

# **The effects of SUMNAL on the developmental skills of Roma children**



**By**

**Liane Walls**



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of Roma children**

**Liane Walls (3957462)**

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**Utrecht University - Faculty of Social Sciences  
Master program 'Education, Socialization and Youth Policy'  
Specialization 'Education and child development in the context of international  
humanitarian cooperation and aid'  
Supervisor: Dr. Rogier A. van 't Rood**

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## ABSTRACT

This study investigated the effects of SUMNAL on the developmental skills of Roma children. The qualitative part of this study consisted a comparative study between children that attended SUMNAL (n = 6) and children that have not attended any kind of kindergarten (n = 6) with help from the Early Learning and Development Standards (ELDS). The qualitative part gathered opinions and statements from different kinds of people about SUMNAL by using a questionnaire, free observations and informal conversations. The results of the ELDS did not show significant differences between both groups. However, the results from the qualitative data did show that SUMNAL has a great impact on the developmental skills of children. Further research is needed to generalize the findings of this study to other Early Childhood and Development centers.

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**Key words:** Roma, children, Early Childhood Development center, Early Learning and Development Standards, developmental skills, health and motor development, socio-emotional development, language/communication and literacy development, cognitive development and general knowledge acquisition, approaches to learning, SUMNAL, primary school

## INTRODUCTION

There appears to be consensus that the early years are particularly important for the development of basic skills which will help children cope with everyday requirements later on (Burger, 2010). That is why early childhood is the most effective and cost-efficient time to ensure that all children develop their full potential. The returns on investment in Early Childhood Development (ECD) are substantial (Engle et al., 2011). Especially in families with a low socio-economic status where the children have poorer informal learning at home, because their parents are uneducated (Burger, 2010). The economist and Nobel prizewinner Heckman (EACEA P9 Eurydice, 2009) has argued that high quality early childhood education and care provides one of the few effective policy means of increasing the social and economic situation for disadvantaged ethnicities and for a society as whole. The Roma families are the most disadvantaged ethnic group in the former Yugoslav Republic of Macedonia. Since approximately ten years, more attention is being paid to early education for the Roma population in the former Yugoslav Republic of Macedonia. SUMNAL is a Non-Governmental Organization in Skopje that is focusing on Roma families in the community Topaana. SUMNAL organizes and performs various educational, social and character building activities in close relation with the proposed and taught material in the regular school and curricula prepared by the Ministry of Education. SUMNAL is providing tools and resources needed to educate an unprecedented number of adults and children in Topaana (SUMNAL, 2012).

In this study, the effects of the ECD center of SUMNAL will be researched. The main research question is focused on the developmental skills of the Roma children:

***What are the effects of the ECD center SUMNAL on the developmental skills of Roma children?***

Many opinions, mainly positive, are given about SUMNAL. However, no study has yet been done on the quality of SUMNAL and its effects on the developmental skills of the children. This study will gather more information on SUMNAL; will provide more insight into this ECD center; and will show the effects of SUMNAL on the developmental skills of the Roma children.

## THEORETICAL BACKGROUND

### **Roma in the former Yugoslav Republic of Macedonia**

Roma constitute 2.66% of the overall Macedonian population according to the 2002 census, or 53,879 people, which makes Roma the fourth largest group in the former Yugoslav Republic of Macedonia. However, informed estimates from Romani NGOs suggest that Roma constitute closer to 6% of the total population, at least one expert source estimates a figure of 260,000 Roma in the country.

Discrepancies between official and unofficial figures derive from a combination of civil registration issues and the tendency of different Roma communities in the country to identify themselves as something else, most commonly due to prejudices and stereotypes (Unicef, 2011). Most Roma live in Skopje, namely 23,475 (43.6% of all Roma in the former Yugoslav Republic of Macedonia), and 13,342 (24.8%) live in the municipality of Shuto Orizari. This municipality is the largest settlement of Roma in Europe (Trbojevik & Bogoevska, 2011). Roma are traditionally a vulnerable ethnic group in the former Yugoslav Republic of Macedonia. They are facing the problems of poverty and social exclusion which is the basis for multiplication of series of other social problems (Trbojevik & Bogoevska, 2012). Although the Roma are most likely to be missed in national poverty assessments, it is clear that they are among the poorest of the poor. Even within a neighborhood, there are great differences between Roma and non-Roma households. According to the United Nations Development Program (UNDP) more than half of the Roma families (52%) live in 'absolute poverty' in comparison to 11% of the majority population (Mangskau, J.). Poor Roma households are in a critical situation concerning outstanding payments for water, electricity and other housing-related payments. In fact, utility debts of poor Roma households reach 1.230% of their total monthly household expenditures and 393% of non-poor households, which is according to Salimovska et al. (2010) a clearly unmanageable burden. Material deprivation shows that majority of the Roma population in the country (69% of the Roma) are faced with lack of necessary elements for decent living (Macedonians 28%, Albanians 33%, Turks 29%). Furthermore, the households at risk of poverty or social exclusion are by far Roma households (89%). Macedonians have a risk of poverty or social exclusion of 38%, Albanians of 55% and Turks of 48% (Gerovska Mitev, 2012).

*Education.* The availability of scholarships for Roma children in secondary and higher education has expanded, and various measures have been adopted to promote multicultural education. The most pressing problems for the education of Roma in the former Yugoslav Republic of Macedonia are limited access to preschool education, overrepresentation of Roma in special education, and segregation between Roma and non-Roma in schools, whether resulting from residential segregation or decisions by school authorities (Roma Education Fund, 2012). Roma are also denied education due to the high costs of school supplies and an unwillingness among Roma to send their children to school in the shabby clothes of poverty (Cahn, Chirico, McDonald, Mohácsi, Peric, & Székely, 1998).



However, even when Roma children are going to primary school, most of these children speak Roma language and have not attended a kindergarten. So they tend to arrive in primary school with little knowledge of the language of instruction (Unicef, 2011). Additionally, attention to Roma as an integral part of the history of the former Yugoslav Republic of Macedonia is absent in general education and teacher training curricula (Roma Education Fund, 2012).

Over the last few years, an increasing attention is being paid to Roma population studies and projects. There are several arguments why Roma families and children need to receive special attention and support:

- The current situation of many Roma children undermines Europe's authority and reputation on human rights issues and its legal commitment to uphold to fundamental rights.
- The European Union cannot afford to ignore the Roma population in Europe and it must begin now to improve basic health conditions, to educate Roma children and to provide hope to families by providing jobs and housing. If the situation is not tackled urgently an intolerable burden will be placed on welfare, health and education services and on the next generations of Europeans.
- The negative impact of poverty is more intense in early childhood and has a far greater impact on other outcomes than poverty experienced later in life.
- Early Childhood programs set the child on the journey toward knowledge and skills, but most important, they instill important 'soft' skills that are crucial for creativity and for working in teams.
- Investments in early childhood education and improving school attendance and completion are the most promising interventions to break the inter-generational transmission of social exclusion (Unicef, 2011).

### **From Early Childhood Development (ECD) center to primary school**

*Early Childhood Development.* Early childhood is characterized by remarkably rapid brain development that has enduring significance. This makes the first years of life critical to the formation of lifelong learning capabilities. So early investment increases the productivity of later investment (Alakeson, 2005). This development is influenced by characteristics of the child, the family and the broader social environment. Physical health, cognition, language, and social and emotional development underpin school readiness (Anderson et al., 2003). Early Childhood Development brings a wide range of benefits within these areas, for instance better child well-being and learning outcomes as a foundation for lifelong learning; more equitable child outcomes and reduction of poverty; increased intