choices behind certain ideas. Also, teachers and managers were interviewed to gather more information about the use of the framework and the daily practices in the schools.

Contact with the ECCEA was established through e-mail in order to interview the director of the institution and to gain access to pre-primary schools. A regional office of the ECCEA further handled scheduling the visits to schools. At the schools arrangements were made for observations and interviews with teachers and/ or managers, which both took place on the same day. Most interviews could not be recorded due to wishes of the interviewee, therefore elaborate notes were taken and a report was made afterwards. These wishes were secured when participants filled in the informed consent. Next to the authority and the pre-primary schools, the Mauritius Institute of Education [MIE] was contacted, as suggested by the ECCEA, because of their involvement in the creation of the NCF.

An interview was held with an associate professor at MIE, who was directly involved in the process of developing the framework.

### **Participants**

Three groups of stakeholders participated in the study. The first group consisted of people involved with pre-primary education on policy level. This group was embodied by two representatives from the Early Childhood Care Education Authority and one from the Mauritius Institute of Education [MIE]. The second group consisted of managers, including assistant coordinators and pre-school managers. Assistant coordinators supervise the teachers and classrooms environments commissioned by the ECCEA, pre-school managers work at a school. In total four assistant coordinators and two pre-school managers participated. The last group included pre-primary school teachers, with a total of fifteen teachers.

For the current study twelve schools were visited, including seven public schools, of which one was a ZEP school, and five private schools. These schools were situated mostly in the centre, east and south of the island and both rural and urban areas were covered. Most public schools were on the premises of a primary school, whereas all private schools were independent buildings. In most classrooms were multiple teachers, and the children were divided into age groups. Most schools also had an attendant to support the teacher with the daily chores.

### **Measuring instruments**

**Quantitative.** The quantitative element of this study entailed observations with two different measuring instruments. Firstly, the overall quality of the classroom environment was observed with the Early Childhood Environment Rating Scale Revised [ECERS-R], secondly to investigate the teacher-child relationship the NCKO-Kwaliteitsmonitor Interactievaardigheden was used. The instruments were used simultaneously, and because of the time frame both instruments could be filled in completely and adequately.

The ECERS-R, designed by Harms and Clifford, (3<sup>rd</sup> edition in 2014) was used, because literature points out that this measuring instrument is most widely used for analysing quality. In addition multiple sources state that the instrument is culturally appropriate (Howes & Smith, 1995; Whitebread, Kuvalja & O'Connor, 2015). The ECERS-R classroom assessment tool is divided into seven subscales; 1) space and furnishing, 2) personal care routines, 3) language-reasoning, 4) activities, 5) interaction, 6) program structure, and 7) parents and staff. A total of 43 items concretise these subscales to make them measurable (Clifford, Reszka & Rossbach, 2010). The handbook on how to use the ECERS-R is not fully available online, therefore the instrument was slightly adjusted (Appendix A). The same subscales were taken into account, but with a simplified description of the scales (Appendix B). Unfortunately, no description was available for the seventh subscale 'parents and staff'. Grading these items was done by using the name of the item. For example, 'provisions for parents' was interpreted as involvement of parents. Also, using the original 7 points scale did not comply with these short descriptions, therefore, to maintain validity and reliability a 3 points scale was

used. With this scale the following values were used, 1= poor fit with the description, 2= partly fits the description, 3= fits the description. In the scoring table a box for comments was added to support the score given.

As the ECERS-R profile mainly measures structural quality (Stipek & Byler, 2004) and teacher-child interaction is a very important influencer on quality this component was additionally observed with the *Interactievaardigheden NCKO-Kwaliteitsmonitor* (De Kruif et al., 2007), which translates into the Interaction competencies measuring scale (Appendix C). This instrument was developed within the broader *Kwaliteitsmonitor* of the NCKO and is thoroughly researched on validity and reliability (De Kruif et al., 2007). The Interaction competencies measuring scale observes six interaction competencies described by Riksen-Walraven (2004 in Fukkink et al., 2005) and rates the quality of interactions initiated by the teacher. The competencies a teacher should have include: 1) sensitive responsiveness, 2) respecting the child's autonomy, 3) giving structure and setting boundaries, 4) talking and explaining, 5) stimulating development, and 6) guiding child-child interactions. Descriptions of the items can be found in Appendix C. The first three entail pedagogical competencies, in line with Stevens (1997) description of children's basic needs including relation, autonomy, and competency. The latter entail teaching competencies (De Kruif et al., 2007). These competencies were rated with a three point scale: low, moderate, and high at three observation moments.

**Qualitative.** Two methods composed the qualitative element of this study: a document analysis of the National Curriculum Framework, and semi-structured interviews with all stakeholder groups involved.

A document analysis involves the study of existing documents (Ritchie & Lewis, 2003), in this case to understand the concepts on which the NCF for pre-primary is based. A deductive content analysis was used, which means that the document was analysed with pre-existing concepts defined by the literature (Elo & Kyngäs, 2008). A categorization matrix was formed in line with existing theory about quality early childhood education as described in the theoretical framework. However, concepts that could not be defined by existing literature were also taken into account, and these were further questioned in the interviews held with the representatives on policy level, including the ECCEA and the MIE. The categorization matrix can be found in Appendix E.

Semi-structured interviews were held with the three stakeholder groups. The group on policy level, including the ECCEA and the MIE, were asked questions concerning the NCF. These questions focused on how the document was created, on what assumptions it is based, and how it should be used in the daily practices. Questions included 'Who constructed the framework and what are the main ideas behind it?' and 'What is the main purpose of the framework?' The managers and teachers were asked questions in relation to the use of the NCF and what constitutes quality of education. Examples of questions for managers include 'What do you know about the framework?' and 'How is the framework used by teachers?', questions for teachers are for example 'How do you use the framework?' and 'What do you think are concepts related to the quality of education?' The outline of

the interviews can be found in Appendix D. Alongside these questions information that could not be observed during the day was asked, for example ‘provisions for parents’ could not be observed with the ECERS-R profile.

### **Data analysis**

**Quantitative.** Before scores were computed for the ECERS-R and the Interaction competencies measuring scale, the completed measuring instruments were compared to each other and scoring was adjusted if necessary. For example, during observations the same scores were given to two schools on the item ‘greeting/ departure’. After comparison it became clear that one school included parents more, which resulted in the adjustment of the score for the other school. Hereafter, for both observational instruments an overall value was computed, for the ECERS-R Profile this resulted in a score for overall quality and for the Interaction competencies measuring scale this lead to a score for interaction competencies of the teacher. Applicable to the Interaction competencies measuring scale, if a competency was scored as ‘non applicable’, the specific value was not taken into account for the total score.

The overall quality derived from filling in the ECERS-R Profile was computed through a few steps. Firstly an average score per item was defined, and thereafter the total score was computed by taking the average of all items. To define the overall quality as ‘low’, ‘middle’ or ‘high’ the following margins were used. As the lowest score that could obtained was 1, and the highest 3; the margins were 1-1,66 (‘low’), 1,67-2,33 (‘middle’), and 2,34-3 (‘high’). For the Interaction competencies measuring scale an overall score was also computed. First for every competency an average score out of the three measuring moments was computed, hereafter an overall average score could be calculated. The same values were given to the scores. ‘Low’ constituted a score between 1-1,66, ‘middle’ 1,67-2,33, and ‘high’ 2,34-3.

**Qualitative.** For the document analysis and interviews the method of content analysis was used. As above described the NCF was analysed with concepts based on existing literature on ECEC. After this initial analysis, the information derived from the three interviews with policy stakeholders was used to fill in the gaps or elaborate on information found in the document. This gave an overview of both the fixed content of the NCF and reasons behind certain choices that were made.

Interviews were analysed differently. Interviews with teachers were analysed with the use of four categories: 1) Use of the NCF, 2) Value of the NCF, 3) Quality of education, and 4) Evaluation. These categories were used to colour code certain words and sentences in the interviews and reports of the interviews. For example, ‘*to plan the daily activities*’ falls in the category Use of the NCF, and ‘*the framework makes her work easier and facilitates her work*’ in Value of the NCF. After this colour coding all the marked sentences and words were put in a matrix, followed by the grouping of these sentences and words to make the matrix more comprehensible. For the interviews with managers, including assistant coordinators and pre-school managers, the same procedure was used. However, different categories were created: 1) NCF, 2) Quality of Education, and 3) Evaluation and role. An

example of the category NCF is *'For the teachers it's just like a guideline'*, and for the category Evaluation and role *'We don't have a specific tool used by the organization'*. The matrixes for both these interviews can be found in Appendix F.

## Results

The results are described in line with the three sub-questions stated at the end of the theoretical framework. Firstly results concerning the content of the NCF are described, hereafter the use of the NCF, and lastly the overall quality of pre-primary education in Mauritius.

### **Content of the National Curriculum Framework for pre-primary**

Statements about the content of the NCF can be drawn from both the document analysis as the interviews held with relevant stakeholders. Both these resources confirm that the framework was created by the MIE under supervision of the ECCEA. During the process different stakeholders were involved to give their opinion about the curriculum, including teachers, assistant coordinators and the Ministry of Education. In addition the group who worked on the framework consulted different curricula from all over the world to gather ideas for their own. One example is that the descriptors stated in the framework are derived from the Connecticut curriculum. The curriculum itself is based upon four principles; 1) The principles of the UN Convention of the Rights of the Child, 2) The cognitive, social, emotional, physical, aesthetic, moral and spiritual development of the child, 3) The cultural diversity of the Mauritian society, and 4) The need to equip the child with skills to facilitate learning to read, write and count. In an interview was explained that the curriculum focuses on the Rights of the Child, because it is important to them that all policy concerning children takes this into account. The focus on the holistic development is valuable, because the research team found that most early education curricula focus on this concept. The third principal, focusing on cultural diversity, was explained by the notion that Mauritius is known for its peaceful diverse society and therefore an example for the world. This pride is seen throughout the curriculum. The need to equip the child with the mentioned academic skills is because pre-primary prepares children for the next level of education. In addition, the framework is based upon certain goals, starting with the National Curriculum Goals which are the basis for every curriculum in Mauritius. These national goals are then specified in generic learning statements, overarching learning goals, goals per learning area, learning outcomes, descriptors and finally into performance indicators (see Appendix E).

The framework continues with a description of relevant theories concerning early childhood education. It is mentioned regularly that *"It reflects contemporary educational thinking and up-to-date pedagogical practices"*. For example, the NCF describes the importance of early childhood education and the individual development of the child. In an interview is stated that these theories are mostly derived from the previous guidelines used in Mauritius for pre-primary education. Striking is the description of the 'needs of the child', which allegedly was derived from the previous guidelines. This description mentions over ten 'needs of the child' without quoting literature or practical implications

for the teacher. Interviewees could not say why the sources are not included or what the value of this specific description is.

The following chapters focus on outlining the different areas of learning, based upon the concept of the holistic development of the child, and describing the (pedagogical) approaches that are to be used in the daily practices. Concerning these two subjects some descriptions stand out. Firstly, the area of ‘Communication, Language and Literacy’ mentions the mother tongue of the children which has to be used as a communication basis at school. In an interview is explained that because Mauritian children come from different backgrounds, and sometimes do not speak the same language, the teachers are relatively free in choosing the language of instruction at school. Therefore the term ‘mother tongue’ describes broadly the differences in language children have in order to let schools make their own decision. Secondly, in relation to the pedagogical approaches, the ‘Play-based approach’ and ‘Multicultural approach’ stand out. The concept of the ‘Play-based approach’ is vaguely and variously described throughout the framework. Play is mentioned alongside ‘the three stages of play’, as ‘the natural way in which children learn’, but also as ‘*reproducing a design/pattern from mother’s dress*’. Moreover, there is no description of the concept of ‘free play’. Furthermore, the ‘Multicultural approach’ puts emphasis on the differences in culture in Mauritius and the desire to raise their children in a certain way. Meaning with respect for cultural diversity and the sense of belonging to Mauritius as a nation.

These chapters are followed by a specification per area of learning outlining the descriptors, performance indicators and guidelines for teaching approaches, strategies (activities) and assessment.

Another element of the framework worth mentioning is how assessment is integrated in the curriculum. The framework values assessment for example in stating that “*Through assessment the educator monitors achievement of an individual child in each area of learning*”. However, no explicit tools or measurements are given nor described to support assessment in the classroom. Per learning area suggestions for assessment are briefly described, for example for the area ‘Communication, Language and Literacy’ it is advised to “*assess through observational checklists*”. Interviewees acknowledge the lack of assessment in the framework and express the desire to change this in the revision.

### **Use of the National Curriculum Framework in daily practices**

Most teachers and managers, including assistant coordinators and pre-school managers, highly value the NCF and feel that it is an important document for pre-primary education because it ensures quality. Some teachers call it ‘Like a Bible’, other teachers and managers appreciate the framework because it ensures that every child gets the same opportunities. The majority of the teachers mention that the framework facilitates their work and that everything described in the curriculum is important. However, other teachers and managers gave critical notes in what way the framework could be improved. Both these advantages and disadvantages can be described in two components, how the framework is used for planning and how it is used for evaluation.

**Use for planning.** Almost all teachers use the curriculum daily to make their planning for the group. Moreover teachers make daily, weekly and year plans based on the NCF. Most teachers use the NCF as a guide to plan and create themes and activities for the children. The activities are based upon the different areas of learning and the corresponding descriptors. Some teachers also mention the different approaches described in the curriculum and the teaching approaches, and a few state specific topics for which they use the framework for example for vocabulary lessons or how to write in English. Only three teachers mention not to use the NCF, and two teachers state that they use it in combination with another curriculum. All these teachers work for a private school, and most managers from these same schools confirm this use of the curriculum. Only for one private school the teacher states not the use the NCF, whereas the manager highly values the NCF and encourages her teachers to use it.

Most teachers and managers did not comment on the content of the NCF, stating that ‘nothing is missing’ and ‘everything is described’, however some could give pointers. For example, teachers want more examples of activities. One teacher specifically mentioned the desire for ideas on physical education and science activities, ideas on how to incorporate technology in the classrooms, and more creative activities. One teacher used the words ‘copy and paste’ activities to describe the current ones. Additionally, some teachers and managers mentioned that the NCF is too academic, and does not focus enough on the interest of the child and free play.

Comparing the interviews with the daily practices of teachers it is worth mentioning that teachers indeed use the NCF for their daily planning and create activities according to the areas of learning and the descriptors. However, in the public schools and most private schools this is done in the following manner: per day of the week one area of development is chosen, and per activity one descriptor is selected. This shows in what way the curriculum is implemented, and that teachers sometimes do use the curriculum in a ‘copy and paste’ way.

**Use for evaluation.** The curriculum also has its influences on the evaluation of the daily practices of teachers, both done internally and externally. Internally meaning the way teachers reflect on their daily practices and the assessment of children. Evaluation is done externally by the assistant coordinators who are commissioned by the ECCEA. When teachers were asked how they evaluate their daily practices, most of them mention the value of reflection and feedback. Only a few do not understand the question. Almost all teachers work alongside one or more colleague in the classroom, and together the teachers make their planning and discuss their pedagogical approaches. Teachers feel like they can discuss anything with their colleagues, and regularly do so. Teachers mention using observations, asking questions and carrying out follow-up activities to assess the progress of their children. Some state that it is important to know whether children have grasped the subject or reached the goal of the activity. A few teachers also mention using the Developmental Learner Profile [DLP], a tool to assess the children on multiple areas of learning when children transfer from pre-primary to primary education. It seems that teachers have enough ideas on how to follow the development of children although no frequent records are being kept. Furthermore, follow-up activities are seen as repetition of

the same goal. For example, one teacher mentioned that if a child does not understand the concept of the colour red the follow-up activity would be using different colours and focusing on red. The activity would keep on going until the child gave the desired answer. Other teachers remark that different strategies should be used, for example adding a song or a poem. Teachers do not mention using ideas or tips from the NCF to assess their teaching.

As mentioned above external evaluation is done by the assistant coordinators, who describe their role as assess the education given and give advice to teachers. Assistant coordinators visit both public and private schools regularly and use a supervision sheet. This sheet includes components as finances, planning of the activities, the environment, and progress of the children. Assistant coordinators both observe teachers and children, and discuss recommendations with the teacher. Most teachers find these suggestions helpful, but some teachers and managers of private schools state that they do not value this inspection. One manager mentioned that assistant coordinators only visit to ‘sign the visiting book’. Another teacher mentioned that, because she teaches Montessori education, when a new assistant coordinator visits her school she has to explain her view on education. In addition this teacher feels like the assistant coordinator does not understand the concept of Montessori education and gives useless advice.

### **Overall quality of pre-primary education environments**

**Objective quality.** Quality of the classroom environments was measured in terms of overall quality (ECERS-R Profile) and competencies of the teacher (Interaction competencies measuring scale).

**Overall quality.** The scores per item and the total score for every school are seen in Table 1.

The results show that the items language-reasoning (1,79), and program structure (1,67) score relatively low. For the item language and reasoning classroom environments score low, because teachers mainly ask close-ended questions and do not stimulate communication between children. Children in the classroom mainly have to be quiet, and do not work together with their peers. Environments which score higher, for example school 9 and 11, on this item stimulate critical thinking in children more, allow more time for children to talk together, and sometimes let children play together. Program structure scores low because of the high emphasis on group activities, or whole group activities (every child in the classroom carries out the same activity) and the absence of free play in most environments. In most public and private schools children work individually, usually in small groups according to age, on the same task. Furthermore, only a few schools implemented the concept of free play in their classroom and play corners were only integrated in some schools. These schools, for example school 9, score higher on this item. When asked about free play, some teachers from both public and private schools mention that in the morning children get to choose from the cupboards before class starts.



Table 1.Score per item and overall scores for the ECERS-R Profile  
(Low: 1-1,66/ Middle: 1,67-2,33 / High: 2,34-3)

School	Specifications	Item 1 Space & Furnishings	Item 2 Personal care routines	Item 3 Language- reasoning	Item 4 Activities	Item 5 Interaction	Item 6 Program structure	Item 7 Parents and staff	Total score
School 1	Public school Rural area Ratio: 2-30	2,38	2,5	1,25	2,4	2,4	1,5	2,67	2,16
School 2	Public school (ZEP) Urban area Ratio: 2-20	2,63	2,83	2	2,5	2,2	1,75	2,83	2,39
School 3	Private school Urban area Ratio: 3-23	2,13	2,5	1,5	2,5	2,2	1,75	3	2,23
School 4	Private school Rural area Ratio: 1-23	2,13	2,83	1,25	2,4	2	1,5	2,83	2,13
School 5	Public school Urban area Ratio: 2-23	2,25	2,67	2	2,4	2,4	1,5	2,5	2,25
School 6	Public school Urban area Ratio: 4-59	2	2,83	1,25	2,1	2,2	1,25	2,67	2,04
School 7	Public school Urban area Ratio: 4-69	2,13	2,83	1,5	2,5	2,2	1,5	3	2,24
School 8	Public school Urban area Ratio: 2-20	2,75	2,83	1,75	2,4	2	1,5	3	2,32
School 9	Private school Urban area Ratio: 3-27	2,75	3	2,75	2,8	2,8	2,5	3	2,8
School 10	Public school Rural area Ratio: 2-21	2,25	2,83	1,75	2,2	2,2	1,5	2,83	2,22
School 11	Private school Urban area Ratio: 2-14	2	2,5	2,75	2,5	2,8	2,5	2,33	2,48
School 12	Private school Rural area Ratio: 1-22	1,38	3	1,75	2,5	2,4	1,75	3	2,25
<b>Total score</b>		2,23	2,53	1,79	2,43	2,32	1,67	2,81	

Environments have moderate scores on the items space and furnishings (2,23), and interaction (2,32). The item on space and furnishings shows, however, a moderate score because of variation between classroom environments. Most classrooms have good indoor spacing and appropriate furnishing for children, only a few classrooms felt crowded and there was not enough space to move around flexible between the furnishings. This was for example the case in school 12. Additionally, a

couple of classrooms had a space for privacy or facilities for nap-time. Furthermore, most classrooms did not have appropriate time or space to play outside. Neither the outdoor environment was appropriate, nor was there safe and well maintained equipment. Only school 9 provided appropriate time and space, and was playing outside an integrated part of the daily schedule. Environments also score moderately on the item interaction. In every school children were supervised appropriately, and teachers were around throughout the day. Classrooms showed differences in the way children were disciplined, although manners and respect is highly valued by all teachers. Some teachers showed a more positive way of correcting children, for other teachers the main interaction between child and educator concerned discipline. Moreover, because interaction was not stimulated between children the overall score for this item lowered for most environments.

High scores were seen for the items personal care routines (2,53), activities (2,43), and parents and staff (2,81). All schools score high on the item personal care routines, mostly because environments maintain good health and safety practices. Teachers make sure children eat and drink properly, go to the toilet and wash their hands, and that the classroom is free of hazard. Nap time is mostly done after lunch, and while most children sleep with their head on the table some schools have beds or mattresses. One remark is that observations showed that most children do not really sleep during this time. In the classroom different activities are provided for the children in line with the theme, taking into account the different areas of learning. In a few classrooms children choose the activity, however in most classrooms the teacher provides the tasks. The seventh item, parents and staff, scores high because most teachers try to engage parents in the education of their children with parent meetings, festivals, and outings. Some teachers, however, note that due to a lack of parenting skills it is difficult to engage parents in education. A teacher from school 1 explicitly states that parents need more parenting skills and knowledge about the value of pre-primary education in order for them to give quality education. In addition, the facilities for teachers are well established and there is room for personal and professional development. Professional development can be done through self-initiated activities, but most teachers follow the courses provided by the ECCEA.

***Competencies of the teacher.*** Table 2 shows the scores per item and the overall scores for the Interaction competencies measuring scale.

Table 2. Score per competency (C) and overall scores for the Interaction competencies measuring scale

(Low: 1-1,66/ Middle: 1,67-2,33 / High: 2,34-3)

School	Specifications	C 1 Sensitive responsiveness	C 2 Respecting the child's autonomy	C 3 Setting boundaries	C 4 Talking and explaining	C 5 Stimulating development	C 6 Guiding child-child interactions	Total score
School 1	Public school Rural area Ratio: 2-30	2,33	1,67	3	2	2	1,33	2,06
School 2	Public school (ZEP) Urban area Ratio: 2-20	2,33	1,67	3	2,5	2	1	2,08
School 3	Private school Urban area Ratio: 3-23	1,33	1,33	3	3	1,33	1,33	1,89
School 4	Private school Rural area Ratio: 1-23	1	1,33	3	3	2	1	1,89
School 5	Public school Urban area Ratio: 2-23	3	2	3	2,5	2,5	1,33	2,39
School 6	Public school Urban area Ratio: 4-59	3	2	3	2,33	2	1	2,22
School 7	Public school Urban area Ratio: 4-69	3	1,33	3	2	1,5	1,33	2,03
School 8	Public school Urban area Ratio: 2-20	2	1	3	2	2,5	1,33	1,97
School 9	Private school Urban area Ratio: 3-27	2,33	2,33	2,33	2	3	2	2,33
School 10	Public school Rural area Ratio: 2-21	2	1,67	3	3	2	1,33	2,17
School 11	Private school Urban area Ratio: 2-14	2,67	2,33	3	3	2,5	1,67	2,53
School 12	Private school Rural area Ratio: 1-22	3	1,67	3	3	2	1,67	2,39
<b>Total score</b>		2,33	1,69	2,94	2,53	2,11	1,36	

Low scores are seen for the competency guiding child-child interactions (1,36). No environment scored high for this competency. This is because children are not stimulated to talk to their peers during the day, sometimes obligated to be silent during the entire activity. Moreover, when talking is allowed it is not stimulated by the teacher nor does the teacher assist the child in conversation skills. For example when a conflict between children occurs, a teacher does not help most of the time.

The items sensitive responsiveness (2,33), respecting the child's autonomy (1,69), and stimulating development (2,11) show moderate scores. In general teachers react sensitive and adequately to children when they show distress or discomfort. However, teachers who score high on this competency are more willing to talk informally to their children, make jokes, give compliments or walk around in the classroom. Teachers who score low show unstable reactions to what children say or do, and sometimes ignore children who need help. This was mostly seen at schools 3 and 4, where teachers barely speak to their children. Also, these teachers do not engage in informal conversation with their children and mostly give instructions or correct children. For the second competency, respecting the child's autonomy, it is striking that no environment scores high. This means that classroom environments do not give children a lot of choice or independence during the school day. Children carry out teacher-initiated tasks, are handed everything, and are sometimes fed during lunch time. This is in line with the competency stimulating development, because children in most classrooms do not get individual attention regarding their own development. Children mostly carry out the same tasks as their peers which the teacher provides. Also, teachers do not ask a lot of open-ended or critical questions.

The items giving structure and setting boundaries (2,94), and talking and explaining (2,53) score relatively high. This could be due to the fact that teachers value discipline and manners in the classroom, and want their children to behave well. The structure in the classroom is very clear to the children, same as the schedule and the way routine activities are carried out. Talking and explaining is most of time in the hands of the teacher, and children do not ask a lot of questions. Most teachers take the time to explain the activity and pay attention to individual children who need it.

**Subjective quality.** During interviews teachers and managers were asked about a definition of quality of education. Although answers differed and some teachers and managers named more elements than others, some concepts are mutual. Both teachers and managers put emphasis on the role of the teacher, and acknowledge the importance of a good teacher. Some added that a degree is not enough, that also 'love for the job' is needed. A teacher should be a facilitator and guide the children towards primary education, providing a happy environment where children can play. Giving child-centred education and paying attention to the whole development of the child is also crucial. Caring for children is also an important concept for teachers and managers, sometimes quoted as *'What I do at home, I expect at school'*. Moreover, some teachers explicitly answered that quality of education is *'doing the best with what we have'*.

## Conclusion and discussion

In this study the quality of pre-primary education in Mauritius was central and researched through three sub questions. Firstly the content of the National Curriculum Framework [NCF] for pre-primary was analysed, secondly the use of this framework in the daily practices of teachers, and thirdly the overall quality of pre-primary environments was assessed. Results show that these components of quality are relatively good in Mauritius, meaning that the ECCEA who created and monitors the curriculum provides a good basis for the practices of pre-primary teachers. The framework aims at describing relevant theories and hands-on suggestions to support the pedagogical approaches in the classrooms. Observations in the classrooms and interviews with teachers show that most teachers highly value this curriculum and use it for their daily planning of activities. Moreover, observations point out that all classroom environments are of middle or high quality. Resulting in, generally speaking, classrooms which provide a good basis for children to learn. However, as the SABER Country Report stated in 2012, quality is still an issue in this educational sector, and improvements need to be realized in order to truly satisfy the needs of the young child.

Starting from the policy perspective, the analysis of the NCF showed that relevant theories concerning early childhood development and learning are described in the curriculum, alongside practical suggestions and tools for teachers which are to be used freely. This is in line with Oberhuemer (2005) who states that a curriculum should be a supportive tool used freely by the teacher. Not all descriptions, however, are consistent, sufficient or based upon grounded theory. These issues are mostly seen with the ‘play-based approach’, the ‘multicultural approach’, the concept of ‘holistic development’, evaluation and assessment, and individual development. These incomplete descriptions may be the reason why implementation of these concepts in the classroom is failing.

First of all, theories concerning play are, somewhat, described in the NCF, but observations show that teachers do not implement this concept. Teachers describe an activity where children are handed clay with the instruction to make the letter ‘S’ as ‘learning by doing’ or ‘play’. Moreover, free play in play corners is not seen in the majority of the pre-primary classrooms. This is worrying, because play, according to Vygotsky and Piaget (in: Bjorklund & Brown, 1998) is the most important strategy to teach young children. Through play young children discover the world and construct knowledge. Not providing young children with free play is therefore by definition not providing for good pedagogy for young children.

Secondly, the multicultural approach is a striking concept in the NCF, and is explained as an important ideal for education, because children need to learn about the diversity of Mauritian society. The sixth national curriculum goal, which applies to all curricula in Mauritius, described in the NCF sheds light on this idea: *“To foster national unity by promoting in the individual understanding of and respect for our multicultural heritage”*. Observations, however, show that this goal is translated into knowledge about for example the colours of the flag or who the prime minister is. It is questionable to what extent this teaches young children about national unity and citizenship.

Thirdly, teachers use the concept of ‘holistic development’ in their weekly planning differently from intended. Despite knowing the theory, observations show that teachers do not fully grasp the concept. Teachers select one area of learning and create their daily activities around it, for example on Monday mathematics is central and on Tuesday physical development. This however is not meant by the holistic development of the child. Working holistically entails that multiple areas of learning are integrated in one activity, preferably in play corners (Brouwers, 2010). Moreover, it seems that teachers put more emphasis on hard skills, for example learning to write your name, then soft skills, for example helping a child to solve a conflict. Developing the child holistically also entails providing for education in the area of social and emotional development (Slot, 2016).

Fourthly, because evaluation and assessment are not clearly described in the NCF it is possible that teachers do not pay attention to it. During observations and interviews it became clear that the individual development of children is not really stimulated and followed. This is also seen in the types of activities children carry out, which are mostly the same for everyone and therefore not tailored to the individual capabilities of the child. Gathering information about children is important in order to individualize the curriculum (Espinosa, 2005; Maxwell & Clifford, 2004). As this is not done, children do not develop to their full potential.

Lastly, continuing about the individual development of the child observations show that an individualized approach is not common in the classroom. Even though the NCF describes the value of a child-centred approach and that it is important “*to provide the best learning opportunities for individual children*”. Foremost, taking into account the competencies of the teachers as described by Riksen-Walraven (2004 in Fukkink et al., 2005), environments need to provide for autonomy of the child, proper guidance, and stimulating developmental activities. In most classrooms children are not allowed to choose their activities or sometimes not even the colour they want to use for their drawing. In addition teachers do not ask a lot of critical questions (why and how questions) to children. Instruction is mostly teacher-directed and input of the child is not really seen, if questions are asked these are close-ended and children repeat the same answer. This seems contradictory to the NCF, which wishes for independent and strong-minded citizens. Moreover, the Education and Human Resources Strategy plan 2008-2020 states that: “*...valuing the individual learning achievements of each and every student*” is more important than a ‘one size fits all’ approach. Being able to make your own choices and follow your own plan is prior to these skills and attitudes. This could be due to the fact that teachers highly value discipline and good manners. Free situations or situations where children work, play or talk together (and therefore are louder) seem not desirable. This is worrying because Vygotsky (in: Bjorklund & Brown, 1998) emphasizes the importance of language in the early development of the child, especially in relation to play. Language acquirement and play go together at this young age, and stimulates the development of the child.

**Recommendations.** Next to these critical notes in relation to the research questions, the aim of this study was to formulate recommendations for the pre-primary sector in Mauritius. Specific

recommendations can be found in Appendix H and I, but most attention should be given to the interaction between policy and practice. Observations show that teachers highly value this framework and use it daily to plan their activities, which gives policy makers the responsibility to make the document understandable and practical. It seems, however, that theories described in this curriculum are not fully grasped and implemented by the teachers. Moreover, the NCF highly values child-centred education and acting in the ‘interest of the child’, whilst observations give a different image. The individual talents and competencies of children should be more stimulated in order for them to become the desired, future contributing members of society the Ministry of Education, Culture and Human Resources (2009) envisions.

**Future research.** For teachers to individualize the curriculum to the needs of every child in their classroom, it seems that more teaching competencies and skills are needed. This could be a task for the teacher training programs in Mauritius, who should equip teachers with this knowledge. Therefore future research should focus on investigating the curriculum of the teaching programs and its effectiveness in the daily practices of schools. In addition it could also be interesting to look at the relationship between assistant coordinator and teachers, as the prior gives advice to schools on how to improve their pedagogical approaches. Results showed that this advice is not always appreciated, which undermines the role of the ECCEA in providing quality education. Foremost the qualifications of the assistant coordinators and the instruments they used could be researched, as well as the dynamics in the process of giving advice. Another suggestion for future research is in relation to the broader community in which the child grows up, in accordance with the model of Bronfenbrenner (1979). The current study briefly questioned teachers and managers about the involvement of parents in pre-primary education. Although schools try to engage the family teachers mention that this is difficult sometimes. Moreover in disadvantaged communities teachers feel like they have to raise the children, and education takes second place. In quality education parents play a key role according to Leseman and Slot (2014), therefore the child-rearing practices and the commitment of parents to education could be a focus of future research. Also, the thesis of Cerunne Bouts could be a starting point to research this subject, as this thesis concerns parents.

**Limits of the study.** Nuance is needed in interpreting these results due to some limits of the study carried out. Firstly, it needs to be said that the extent of the study is relatively small, because only twelve schools participated. In addition, the method of sampling was influenced by the local authority concerning pre-primary education in Mauritius. Although different schools in different regions were visited, it still could implicate that the range of schools was relatively the same. Also, differences were found between public and private schools therefore overall conclusions cannot be generalized to every pre-primary school in Mauritius. Secondly, the way the observational instruments were used, more specifically the ECERS-R, has some limits. As the complete instrument was unavailable, short descriptions were used instead. These descriptions however are seen from the perspective of an educator, and more difficult to interpret by someone who has no experience in the field of education.

For the current study this was not an issue, but in order to repeat the study a researcher should have knowledge about early childhood education. Using these short descriptions did however leave room for cultural sensitivity, scoring items in the context of the country, and the specific classroom environment. Taking into account the resources of the specific teacher, classroom environment and children. Thirdly, even though an additional observation instrument was used to complement the ECERS-R list to take into account both structural and process quality, the instructional quality of teachers was still under exposed.



## References

- Anderson, L. M., Shinn, C., Fullilove, M. T., Scrimshaw, S. C., Fielding, J. E., Normand, J., & Carande-Kulis, V. G. (2003). The effectiveness of early childhood development programs: A systematic review. *American Journal of Preventive Medicine*, 24(3), 32–46. doi:10.1016/S0749-3797(02)00655-4
- Ansell, N. (2005). *Children, Youth and Development*. London: Routledge.
- Barnett, W.S. (2008). *Preschool Education and Its Lasting Effects: Research and policy implications*. Boulder and Tempe: Education and the Public Interest Center & Education Policy Research Unit. Retrieved from: <http://nepc.colorado.edu/publication/preschool-education>
- Beller, E. (1993). What should early childhood education aim to do for children? What is the effect on young children's lives? Paper presented at the Third European Conference on the quality of early childhood education. Kriopigi, Greece: European Early Childhood Education Research.
- Bennet, J. (2000). *Early childhood care and development program in Mauritius*. Retrieved from: [https://www.unicef.org/evaldatabase/files/MTS\\_00-005.pdf](https://www.unicef.org/evaldatabase/files/MTS_00-005.pdf)
- Bjorklund, D.F., & Brown, R.D. (1998). Physical play and cognitive development: Integrating activity, cognition and education. *Child development*, 69-3, 604-606.
- Blok, H., Fukkink, R. G., Gebhardt, E. C., & Leseman, P. P. M. (2005). The relevance of delivery mode and other program characteristics for the effectiveness of early childhood intervention. *International Journal of Behavioral Development*, 29-1, 35–47. doi: 10.1080/01650250444000315
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Brouwers, H. (2010). *Kiezen voor het jonge kind*. Bussum: Uitgeverij Coutinho
- Burchinal, M.R., & Cryer, D. (2003). Diversity, child care quality, and development outcomes. *Early Childhood Research Quarterly*, 18, 401-426. doi: 10.1016/j.ecresq.2003.09.003
- Burchinal, M.R., Peisner-Feinberg, E., Bryant, D.M., & Clifford, R. (2000). Children's social and cognitive development and child-care quality: Testing for differential associations related to poverty, gender, or ethnicity. *Applied development science*, 4-3, 149-165. doi: 10.1207/S1532480XADS0403\_4
- Clifford, R. M., Reszka, S. S., & Rossbach, H. G. (2010). Reliability and validity of the early childhood environment rating scale. Unpublished manuscript. Chapel Hill: University of North Carolina.
- Currie, J. (2001). Early childhood education programs. *Journal of economic perspectives*, 15-2, 214-238. doi: 131.211.208.19
- De Haan, A. K. E., Elbers, E., & Leseman, P. P. M. (2014). Teacher- and child-managed academic activities in preschool and kindergarten and their influence on children's gains in emergent academic skills, *Journal of research in childhood education*, 28-1, 43-58. doi:

- De Kruif, R.E.L., Vermeer, H.J., Fukkink, R.G., Riksen-Walraven, J.M.A., Tavecchio, L.W.C., Van IJzendoorn, M.H., & Van Zeijl, J. (2007). *De Nationale studie pedagogische kwaliteit kinderopvang: Eindrapport Project 0 en 1*. Nederlands Consortium Kinderopvang Onderzoek. Retrieved from:  
[http://www.kinderopvangonderzoek.nl/drupal/sites/default/files/field/textfile/Validatie%20project%200%20en%201\\_0.pdf](http://www.kinderopvangonderzoek.nl/drupal/sites/default/files/field/textfile/Validatie%20project%200%20en%201_0.pdf)
- Douglass, A. (2011). Improving family engagement: The organizational context and its influence on partnering with parents in formal child care settings. University of Massachusetts Boston. Retrieved from: <http://files.eric.ed.gov/fulltext/EJ956369.pdf>
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis. *Journal of advanced nursing*, 62-1, 107-115. doi: 10.1111/j.1365-2648.2007.04569.x
- Englund, M.M., Luckner, A.E., Whaley, G.J.L., Egeland, B. (2004). Children's achievement in early elementary school: Longitudinal effects of parental involvement, expectations, and quality of assistance. *Journal of Educational Psychology*, 96(4), 723-730. doi: 10.1037/0022-0663.96.4.723
- Espinosa, L. (2005). Curriculum and Assessment Considerations for Young Children from Culturally, Linguistically, and Economically Diverse Backgrounds. *Psychology in the Schools*, 42-8, 837-853. doi: 10.1002/pits.20115
- Fukkink, R., Tavecchio, L., De Kruif, R., Vermeer, H., & Van Zeijl, J. (2005). Criteria voor kwaliteit van kinderopvang: Visies van sleutelfiguren. *Pedagogiek*, 4-25, 243-261. Retrieved from:  
[http://www.kinderopvangonderzoek.nl/drupal/sites/default/files/field/textfile/5\\_-\\_Criteria\\_voor\\_kwaliteit\\_van\\_kinderopvang\\_1.pdf](http://www.kinderopvangonderzoek.nl/drupal/sites/default/files/field/textfile/5_-_Criteria_voor_kwaliteit_van_kinderopvang_1.pdf)
- Harms, T., & Richard, M. (2014). *Early childhood environment rating scale: Third Edition*. New York: Teachers College Press.
- Howes, C., Burchinal, M., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O. (2008). Ready to learn? Children's pre-academic achievement in pre-kindergarten programs. *Early Childhood Research Quarterly*, 23, 27-50. doi:10.1016/j.ecresq.2007.05.002
- Howes, C., & Smith, E. W. (1995). Relations among child care quality, teacher behavior, children's play activities, emotional security, and cognitive activity in child care. *Early Childhood Research Quarterly*, 10, 381-404. doi: 10.1016/0885-2006(95)90013-6
- Ishimine, K., Tayler, C., & Bennett, J. (2010). Quality and Early childhood education and care: A policy initiative for the 21<sup>st</sup> century. *International Journal of Child Care and Education Policy*, 4-2, 67-80. doi:10.1007/2288-6729-4-2-67
- Kagitcibasi, C., Sunar, D., & Bekman, S. (1988). Comprehensive pre-school education projects. Ottawa, Canada: International Development Research Center (IDRC).
- Kamerman, S.B. (2001). *Early childhood education and care: international perspectives*. New York:

- Columbia University Institute for Child and Family Policy. Retrieved from:  
<http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.527.9037>
- Leseman, P., & Slot, P. (2014). Breaking the cycle of poverty: challenges for European early childhood education and care. *European Early Childhood Education Research Journal*, 22(3), 314–326. doi: 10.1080/1350293X.2014.912894
- Leseman, P. L., Slot, P.L., & Lerkkanen, M.-K. (2015). CARE – Curriculum quality analysis and impact review of European ECEC: D2.2. The relations between structural quality and process quality in European early childhood education and care provisions: secondary analyses of large scale studies in five countries. Retrieved from: [http://ecec-care.org/fileadmin/careproject/Publications/reports/CARE\\_WP2\\_D2\\_2\\_Secondary\\_data\\_analyses.pdf](http://ecec-care.org/fileadmin/careproject/Publications/reports/CARE_WP2_D2_2_Secondary_data_analyses.pdf)
- Magnuson, K., & Duncan, G.J. (2016). Can early childhood interventions decrease inequality of economic opportunity?, *The Russell Sage Foundation Journal of the Social Sciences*, 2-2, 123-141. doi:
- Mauritius Institute of Education & Early Childhood Care and Education Authority (n.d.). *National curriculum framework pre-primary 3-5 years*. Retrieved from:  
[http://www.ibe.unesco.org/curricula/mauritius/mf\\_ppfw\\_2010\\_eng.pdf](http://www.ibe.unesco.org/curricula/mauritius/mf_ppfw_2010_eng.pdf)
- Mashburn, A. J., Pianta, R. C., Hamre, B. K., Downer, J. T., Barbarin, O. A., Bryant, D., ... Howes, C. (2008). Measures of classroom quality in prekindergarten and children's development of academic, language, and social skills. *Child Development*, 79, 732–749. doi: 10.1111/j.1467-8624.2008.01154.x
- Maxwell, K.L., & Clifford, R.M. (2004). School readiness assessment. *National Association for the Education of Young Children*. Retrieved from:  
<http://journal.naeyc.org/btj/200401/maxwell.pdf>
- Melhuish, E.C. (2001). The quest for quality in early day care and preschool experience continues. *International journal of behavioural development*, 25, 1-6. doi: 10.1080/01650250042000492
- Ministry of Finance and Economic Development (October 2015). Poverty analysis 2012. Retrieved from:  
<http://statsmauritius.govmu.org/English/StatsbySubj/Documents/Poverty/Poverty%20Analysis%202012.pdf>
- Ministry of Education, Culture and Human Resources (October 2009). Education and Human Resources Strategy Plan 2008-2020. Retrieved from: <http://ministry-education.govmu.org/English/Documents/Publications/EHRSP%202008-2020.pdf>
- Ministry of Education and Human Resources (September 2014) . Education Reforms in Action 2008-

2014. Retrieved from: <http://ministry-education.govmu.org/English/Documents/EDUCATION%20REPORT%20in%20Action%202.9.14.pdf>
- Nsameng, A. B. (2008). (Mis)Understanding ECD in Africa: The Force of Local and Global Motives. In: M. Garcia, A. Pence, & J. L. Evans (Eds.). *Africa's Future, Africa's Challenge. Early Childhood Care and Development in Sub-Saharan Africa. Series Directions in Development* (pp. 135–149).
- Oberhuemer, P. (2005). International Perspectives on Early Childhood Curricula. *International Journal of Early Childhood*, 37-1, 27–37. doi: 10.1007/BF03165830
- Odit, M.P., Dookhan, K., & Fauzel, S. (2010). The impact of education on economic growth; The case of Mauritius. *International Business & Economics Research Journal*, 9-8, 141-152. doi: 10.19030/iber.v9i8.620
- Parliament of Mauritius (2007). Early Childhood Care and Education Authority Act 2007. Retrieved from: <http://www.tipti.org/act.pdf>
- Plowman, L., & Stephen, C. (2005). Children, play, and computers in pre-school education. *British journal of educational technology*, 36-2, 145-157. doi: 10.1111/j.1467-8535.2005.00449.x
- Ritchie, J., & Lewis, J. (2003). *Qualitative research practice: A guide for social science students researchers*. London: SAGE Publications
- SABER Country Report (2012). *Mauritius: Early Childhood Development*. The World Bank. Retrieved from: <http://documents.worldbank.org/curated/en/957541468288019851/pdf/900870WP0Box380ritius0CR0Final02012.pdf>
- Shepard, L.A. (1994). The challenges of assessing young children appropriately. *The Phi Delta Kapan*, 76-3, 206-212.
- Slot, P.L. (2016). *Innovating the early years curriculum to prepare children for the 21<sup>st</sup> century*. Utrecht: Afdeling Orthopedagogiek Cognitieve en Motorische Ontwikkelingsproblemen, Universiteit Utrecht
- Stipek, D., & Byler, P. (2004). The early childhood classroom observation measure. *Early childhood research quarterly*, 19-3, 375-397. doi: 10.1016/j.ecresq.2004.07.007
- Sylva, K. Melhuish E., Sammohans, P., Siraj-Blatchford I., & Taggart, B. (2011). Pre-school quality and educational outcomes at age 11: Low quality has little benefit. *Journal of Early Research*, 9, 109-124. doi: 10.1177/1476X10387900
- Stevens, L.M. (1997). *Overdenken en doen. Een pedagogische bijdrage aan adaptief onderwijs*. Den Bosch: Procesmanagement Primair Onderwijs.
- Stipek, D., & Byler, P. (2004). The early childhood classroom observation measure. *Early Childhood Research Quarterly*, 19, 375-397. doi: 10.1016/j.ecresq.2004.07.007
- Tannock, M.T. (2008). *Rough and Tumble play: an investigation of the perceptions of educators and*

- young children. *Early childhood education*, 35, 357-361. doi: 10.1007/s10643-007-0196-1
- United Nations Committee on the Rights of the Child (2011). *Considerations of reports submitted by States parties under article 44 of the convention: Combined third to fifth periodic reports of States parties due in 2011 Mauritius*. Retrieved from:  
<http://www.refworld.org/publisher,CRC,STATEPARTIESREP,MUS,54ae68ad4,0.html>
- Vandell, D.L., & Wolfe, B. (2000). Child care quality: Does it matter and does it need to be improved? *Institute for Research on poverty*. Retrieved from:  
<http://www.irp.wisc.edu/publications/sr/pdfs/sr78.pdf>
- Van Huizen, T., & Platenga, J. (2015). *Universal child care and children's outcomes: a met-analysis of evidence from natural experiments*. Utrecht School of Economics: Tjalling C. Koopmans Research Institute. Retrieved from: <http://www.sole-jole.org/16331.pdf>
- Van 't Rood, Bairsto, P., Danbalki, Y., & Haug, G. (2015). Consultancy Services for the Elaboration of an Action Plan for the Tertiary Education Strategic Plan 2013-2015: final report.
- Whitebread, D., Kuvalja, M., & O'Connor, A. (2015). *Quality in early childhood education: An international review and guide for policy makers*. University of Cambridge. Retrieved from:  
[http://www.wise-qatar.org/sites/default/files/asset/document/wise-research-7-cambridge-11\\_17.pdf](http://www.wise-qatar.org/sites/default/files/asset/document/wise-research-7-cambridge-11_17.pdf)

Name school:

Name teacher:

Date:

Qualifications:

Group size:

Teacher-child ratio:

Sub-scale	Item	Ranking 1 to 3			Comments
<b>Space &amp; Furnishings</b>	Indoor spacing				
	Furnishings for routine care, play & learning				
	Furnishings for relaxation & comfort				
	Room arrangement for play				
	Space for privacy				
	Child-related display				
	Space for gross motor play				
	Gross motor equipment				
<b>Personal care routines</b>	Greeting/ departing				
	Meals/ snacks				
	Nap/ rest				
	Toileting/ diapering				
	Health practices				
	Safety practices				
<b>Language-Reasoning</b>	Books and pictures				
	Encouraging children to communicate				
	Using language to develop reasoning skills				
	Informal use of language				
<b>Activities</b>	Fine motor				
	Arts				
	Music/ movement				
	Blocks				
	Sand/ water				
	Dramatic play				
	Nature/ science				
	Math/ number				
	Use of TV, video and/ or computers				
	Promoting acceptance of diversity				
<b>Interaction</b>	Supervision of gross motor activities				
	General supervision of children				
	Discipline				
	Staff-child interactions				
	Interactions among children				
<b>Program structure</b>	Schedule				
	Free play				
	Group time				
	Provisions for children with disabilities				
<b>Parents and Staff</b>	Provisions for parents				
	Provisions for personal needs of staff				
	Provisions for professional needs of staff				
	Staff interaction and cooperation				
	Supervision and evaluation of staff				
	Opportunities for personal growth				

## **EARLY CHILDHOOD ENVIRONMENT RATING SCALE – REVISED (ECERS-R)**

### **Statements of Developmentally Appropriate Practice**

#### **SPACE AND FURNISHINGS**

##### **1. Indoor space**

Children need sufficient space that is well lit and has a comfortable temperature for learning and playing. Indoor space that is well maintained and in good repair sends a message to the young child that is welcoming and inviting.

##### **2. Furniture for routine care, play and learning**

Children need appropriate furnishings to meet the demands of their daily schedules. Basic furniture such as cots, tables and chairs should be sturdy and appropriate to the size of the children in the group in order for children to be comfortable, have proper body support, and focus on learning, playing, and routine activities rather than their own discomfort. Caregivers need easy access to routine care furnishings, such as cots, in order to maintain proper supervision and provide smooth transitions between activities.

##### **3. Furnishings for relaxation and comfort**

Children need space and opportunity to relax and rest. Soft furnishings and toys allow children opportunities for relaxation and comfort. Cozy areas provide a space for quiet activities to occur and should be protected from active play so children can snuggle, daydream and lounge.

##### **4. Room arrangement**

Creative room arrangement promotes a child's positive self-image and encourages a wide variety of age appropriate activities. Well-defined interest centers where materials are accessible help children to understand about organization and returning materials to their proper place.

##### **5. Space for privacy**

Some children experience unacceptably high levels of stress when exposed to constant activity and interaction. Places where children can escape from the pressures of group care promote positive self-esteem. Providing a child with opportunities, space, and time to be alone can contribute to positive classroom behavior.

##### **6. Child related display**

Every child needs to know that others value his/her play or work. Artwork or other individual work that is created by the children should be displayed in the classroom at the child's eye-level. This promotes feelings of positive self-esteem and sends the message to the child that his/her work is valued and appreciated.

### **7. Gross motor play**

Children need daily opportunities to exercise large muscles, run in open spaces, and practice gross motor skills. (Safety is always a number one priority.) Space to develop children's large muscles through a variety of play experiences should be made safe by providing adequate cushioning for fall zones. All play equipment should be safe and effective monitoring should be implemented to teach children safe play behavior and to safeguard against accidents.

### **8. Gross motor equipment**

Children need age appropriate stationary and portable equipment to promote a wide variety of skills that exercise large muscles while developing confidence and abilities. Equipment should be sound, sturdy, safe and accessible to children daily.

## **PERSONAL CARE ROUTINES**

### **9. Greeting/Departing**

Parents and children need a warm, welcoming, and pleasant atmosphere to make the daily greeting and departing routine a happy one. Positive greetings help to promote the children's self-esteem and create a welcoming environment for parents.

### **10. Meals/Snacks**

Meals and snacks that follow USDA guidelines contribute to the health of children and provide a model for good nutritional habits for life-long practice. Proper hand washing along with careful food preparation teach children proper hygiene and promotes sanitary conditions.

### **11. Nap/Rest**

Nap and/or rest time should be appropriately scheduled and supervised for the children in the group. Adequate separation of cots helps to prevent the spread of germs. Soft music or a soothing story helps to facilitate a peaceful rest time that is important in helping children to balance the day and renew their energy.

### **12. Toileting/Diapering**

Young children need appropriate supervision of the toileting process in order to care for basic needs and to teach the importance of good health habits. The schedule should be individualized. Provisions, such as soap and steps near the sink, should be convenient and accessible so that children can wash hands after toileting; this promotes self-help skills and good personal hygiene. Diapering should always be managed in a manner that promotes safety and good health practices.



### **13. Health practices**

Practicing preventive measures, such as washing hands after handling pets or wiping noses, help to educate children to achieve life-long health practices. Taking appropriate action when children are sick will minimize the spread of germs.

### **14. Safety practices**

Protecting children is critical in providing quality care, whether through adequate supervision or minimizing hazards both inside and outside. Caregivers should anticipate potential safety problems and demonstrate, model, and teach children safe practices.

## **Language-Reasoning**

### **15. Books and pictures**

The use of books and pictures is an important means of learning for children as they make sense of the world around them. Books, pictures, and language materials should be available in sufficient number both for independent use in a reading center and for use by a teacher with children in formal and informal settings.

### **16. Encouraging children to communicate**

Activities and materials that promote language development should be available for use throughout the classroom and the daily schedule. Teachers should establish an environment where language exploration and usage is encouraged.

### **17. Using language to develop reasoning skills**

Logical relationships and concepts should be presented in appropriate ways. Children learn through interaction with materials and people, both peers and adults, in the context of play and daily routines. Language provides the key tool for success and problem solving, as children are encouraged to talk through their thought processes.

### **18. Informal use of language**

Language is a way for children to expand understanding. Caregivers should engage children in give and take conversations for enjoyment and learning. They should support child-to-child conversations as well.

## **Activities**

### **19. Fine motor**

Children need a variety of age-appropriate and developmentally-appropriate toys and materials that they can manipulate with their hands and play with at will. These activities strengthen fine motor control while encouraging skill development that contributes to academic readiness.

**20. Art**

Children benefit from exposure to child-initiated art activities that are open-ended and process oriented. Children's art should be respected and appreciated as individual, creative expression. Materials and opportunities to create art projects at a beginning and more advanced level should be available as children are developmentally ready for them.

**21. Music/movement**

Music and movement are valuable means of learning. Children need a supportive environment that includes a teacher and a variety of tools to encourage their self-expression through music and related activities.

**22. Blocks**

Block play, with a variety of blocks and accessories, allows children the opportunity to explore spatial, mathematical, and role-play possibilities. Powerful block play requires sufficient space in a protected area and time to expand on concepts and ideas.

**23. Sand/water**

Sand and water play gives children the opportunity to learn concepts through active exploration with their senses. The addition of interesting props extends the learning potential offered through sensory play.

**24. Dramatic play**

Dramatic play gives children the opportunity to discover an array of roles and responsibilities. It provides a vehicle through which they make sense of their world. Dramatic play is enhanced by space, time, props, materials, and supportive teachers.

**25. Nature/science**

Science and nature activities and materials foster curiosity and experimentation benefiting the young learner through direct experience and application to other areas of learning. Concept and observation skills are strengthened through science procedures.

**26. Math/number**

Math skills, when introduced through appropriate hands-on methods, form a foundation for school readiness and later academic success. Math skills can be taught effectively through routines, schedule, and play activities.

**27. Use of TV, video, and/or computer**

TV/video viewing and computer use tend to be passive in comparison to active involvement with materials and people. The use of each should be confined to subject material that is age-appropriate and mentally stimulating. Time limits encourage more active learning. Participation should not be required.

**28. Promoting acceptance of diversity**

Children need to be exposed to the similarities and differences of people in positive ways through books, pictures, toys, materials, and interaction. This exposure encourages respect for others and lessens misunderstandings.

## INTERACTIONS

### 29. **Supervision of gross motor activities**

Caregivers should use gross motor activities as learning opportunities to promote positive social interactions and to encourage the development of skills and new experiences. Diligent supervision of gross motor activities, whether indoors or outdoors, is critical to preventing accidents and insuring safe, active play.

### 30. **General supervision of children (other than gross motor)**

During activities, caregivers must balance the level of supervision and control based upon the ages, abilities, and individual needs of the children. Adequate supervision and awareness of the whole group is required for children's health and safety and in the recognition of accomplishments, which is necessary for children's emotional well-being.

### 31. **Discipline**

The set-up of the environment, teacher expectations, available materials and opportunities, and daily schedule significantly impacts children's behavior in childcare. A classroom and curriculum geared toward developmentally appropriate practice will lead to generally good behavior that is the product of self-motivation rather than the result of punishment and control.

### 32. **Staff-child interactions**

Caregivers, who are nurturing and responsive, promote the development of mutual respect between children and adults. Children, who trust adults to provide for their physical, psychological, and emotional needs, develop their own sense of self-worth and self-esteem.

### 33. **Interactions among children**

Because self-regulation, proper emotional expression, and positive social relationships are such essential skills for later schooling and life, teachers must encourage children to develop acceptable behaviors by providing a setting that encourages real opportunities for initiative taking and competence building. Providing opportunities for children to work and play together, to solve conflicts in productive ways, and to participate in group activities are ways teachers promote positive social relationships.

## PROGRAM STRUCTURE

### 34. **Schedule**

Children thrive on having a consistent routine that provides a balance of activities designed to meet individual needs and foster physical, cognitive, social, and emotional growth. Best practice promotes a daily schedule with large amounts of time for play, smooth transitions between activities, and a balance between child-initiated and teacher-directed activities.

**35. Free Play**

When children are permitted to select materials and companions, and, as far as possible, manage play independently, they practice making decisions and having control of their world. Caregiver intervention should be in response to children's needs, an invitation, or an opportunity to expand play activities.

**36. Group Time**

In group-care situations, the focus needs to be on meeting individual needs and guiding children as they interact in small groups. Whole group activities should be kept to a minimum and limited to gatherings that follow the interests and involvement of the children.

**37. Provisions for children with disabilities**

Meeting the needs of children with disabilities requires knowledge of routine care needs, developmental levels, individual assessments, and the integration of the children in ongoing classroom activities. It also requires the involvement and establishment of a partnership between the parents and staff in setting attainable goals that will assist the child in reaching his/her full potential.

**School:****Teacher:****Date:**

Fragment	<b>Sensitive responsiveness</b>	Fragment	<b>Talking and explaining</b>
1	High – middle – low	1	High – middle – low
2	High – middle – low	2	High – middle – low
3	High – middle - low	3	High – middle - low
	<b>respecting the child's autonomy</b>		<b>stimulating development</b>
1	High – middle – low	1	High – middle – low
2	High – middle – low	2	High – middle – low
3	High – middle - low	3	High – middle - low
	<b>giving structure and setting boundaries</b>		<b>guiding child-child interactions</b>
1	High – middle – low	1	High – middle – low
2	High – middle – low	2	High – middle – low
3	High – middle - low	3	High – middle - low

Descriptions of the items provided by Riksen-Walraven (2004 in Fukkink et al., 2005):

- Sensitive responsiveness = the teacher recognizes signals from children and reacts appropriately
- Respecting the child's autonomy = the child's autonomy is respected in a non-invasive style
- Giving structure and setting boundaries = to secure safety and developing opportunities
- Talking and explaining = to stimulate language development
- Stimulate development = in relation to the overall development of the child
- Guiding child-child interactions = promote and encourage pro-social behaviour and positive interactions between children

## Appendix D. Outline interviews

### Interview with ECCEA

Because I am doing research in pre-primary education I am interested in the way the *National curriculum framework for pre-primacy* is designed. I have a few questions about his framework.

- 1) Who constructed the framework and what are the main ideas behind it?
  - Theories
  - Assumptions
  - Foundations of the framework
- 2) What is the main purpose of the framework?
  - For all schools (public/ private)?
- 3) How was the framework implemented? Was this process evaluated?
- 4) In the framework I noticed a few characteristics.
  - OLO's, LO's and descriptors. How where these goals created?
  - Principles: rights of the child, holistic development, cultural diversity of Mauritius, equip child with skills. Why are these the most important principles? On which theories are these principles based?
  - Approaches: comprehensive, holistic, and inclusive. These approaches are shortly described, how must they be implemented/ used?
  - Pedagogical approaches: play-based, child-centered, integrated, project-based, multicultural, partnership with parents and community. On which theories are this approaches based? How are teachers supposed to implement these?
- 5) How is the framework to be used by teachers?
  - Strictly or freely?
- 6) In the document it states that teachers should evaluate their practices, is there an instrument available for this purpose?
- 7) Are the practices also evaluated by a certain institution? How is this done? Is this framework revised? How? Why or why not?

## **Interview with Management (assistant coordinators and pre-school managers)**

Because I am doing research in pre-primary education I am interested in the way the *National curriculum framework for pre-primary* is used. I have a few questions about how you work with this framework.

- 1) What do you know about the framework?
- 2) How is the framework to be used by teachers?
- 3) What do you think about the framework?
  - Is the framework helpful in shaping daily practices?
- 4) Should the framework be adjusted?
- 5) How would you define quality of pre-primary education?
  - What elements does quality entail?
  - How do you maintain quality?
- 6) How do you evaluate the education given by the teachers?
  - What kind of materials do you use?
  - To whom do you communicate the results?

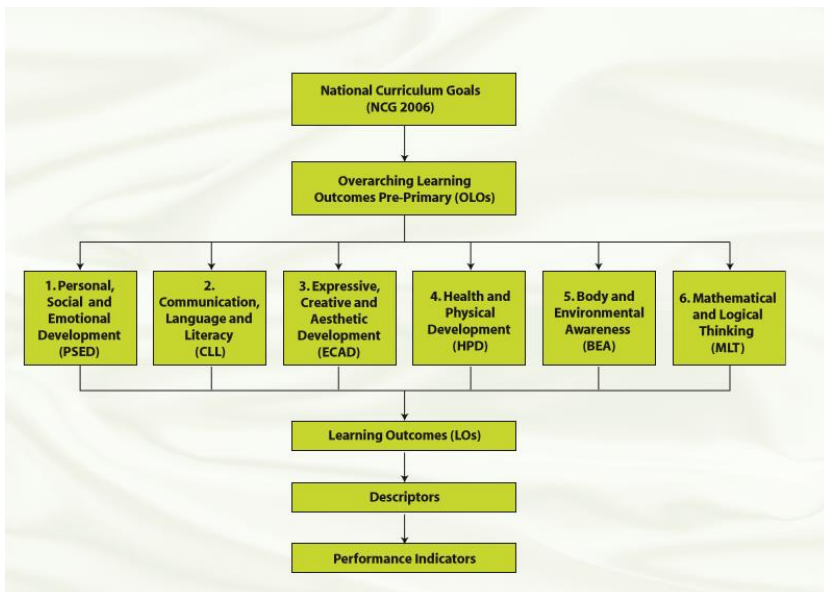
## Interview with teachers

Because I am doing research in pre-primary education I am interested in the way the *National curriculum framework for pre-primary* is used in classrooms. I have a few questions about this.

- 1) Do you know about the framework?
- 2) How do you use the framework?
  - Do you use all of it or elements?
- 3) What do you think about the framework?
  - About the OLO's, pedagogical practices, the approaches, etc.
  - What elements are most valuable? Which elements are missing?
- 4) Does the framework help you to design your education?
  - How?
  - Do you use additional methods?
- 5) Do you know something about how to define quality of education?
  - What do you think are concepts related to the quality of education? (process, structural, teacher-child interactions)
  - How do you evaluate your daily practices?
  - How do you maintain quality?



<b>Document created by</b>	<p>Mauritius Institute of Education Early Childhood Care and Education Authority Ministry of Education, Culture and Human Resources Mahatma Ghandi Institute</p> <p><i>Interviewees state that the ECCEA gave the assignment to the MIE, who grouped a team together, consisting of different stakeholders, and supervised by the ECCEA. All three interviewees on policy level state this. Different stakeholders are for example teachers, supervisors, parents, and also NGOs. The document is meant for every pre-primary school in Mauritius.</i></p> <p><i>The National Curriculum Framework is a revision of previous guidelines, that were used for pre-primary education. As it is a revision, some elements of the previous guidelines are used in the current curriculum. Mostly the theories described and the parts about the needs of the child are copied. For the current NCF various curricula from all over the world were revised and parts were used for the NCF. To keep the document appropriate and hands-on for teachers, less emphasis is put on theories and literature, and more focus is given to the daily practices and guidelines for activities.</i></p>
<b>Purpose of the document</b>	<p>“This will not only prepare them [children] for the next level (primary school) but, more importantly, lay the foundations for learning that will support them throughout their life”</p> <div data-bbox="300 851 1519 1205"> <p>The Pre-Primary Curriculum Framework will help educators:</p> <ul style="list-style-type: none"> <li>i) to design the curriculum to meet the specific needs of the child based on their experiences before entry to the primary level of schooling;</li> <li>ii) to measure the appropriateness of their teaching against the performance indicators outlined in the document; and</li> <li>iii) to take relevant remedial measures whenever this is deemed necessary.</li> </ul> </div> <p><i>The curriculum is a guide for teachers. Another interviewee calls it a ‘roadmap to primary school’ and to assist the teacher in identifying the needs and interests of the child in order to help the child further in its development. The curriculum should be used freely and as a “backbone” of what they [teachers] are doing.</i></p>
<b>Drive behind the document and its principles</b>	<p>“Government stands committed to ensuring that all our children grow and develop to their fullest potential”</p> <div data-bbox="300 1473 1032 1839"> <p>The National Curriculum Framework Pre-Primary 2009 is based on the following :</p> <ul style="list-style-type: none"> <li>• The basic principles of the UN Convention on the Rights of the Child (CRC as per Annex B)</li> <li>• The cognitive, social, emotional, physical, aesthetic, moral and spiritual development of the child.</li> <li>• The cultural diversity of the Mauritian society.</li> <li>• The need to equip the child with skills to facilitate learning to read, write and count.</li> </ul> </div> <p><i>In an interview these principles were explained as followed:</i></p> <ol style="list-style-type: none"> <li>1) <i>The UN Convention of the Rights of the Child is an important principle, because care has to be in line with these rights. Also, the Ministry asks regularly about the rights of the child in reports.</i></li> <li>2) <i>The holistic development is very important in the framework, and was included after analysing curricula from all over the world who all use the holistic development too.</i></li> </ol>

	<p>3) <i>The team who created the framework thought this was a very important principle that all children should have, which is also reflected in the national curriculum goals. In an interview it is also stated that Mauritius is seen as an example for the world when it comes to cultural diversity and promoting acceptance. This is why from an early age children learn about the diversity of Mauritius, become aware of differences and how to live peacefully together. This principle is therefore also seen as a preparation for later.</i></p> <p>4) <i>This principle is based upon the notion that pre-primary education prepares the children for primary level.</i></p>
<b>Theories used in the NCF</b>	<p>‘It reflects contemporary educational thinking and up-to-date pedagogical practices regarding what pupils need to learn in our specific context to derive the maximum benefit for their overall growth and development’</p> <p>“...in line with international trends in Early Childhood Care and Education”</p> <p>“Brain research shows that the best time for children to learn the fundamental motor skills is during early childhood. Movement activates the neural wiring throughout the body making the whole body the instrument of learning. Physical movement plays an essential role in creating nerve cell networks that are the essence of learning. Research on the relationship between healthy lifestyle and academic achievement supports the question: good nutrition + exercise = optimal learning. Research also confirms that proper nutritional support is crucial to maximize brain functioning and to enhance learning”.</p> <p>Theories mentioned are:</p> <ul style="list-style-type: none"> <li>- Gonzala Mana (1993) is used to describe the cultural value of play, and how parents sometimes need to be engaged in explaining the importance of play.</li> <li>- Maxim Gorki (n.d.) is quoted in relation to play.</li> <li>- Brede Kamp &amp; Copple (1996) are used to quote twelve principles of child development that help educators make decisions about developmentally appropriate practice.</li> <li>- Dodge, Colker &amp; Heroman (2002)’s steps are used for thematic planning.</li> <li>- Theory of Reggio Emilia is used in describing the project approach.</li> <li>- Roehlkepartain et al. (2006) and Bigger (1999) are quoted to highlight the importance of spiritual development.</li> </ul>
<b>Goals of the National Curriculum Framework for pre-primary</b>	 <pre> graph TD     A[National Curriculum Goals (NCG 2006)] --&gt; B[Overarching Learning Outcomes Pre-Primary (OLOs)]     B --&gt; C1[1. Personal, Social and Emotional Development (PSED)]     B --&gt; C2[2. Communication, Language and Literacy (CLL)]     B --&gt; C3[3. Expressive, Creative and Aesthetic Development (ECAD)]     B --&gt; C4[4. Health and Physical Development (HPD)]     B --&gt; C5[5. Body and Environmental Awareness (BEA)]     B --&gt; C6[6. Mathematical and Logical Thinking (MLT)]     C1 --&gt; D[Learning Outcomes (LOs)]     C2 --&gt; D     C3 --&gt; D     C4 --&gt; D     C5 --&gt; D     C6 --&gt; D     D --&gt; E[Descriptors]     E --&gt; F[Performance Indicators]   </pre> <p>Structure of the goals set up for this framework.</p>

The National Curriculum Goals (NCG) are:

1. To promote an all-round development of the individual – physical, intellectual, social and emotional – leading to a balanced, active and productive lifestyle;
2. To foster understanding and appreciation of the biological, physical and technological world to enable the learner to arrive at informed decisions about the environment and the changing needs of our society and those of the individual;
3. To develop in the learner skills and knowledge to empower him/her to participate meaningfully in an information-driven economy;
4. To develop creative thinking skills and learning competencies required for the future;
5. To promote equity and social justice by providing opportunities for every learner according to his/her needs, interests and potential;
6. To foster national unity by promoting in the individual understanding of and respect for our multicultural heritage;
7. To promote in the learner an appreciation of his/her place in an interdependent global context;
8. To promote a culture of lifelong learning for greater access to an ever-changing job market.

**Learners should be able to:**

1. acquire language skills for effective communication and meaningful interaction with self and others through listening, speaking, reading and writing. The correct acquisition of language skills is central to the whole process of thinking in every curricular activity.
2. derive meaning and understanding from numerical and spatial concepts and engage in the process of developing logical and rational thinking.
3. behave in a responsible manner with regard to everybody's right to feel valued and to live peacefully.
4. appreciate the diversity of the Mauritian culture and interact positively among themselves.
5. engage in thinking processes to develop and construct knowledge.
6. recognize desirable and worthwhile values as the foundation of good citizenship.
7. understand, appreciate and adapt to change and selectively use new technologies.
8. understand and be sensitive to local, regional and global environmental issues.
9. develop interpersonal knowledge and skills with a view to strengthening positive attitudes, understanding and sharing common values, and also respecting persons and human rights.
10. recognize a safe and sound lifestyle by developing physical fitness and proper nutritional habits.
11. participate in arts, music, dance, drama and appreciate the different aspects of aesthetic expressions and the diversity of our traditions.
12. enjoy learning by experiencing and celebrating success.

*All curricula in Mauritius are based upon the National Curriculum Goals and specified by level of education, for example these goals are specified for pre-primary education in the Overarching Learning Outcomes pre-primary [OLO's].*

Also these NCG's are used to describe the Generic Learning Statements ("Learners should be able to:") which are also applied to every level of education.

**The Overarching Learning Outcomes (OLOs) Pre-Primary Education are linked to National Curriculum Goals (NCGs)**

**By the end of pre-primary schooling, children will be able to:**

1. socialize with family, friends, peers, teachers and other adults (NCG 1, 6)
2. accept each other and live together, irrespective of gender, ethnicity, age and ability. (NCG 1, 6, 7)
3. adapt to and enjoy experiences related to change, surprise and uncertainty (NCG 2, 8)
4. develop confidence by exploring the world using their body and senses (NCG 1, 2, 8)
5. understand fairness in relation to themselves and others NCG 1, 3, 5, 6)
6. participate in the making, following and reworking of rules in the day to day activities (NCG 1, 3, 5, 6)
7. communicate thoughts and experiences creatively, using many forms of expressions (NCG 1, 2, 4)
8. develop physical coordination and healthy habits (NCG 1, 3)

These OLO's are further specified for each area of the holistic development.

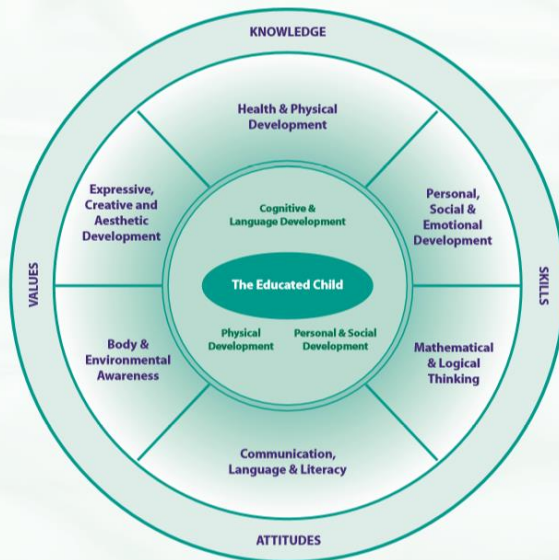
SN	OLOs Pre-Primary Education	Personal, Social and Emotional Development (LOs)
1.	Socialize with family, friends, peers, teachers and other adults.	Children interact with all children, family, teachers and other adults.
2.	Accept each other and live together, irrespective of gender, ethnicity, age and ability.	Children develop positive attitudes towards others.

For example these are two OLO's and LO's for the area of Personal, Social and Emotional Development.

	DESCRIPTORS	PERFORMANCE INDICATORS	YEAR 1	YEAR 2
	<b>Develop self-awareness</b>	• Refer to own self by first and last name	😊	😊
		• Respond when called by name	😊	😊
		• Identify own self by family , gender and age.	😊	😊
		• Show self-confidence		😊
		• Develop self-identity		😊
		• Develop an awareness of the social self (friends, class mates, family members...)	😊	😊
		• Develop an awareness of and recognise the emotional self		😊
		• Describe/name own feelings		😊
		• Develop an awareness of the moral self		😊
	<p>These are again further specified in the descriptors and performance indicators, these indicators are for the teacher to observe the development of the child. This example is again for the area of Personal, Social and Emotional Development.</p> <p>“At the end of pre-primary schooling, the child will demonstrate readiness to step into primary school confidently, take pride in his/ her achievements and develop a sense of patriotism”</p> <p>“The descriptors and performance indicators give an indication of what the child needs to achieve in the first year and the second year of pre-school education, based on a graded approach related to the developmental stage of the child”</p>			
<b>Structural quality</b>				
Group size	Not mentioned in the NCF.			
Children-to-staff ratio	Not mentioned in the NCF.			
Staff's qualifications	Not mentioned in the NCF.			
Curriculum Content	<p>‘.. to develop their individual intellectual, socio-emotional and psycho-motor skills’</p> <p>‘It’s overall goal is to develop the intellectual, spiritual, socio-emotional and psycho-motor skills, knowledge and attitudes..’</p> <p>‘whole child approach’ &amp; ‘holistic development’</p>			



The National Curriculum Framework is organized into six areas of learning.



The content of the curricula is highly based upon the principles of the holistic development, specified in six areas of learning. In chapter 4 these areas are described elaboratively, with supportive theory, the descriptors, and ways to teach about and assess the specific learning area. These areas are:

- 1) Personal, Social & Emotional Development (PSED)  
This area of learning entails self-awareness, care and respect for self and others, spiritual development, sharing and relating to others, self-control and independence, and self-confidence and self-esteem. Written is that children are becoming more independent and social, and that the environment should support this with creating opportunities, setting rules and learn to share for example. Spiritual development is highlighted in this area, mentioning the diversity of the multicultural society of Mauritius.
- 2) Communication, Language and Literacy (CLL)  
The concepts related to this area include communicating with others, writing skills, speaking skills, listening skills, building vocabulary, and reading skills. Language development is described as crucial to young children's learning and cognitive growth. It is described that children have acquired an appreciable level of fluency in their mother tongue, and that language readiness will be the basis on which languages used at school will be taught. *In the interview it is explained that because children in Mauritius speak different languages at home, the term 'mother tongue' is used to broadly describe the differences in language children have and that the school should adjust their language policy in line with the background of the children.* The context of Mauritius in relation to its multiple languages is also described, setting multilingualism in a positive light. It is described that children acquire language in meaningful and functional contexts, when they are exposed to language and learn through activities for example.
- 3) Expressive, Creative and Aesthetic Development (ECAD)  
Important areas relating to ECAD are creative arts (visual arts and crafts), performing arts (drama, music, rhythm and movement), poetry and storytelling, and human values education. Arts are described as "a major form of human communication and expression", and children learn through art to "explore, express and communicate ideas, feelings and experiences". Arts "promote emotional intelligence, a way of understanding and responding through emotions and intrapersonal qualities and experiences". It's also "imperative that children develop convergent thinking when finding solutions to the problem embedded in the task". Children should be able to imagine, create and innovate through creative arts, performing arts, poetry and storytelling, and human values. Human values are important, because 'moral values and ethics are in line with the tremendous progress of science and technology'.
- 4) Health and Physical Development (HPD)  
Concepts related to this area include gross and fine motor skills, co-ordination balance and strength, healthy habits and healthy practices, creativity and movements, socialisation and following simple rules, and safety measures. "Movement and play constitute an important strategy for learning at this age". In this area also attention is paid to healthy food choices, and

Pedagogy	<p>obesity is described as a risk for young children and therefore they need to be taught about a healthy lifestyle.</p> <p>5) Body and Environmental Awareness (BEA) Concepts related to this area include the five senses, different parts of the body, scientific skills, technological world and multimedia, and environment components and care. This area of learning stimulates children to develop awareness of and to promote an understanding about themselves and their surroundings. It also aims to develop important science process skills like observing, classifying, pattern-seeking, hypothesizing, inferring and predicting. It also emphasizes the role of technology in children's lives and exploring their usage. Teachers should work with the natural curiosity children have.</p> <p>6) Mathematical and Logical Thinking (MLT) This area of learning covers basic concepts (colours, shapes, sizes), measures, space orientation, numbers, volume, and time. Children should 'acquire the underlying mathematical concepts through a lot of hands-on experiments and through play'. Teachers should use the child's physical and social environment to build further the quantitative reasoning and problems-solving skills.</p> <p><i>One of the interviewees states that through these different areas of learning life-long learning is stimulated. Also, these areas are supported by the "Manual of activities", a document which describes activities per area of development to inspire the teacher's lesson plan.</i></p> <p>The curriculum adopts three approaches:</p> <ol style="list-style-type: none"> <li>1) The comprehensive approach which entails that children construct their own knowledge.</li> <li>2) The holistic/ whole child approach which aims at developing the whole child.</li> <li>3) The inclusive approach which means that every child develops according to their own needs and capabilities, which will be ensured through education and no form of discrimination will be tolerated. Including a brief description of Special Educational Needs, which are children who have disabilities, specific learning needs or learning difficulties.</li> </ol> <p>In the NCF is described that children learn through doing, discovering and exploring, asking questions, talking and listening, imitation and role playing, trial and error and practice, and learning from other children.</p> <p>In line with these concepts, the NCF states six pedagogical approaches:</p> <ol style="list-style-type: none"> <li>1) Play-based approach (play is the work of children). The three stages of play (solitary play, parallel play, and social play) are described. Some examples of play are given in the domain of "Mathematical and Logical Thinking": counting cups, reproducing a design/ pattern from mother's dress, and comparing the heights of two children. <i>Interviewees all put emphasis on the importance of play, but one of them explicitly states that educators have not implemented this in their daily practices. Another interviewee also says that free play is not as it should be in the schools. More attention is paid to academic learning.</i></li> <li>2) Child centered approach. Also called the developmentally appropriate approach, describing how the whole child needs to be developed. This approach is based upon two dimensions; age appropriateness, and individual appropriateness meaning that the development of the individual child needs to be taken into account. Twelve principles (Brede Kamp &amp; Copple, 1996) are described to judge developmentally appropriate practices.</li> <li>3) Integrated approach. This approach integrates the six areas of learning into themes, and describes is how thematic planning should be done (Dodge, Colker &amp; Heroman, 2002). <i>One interviewee explains that themes are important to keep the child committed.</i></li> <li>4) Project-based approach. The ideas of Reggio Emilia are used to describe that topics in which children are interested should be investigated. How a project should be implemented is also described.</li> <li>5) Multicultural approach. This approach is embedded because of the cultural diversity of Mauritius, and the need to teach children how to respect differences.</li> <li>6) Partnership with parents and the community at large. The role of parents, educators and the community are described. Parents need to support their children, and teachers should build a relationship with parents. It is also mentioned that parents and educators should</li> </ol>
----------	---

	<p>have a good relationship together, and that the schools need strong school-community relationships.</p> <p>“An integrated approach must be used to plan activities in all areas of learning in a thematic unit”.</p> <p>Per learning area strategies are described on how to teach the content to the children:</p> <ol style="list-style-type: none"> <li>1) Personal, Social &amp; Emotional Development (PSED) Strategies to teach this area include demonstrations, stories, mimes, group work, and dramatization.</li> <li>2) Communication, Language and Literacy (CLL) Strategies are activities, games, songs, reading stories, etc.</li> <li>3) Expressive, Creative and Aesthetic Development (ECAD) Strategies include active participation, and exploration and discovery.</li> <li>4) Health and Physical Development (HPD) Strategies include getting children to participate actively in physical activities and adopt healthy habits, make meal times enjoyable, and integrate music in physical activities.</li> <li>5) Body and Environmental Awareness (BEA) Teachers should exploit the environment to teach children about body and environmental awareness, organize field trips, and use music, songs and poems in this area. Strategies include the discovery method, inquiry-based learning, and activity-based learning.</li> <li>6) Mathematical and Logical Thinking (MLT) Strategies include experimentation, play, games, investigation and exploration, discussion.</li> </ol>
Assessment	<p>Assessment is described as an integrated part of teaching and the learning process. “Through assessment the educator monitors achievement of an individual child in each area of learning”. It is also mentioned that assessment tools should be sensitive to culture, racial, class, gender, linguistic and ability differences. Tools described are; observations, anecdotal records, checklists, and portfolio’s. Self-assessment of children is also mentioned in relation to create learning activities that interest the child.</p> <p>Teachers should assess to make informed instructional decisions, and assess regularly to record the progress of the child. Parents should be partners in the accurate and sensitive assessment of the child. Progress should be discussed amongst teachers and parents.</p> <p>There are no usable tools in the NCF that teachers can use immediately. However, in for example the learning area CLL it is described that “the performance indicators can be used to establish a checklist for profiling”.</p> <p>“This process also informs decisions for teaching and learning”.</p> <p>“Educators should ensure that different tools for assessment are used for appropriate diagnostic and formative purposes”.</p> <p>“The assessment of children’s learning needs to be conducted in an authentic learning environment”.</p> <p>Per learning area is defined how the goals should be assessed:</p> <ol style="list-style-type: none"> <li>1) Personal, Social &amp; Emotional Development (PSED) Assessment should be done through observation.</li> <li>2) Communication, Language and Literacy (CLL) The domain should be assessed through observational checklists.</li> <li>3) Expressive, Creative and Aesthetic Development (ECAD) Assessed through observation.</li> <li>4) Health and Physical Development (HPD) Assessment should be focused on observations.</li> <li>5) Body and Environmental Awareness (BEA) Types of assessment include observations, drawing activities, and role play.</li> <li>6) Mathematical and Logical Thinking (MLT) Assessment should be done through observation, records of conversation, behaviour checklist, and portfolio.</li> </ol>

	<p><i>One interviewee states that knowing the child is very important: “To help a child, you need to know a child”. Teachers should observe and record children’s development in order to adequately help the child further. The interviewee also explains that three different profiles are developed to follow the development of the child; the child profile (filled in by parents before the child enters pre-primary), the developmental learner profile themed (per area of learning and can be used as a measuring instrument), and another developmental learner profile transit(to be used as a transit document; for the next educator of the child). These profiles are based upon the OLOs and LOs and measure the child’s abilities in all areas of development.</i></p>
<b>Process quality</b>	
Early child-development	<p>‘Crucial stage of child development’  ‘..foundations upon which all future learning ultimately depends’  “developmentally appropriate practices”  “before entering into the primary setting”  “critical phase for brain development”  “sensitive periods”  “benefits for children who experience high quality pre-school education”  “..not only has a positive impact on children but also brings cost-effective benefits to society”  “the whole child”  “..the interrelationship between cognitive development and language is critical”  “lay the foundation for lifelong learning”</p> <p>In chapter 3 The needs of pre-school children are described as follows. The need:</p> <ol style="list-style-type: none"> <li>1) to feel safe and comfortable</li> <li>2) for love</li> <li>3) to move and be active</li> <li>4) to play and to experience enjoyment</li> <li>5) to imitate adults</li> <li>6) to socialize</li> <li>7) to enjoy quietness</li> <li>8) to grow in autonomy</li> <li>9) to express and to communicate</li> <li>10) to discover, explore and experiment</li> <li>11) to know oneself and to situate oneself in time and space</li> <li>12) to handle and manipulate</li> <li>13) to create</li> </ol> <p>Also described is why children learn. According to the NCF it’s because children desire to find out things, they want to achieve things, they want to please their parents, and because of their desire for praise. Additionally is described when children learn, children learn when they are happy, interested, ready and when they need to.</p> <p>The play-based approach describes that play is very important in the education of young children, because it is the natural way in which children learn. Play also helps developing multiple areas of learning, including the intellectual, social, emotional, physical, and language area. Also it enables developing exploring, learning, and building and construction skills.</p> <p><i>These statements are described in part 2 and part 3; the theories are shortly described because it is believed that teachers don’t really read these parts. Theory used in chapter 3 is derived from the former framework, no explanation is given on which theories are used.</i></p> <p>“..graded approach related to the developmental stage of the child”  “readiness to step into primary school”  “young children are active learners and movement is at the very centre of their lives”.</p> <p>“the best time for children to learn the fundamental motor skills is during early childhood”.</p> <p>“Indeed, young children are continuously trying to make sense of everything around them”.</p>



Teacher-child relationship	<p>In the description of the learning area “Personal, social and emotional development” it is mentioned that educators need to “develop a secure, warm and caring relationship with children, where praise is given appropriately and where a sense of humor is encouraged. This will help children to develop self-esteem and self-confidence”, “Respond to the needs and interests of children, help each child to feel safe, to express their feelings as well as understand the feelings of others”, “...make them aware of ways that they can help others”, “Promote children’s learning by planning activities which are challenging but achievable”, and “Organize the indoor and outdoor environment that allows a wide range of self-initiated activities that enable children to operate autonomously”.</p> <p>In the area “Communication, Language and Literacy” the importance of the teachers is described in the context of language development and being a role-model for the children. “He/ she needs to cater for the needs of all types of children, and to know when to use differential learning strategies, while adopting inclusive pedagogical principles”. The role of the educator in relation to CLL is to “value talk and create opportunities for interaction” and “children should interact with the educator and peers through purposeful talk and communicative activities”.</p> <p>In the area “Expressive, Creative, and Aesthetic Development” it is mentioned that teachers should value the ideas children have, and create an environment in which children can explore freely.</p> <p>The area “Health and physical development” states that educators need to “plan and provide an environment that encourages children’s learning” and “provide opportunities for children to play with their friends; they learn to share, take turns and negotiate with others”.</p> <p>In the area “Body and Environmental Awareness” is described that teachers should prepare an encouraging learning environment, use open-ended questions, and let children explore and investigate, all children should also be encouraged to “communicate and share their views”. It’s also mentioned that children need “appropriate and individual support”. Teachers should also model appropriate behaviour, responses, skills and values, and should work alongside children as a guide and facilitator.</p> <p>The area “Mathematical and Logical Thinking” describes that children should be allowed “to interact with others in exploring objects and communicating with their peers”. Also teachers should “adapt their methods to the needs, abilities, interests, experiences and learning styles of the children”.</p> <p><i>One interviewee says that the child must feel safe in order to learn, and that the child must be happy with the educator. The interviewee acknowledges that the teacher is very important in pre-primary education.</i></p>
<b>Ecological model (Bronfenbrenner)</b>	<p>“However, this will be achieved only through combined efforts of families; educators, education professional, communities and policy makers because children will learn best when adults understand the process of child development and adopt consistent actions towards them”</p> <p>“This Curriculum Framework provides all stakeholders and the community at large with a clear statement of what pupils are expected to achieve at the end of pre-primary schooling and how they can best support the children”</p>
Policy makers	<p>“Educators must work in close collaboration with parents and other bodies such as specialized schools and health specialists so as to provide the best learning opportunities for individual children”</p> <p>“...the MIE works in close collaboration with the Special Education Unit of the Ministry of Education, Culture and Human Resources to develop tools to detect children with learning difficulties for remedial action”.</p>
Parents	<p>“...should be partners in the accurate and sensitive assessment of the child”</p> <p>“.. parents play an important role in their children’s lives”</p> <p>“...parents have a fundamental role to play in the child’s education; they need to support their children continuously and encourage them in whatever they do”</p> <p>“parents must have the possibility at times to enter the class and talk to them [teachers]”</p> <p>“..the pre-school educator should encourage the parents to exchange ideas”</p> <p>“..relationship with parents may help to find ways of helping the child”</p> <p>“maintain an open and trusting communication between educators and parents”</p> <p>“provide parents with information concerning health and safety issues”</p>

	<p>“Work collaboratively with the parents of each child in the early years of schooling. Educators will have first-hand information about each child’s characteristic, special ability or special need.”</p>
<b>Freedom in using the framework</b>	<p>‘Provision is made for educators to adapt and customize the guidelines proposed’</p> <p>‘Guide and support’</p> <p>‘..with guidelines on which learning and teaching materials will be designed, planned and developed’.</p> <p>‘... provides directions to educators, parents and other professionals who care for and educate the child of 3-5 years’</p> <p>‘The pre-primary curriculum framework will help educators’</p> <p><i>All interviewees explicitly state that the curriculum should be used as a guideline, and teachers should feel free to select the relevant content needed for their children.</i></p>
<b>Implementation</b>	<p>“As such, educators will be trained to use this document through a well-organized, accredited, continuous and systematic training program prior to implementation in 2010”</p> <div style="background-color: #f9f9f9; padding: 10px; margin: 10px 0;"> <p>To ensure that the National Curriculum Framework Pre-primary is implemented effectively at national level, it is imperative that the following strategic goals as spelt out in the Education and Human Resources Strategic Plan (EHRSP, 2008-2020) be operationalised:</p> <ol style="list-style-type: none"> <li>1. Review legislative and regulatory framework for the provision of ECCE to standardise practices.</li> <li>2. Establish a network for a holistic approach to ECCE.</li> <li>3. Improve the quality of learning environments.</li> <li>4. Embed technology in the system.</li> <li>5. Undertake review of curricula for ongoing improvement.</li> <li>6. Ensure that all pre-primary educators are fully trained and qualified.</li> <li>7. Encourage and support the inclusion of children with special needs and those from disadvantaged socio-economic backgrounds.</li> <li>8. Foster research and development in ECCE.</li> <li>9. Enhance professional development for the general improvement for early childhood education.</li> </ol> </div> <p><i>In 2010 the NCF was implemented. After the first validation the framework was submitted to the Ministry of Education for their approval, thereafter a second round of validation was done with the involvement of different stakeholders. Then the document was sent to be printed, and after this first copy was corrected the final versions were printed. Teachers were instructed about the framework through trainings done by the MIE. The MIE developed a training kit for this purpose. to ensure that every training was done in the same manner. Sessions were given throughout the country. Trainings were scheduled by the ECCEA. The process of training took about a month and involved more than 3000 teachers. Teachers received a certificate after training. Since then the MIE organizes workshops during the holidays to keep the knowledge of teachers up to date.</i></p> <p><i>Another interviewee states that pre-tests were done with the National Curriculum Framework, the document was sent to a couple of schools and teachers implemented the draft versions. Through feedback sheets the teachers expressed their opinion about the curriculum, and thereafter little things were changed. When the final publishing of the curriculum was done, trainings, organized by the MIE, were held for assistant coordinators on how to implement the curriculum. Hereafter the assistant coordinators instructed the teachers.</i></p>
<b>Revision</b>	<p><i>The interviewees state that next year a group will be formed, the same structure as for the creation of the current curriculum, to revise the National Curriculum Framework. One interviewee states the wish that firstly external researches have to evaluate pre-primary education, because they look at different practices. One interviewee comments that not the content, but the way the curriculum is delivered must be adjusted. Another interviewee agrees that the theories used are appropriate and good, but that more emphasis has to be laid on play and the assessment of activities. This is underlined by another interviewee. Other things like including 21<sup>st</sup> century skills are also valuable.</i></p>

## Appendix F. Matrixes for interviews

### Matrix interviews teachers

Use of the NCF	Value of the NCF	Quality of Education	Evaluation
<ul style="list-style-type: none"> <li>- Plan: daily, weekly, and yearly (Master plan)</li> <li>- Use it freely and taking ideas</li> <li>- Concepts: play-based approach, child-centered approach, child development, six areas of learning, teaching approaches</li> <li>- Use goals and descriptors</li> <li>- Shape activities (get ideas)</li> <li>- To 'fill in the themes'</li> <li>- Sometimes specific: for vocabulary lessons or how to write in English</li> <li>- In combination with another curriculum</li> <li>- Not use it</li> <li>- Use it daily</li> <li>- Use it 'on and off'</li> </ul>	<ul style="list-style-type: none"> <li>- Everything is planned and described and important</li> <li>- Nothing is missing</li> <li>- "Like a Bible", good guidance</li> <li>- Very helpful</li> <li>- Reminder of approaches and theories</li> <li>- Know that you are on the right track ('So every school goes in the same direction') and children have similar opportunities</li> <li>- Then you give quality education</li> <li>- Facilitates work</li> <li>- Look at the NCF to know what is important to teach a child</li> <li>- Directly use it in the daily practices</li> <li>- Good because the Ministry wrote it</li> <li>- Not enough activities, different activities</li> <li>- No ideas on physical exercises</li> <li>- No information on technology in the classroom</li> <li>- It's too academic</li> <li>- Too much goals and descriptors</li> <li>- Little things missing</li> <li>- Themes too big</li> <li>- Repetitive</li> <li>- Change 'everything'</li> <li>- More age specific</li> <li>- More imaginative and creative activities</li> <li>- Not 'copy and paste'</li> <li>- No guidelines for individual attention</li> <li>- Child-centered approach is highly valued</li> </ul>	<ul style="list-style-type: none"> <li>- Environment and types of children</li> <li>- Background of the children</li> <li>- Home situation</li> <li>- Caring</li> <li>- Appropriate practices</li> <li>- Security of children</li> <li>- Attitude of the teacher</li> <li>- Relation with children</li> <li>- Opportunities to learn</li> <li>- Individual attention</li> <li>- Happy environment (make them feel at home)</li> <li>- Child-centered</li> <li>- Overall development</li> <li>- Children get to explore and are exposed to the world</li> <li>- Learn through play and doing</li> <li>- Sometimes specific: moral values, disciplining, language, independent, self-confident, love for learning</li> <li>- Meaningful experiences</li> <li>- Not 'spoon fed'</li> <li>- Preparation</li> <li>- Space</li> <li>- Adapt to context and provided materials</li> <li>- Lots of resources</li> <li>- 'Try our best with what we have'</li> <li>- Qualifications of the teacher</li> <li>- The teacher (as the facilitator)</li> <li>- Good food</li> </ul>	<ul style="list-style-type: none"> <li>- Reflection regularly (every day/ every week together/ etc.)</li> <li>- Feedback (from assistant coordinator, manager, colleagues, parents, and children)</li> <li>- Alone and together (director, manager, colleagues) discussions and learning from each other</li> <li>- Daily notes</li> <li>- Observations, asking questions, repetition, remedial activities</li> <li>- Evaluate activities: Have the children grasped the subject/ achieved the goal?</li> <li>- Use the Developmental Learner Profile (DLP)</li> <li>- Parents surveys, reports to parents, briefings</li> <li>- Workshops and courses</li> <li>- Some teachers don't understand the question</li> <li>- One teachers states that she does not need help</li> <li>- Monitored by the ECCEA (some don't value this)</li> </ul> <p>"Yeah, in the afternoon you should know what you have done, what's missing, so that the following day you can do better"</p> <p>"Problem not always with the child, but also with the way teaching is provided and the way materials are used"</p>

	<ul style="list-style-type: none"> <li>- Prepare them for every primary school in Mauritius</li> <li>- Holistic development / six areas of learning</li> <li>- Well-being of the child</li> </ul>	<ul style="list-style-type: none"> <li>- Good education</li> <li>- Know about child development</li> <li>- Differs per teacher</li> <li>- Using different strategies</li> <li>- Praise children</li> <li>- As a friend</li> <li>- Collaboration, interaction and relation with staff and teachers</li> <li>- Improving practices</li> <li>- Prepare them for the next level and from them for later in life</li> </ul> <p>‘What I do at home, I expect at school’</p> <p>‘Not money, but work for love’</p> <p>‘Outcome for children should be the same’</p>	
--	---	--	--

Matrix interviews assistant coordinators and managers

NCF	Quality of Education	Evaluation and role
<ul style="list-style-type: none"> <li>- Good manual</li> <li>- Highly valued</li> <li>- Provides good quality</li> <li>- Mixture of curricula or additional syllabus</li> <li>- No recommendations</li> <li>- Good guideline</li> <li>- Helps the teachers and facilitates their work</li> <li>- Teachers should use it to plan and prepare activities</li> <li>- Knowing you are on the right track and to standardise education</li> <li>- Content is child friendly, child centered, describes areas of learning, domains of development, and is play based.</li> <li>- Shows how to work with different ages</li> <li>- Theories are okay</li> <li>- Too academic</li> <li>- Not enough themes</li> <li>- Playing in corners not described</li> <li>- Not enough emphasis on play, storytelling, role play, the use of</li> </ul>	<ul style="list-style-type: none"> <li>- Caring</li> <li>- Secure children</li> <li>- Learning through play</li> <li>- Learning through modelling</li> <li>- Holistic development and specific areas: technology, respect everyone, know feelings, discipline, communication, and writing</li> <li>- Provide for the needs of children</li> <li>- Teach in small groups</li> <li>- If the educator is not well, the whole class will not be well</li> <li>- Good educators, teacher is most important and should have a good performance</li> <li>- Degree is important but not enough</li> <li>- Train the children</li> <li>- See the children</li> <li>- Love to teach</li> <li>- Relationship with children</li> <li>- Facilities, safe environment with clear rules</li> <li>- Standardized education (same opportunities for every child)</li> </ul>	<ul style="list-style-type: none"> <li>- Review education given (monitor teacher)</li> <li>- Report to the regional office</li> <li>- Help where needed. Be there for the children, educators, parents and other colleagues and welcome trainees</li> <li>- Involve parents</li> <li>- Take care of the well-being of the educators</li> <li>- Supervision sheet / checklist (look at administrative books, finances, revise the planning, assess the environment, infrastructure)</li> <li>- Observe teacher and children</li> <li>- Discuss with educators and give advice, follow up</li> <li>- Regular meetings and/ or visits</li> <li>- Organize coaching days, conduct demonstration sessions</li> <li>- Use the quality improvement plan</li> <li>- Sometimes ECCEA inspection is not valued:</li> </ul>

<p>scrap material, value based education</p> <ul style="list-style-type: none"> <li>- It should be more colourful and with pictures</li> <li>- More activity based activities, science activities, 21<sup>st</sup> century activities (technology) and activities for mathematical understanding</li> <li>- More child-centered activities</li> <li>- Too much focus on the areas of learning, and teachers cut across the basic needs of children</li> <li>- Not enough emphasis on assessment of activities</li> </ul> <p>‘All children should have the same education’</p>	<ul style="list-style-type: none"> <li>- Good service for parents and get parents involved</li> </ul> <p>‘When you love you can teach’</p> <p>‘Looking after them like our own children’</p>	<p>“...take my book of the visiting book to make sure if someone come and ask if they have come they just sign it.”</p> <p>“They can’t even say from where the child was and now what skills he has acquired and what they expect. It’s not well planned this.’</p>
---	--	---

**ECERS-R Profile**

Item	Overall impression	Comments
1: Space and furnishings	Middle & differences between schools (blue)	<b>Low:</b> no space for privacy, no furnishing for rest, no child-related display, no facilities to play outside, classroom is small and feels stuffy
		<b>Middle:</b> indoor spacing and furnishing is appropriate, no (not enough) facilities to play outside and limited space, no child-related displays, or no space for privacy
		<b>High:</b> Enough space, appropriate for children, multiple corners for privacy, materials for rest, good (or moderate) space and equipment for outside play
2: Personal care routines	Middle & somewhat the same (yellow)	<b>L:</b>
		<b>M:</b>
		<b>H:</b> parents (not) in the classroom but children are greeted, good health and safety practices, food taken care of (sometimes by school), children go to the toilet together and only and wash their hands, also when there is no nap-time or when parents don't come in the classroom, children sleep on beds or mostly with head on table after lunch for some time (differs)
3: Language-Reasoning	Low	<b>L:</b> books are (not) present, (neither) posters as well, communication between children is not stimulated, teachers only ask close-ended questions, children do not get to work together, repetition and 'drill and practice', children have to be quiet
		<b>M:</b> no books, talk between children is not stimulated but sometimes allowed, more open-ended questions but no critical questions, children do not get to work together
		<b>H:</b> enough books, posters on the wall, children get to talk, teachers ask critical question, teachers evaluate the activities, children get to work together, also when teachers don't ask critical questions
4: Activities	Middle & somewhat the same (yellow)	<b>L:</b>
		<b>M:</b> activities throughout the day are somewhat the same and given by the teacher, only singing to support routine activities, no use of TV or computers
		<b>H:</b> different activities, some child initiated, themes, children get individual attention, some things are not done
5: Interaction	Middle & somewhat the same (yellow)	<b>L:</b>
		<b>M:</b> Teachers supervise the children, children are very disciplined, main interaction is to correct children or to explain, interactions among children are not stimulated
		<b>H:</b> children are well supervised, teachers discipline in an appropriate manner, teachers are sensitive, children can talk and play together, also when children don't get to interact with each other
6: Program structure	Low	<b>L:</b> Planning is clear, there is no free play or sometimes choosing in the morning from the cupboard, every child does the same tasks, no provisions for children with disabilities

		<b>M:</b> Planning is clear, no free play or sometimes free choice in the morning (choose game out of cupboard), group time is high (children mostly do the same tasks), provisions for children with disabilities are somewhat present
		<b>H:</b> schedule is known to the children, children get to play freely during the day, group time is minimal, facilities for children with disabilities
7: Parents and staff	High	<b>L:</b>
		<b>M:</b> moderate contact with parents, they are not really engaged, no external supervision
		<b>H:</b> good contact with parents, provisions for staff are well organized, teachers follow workshops or courses, teachers discuss together about different topics

### Interaction competencies measuring scale

Item	Overall impression	Comments
1: Sensitive responsiveness	Middle & differences between schools (blue)	<b>Low:</b> teacher not all the time in the classroom, very unstable in reactions given to children, only goes to child when mentioned by other children, no informal talking with children, lots of directive talk
		<b>Middle:</b> is sensitive to children, but does not walk around or sits near children, sometimes ignores behaviour of children (when reaction is desirable), gives compliments, is sometimes very direct (no!)
		<b>High:</b> walks around and goes to children, reacts to children in a sensitive way, gives compliments, makes jokes, reacts to children and conversates with them
2: Respecting the child's autonomy	Low	<b>L:</b> Children do not get to choose the activities, children are mostly fed during lunch, children have to answer to the same questions
		<b>M:</b> can get some materials by themselves, eats (sometimes) independently, do not choose the activity they want, sometimes get to choose their own activities
		<b>H:</b>
3: Giving structure and setting boundaries	High	<b>L:</b>
		<b>M:</b> some activities are structured, others are not
		<b>H:</b> teacher corrects children, highly focused on discipline and manners
4: Talking and explaining	High / Middle & somewhat the same (yellow)	<b>L:</b>
		<b>M:</b> teacher gives no explanation when children choose their own activity, gives instruction
		<b>H:</b> gives clear instructions, gives extra explanations if needed, knows when to instruct children and when they don't need an explanation, asking questions
5: Stimulating development	Middle & differences between schools (blue)	<b>L:</b> Close-ended questions, children repeat after the teacher, every child does the same activity, 'copy and paste' activities

		<b>M:</b> somewhat open assignments, varied with teacher-centered assignments which are the same for every child,
		<b>H:</b> children get to choose their activities, activities capture multiple areas of development, teachers ask questions, tasks are developmentally appropriate
6: Guiding child-child interactions	Low	<b>L:</b> Children talk during circle-time, talk is sometimes permitted, interaction mainly between child and educator, talk is not permitted
		<b>M:</b> children are sometimes allowed to talk, but this is not stimulated
		<b>H:</b>



**Recommendations based upon the ECERS-R Profile:**

<b>Space &amp; Furnishings</b>	Arrange the classroom and its furnishing to stimulate free play (creating play corners)
	Invest in safe and appropriate time, space and equipment to play outside
	Display children's work at eye-level of the child
<b>Personal care routines</b>	Let children choose when to go to the toilet
	Provide time to rest for children who need it (and activities for children who don't need rest)
	Let parents in the classroom and greet them
<b>Language-reasoning</b>	Display books and posters to stimulate language development
	Ask open-ended questions to children (why and how questions) and diversify the kind of questions
	Let children work and talk together
<b>Activities</b>	Provide different activities which children can choose from
	Integrate multiple areas of development in a activity
<b>Interaction</b>	Talk to the children in an informal way (ask about their weekend/ how they are feeling/ their interests/ etc.)
	Discipline children in an appropriate and motivating way (so that children want to pay attention)
<b>Program structure</b>	Implement a pedagogy based upon free play
	Rotate between whole group/ small-group/ individual activities
<b>Parents and staff</b>	Engage parents in daily classroom activities and talk about the development of the child (partnership school and home)
	Make use of the opportunities to develop further provided by the MIE and ECCEA

**Recommendations based upon the Interaction competencies measuring scale:**

<b>Sensitive responsiveness</b>	Be consequent in reacting to children
	Go to children frequently (walk around in the classroom), talk to them, make jokes
<b>Respecting the child's autonomy</b>	Let the children have input in the activities
	Stimulate children to eat independently
	Engage children in the organization of the classroom (let them clean up, hand out things, etc.)
<b>Giving structure and boundaries</b>	Be appropriate in the way you discipline children
<b>Talking and explaining</b>	Let children be a part of the instruction
	Ask a lot of questions and let children explain
<b>Stimulating development</b>	Follow and register the individual development of the child
	Provide different activities on different levels to stimulate individual development
	Pay attention to competencies of the individual child and motivate talents
<b>Guiding child-child interactions</b>	Let children work and talk together
	Help children interact with each other (i.e. when children have a conflict)

**Recommendations based upon the Categorization Matrix of the NCF:**

<b>Theories</b>	Make sure that information given is grounded in recent theory concerning early childhood development
	Assess whether the theories described are relevant for teachers
	Justify choices made in the curriculum upon theories and insights
<b>Curriculum</b>	Assess the way in which the theory of the holistic development is used in daily practices
	Provide ideas on how to integrate the multiple areas of learning in playful activities
	Emphasize the importance of free play and describe clearly what is meant by this concept
<b>Assessment</b>	Add more information about the importance of assessment
	Give specific instruments or methods to assess the individual child
	Give options for personal assessment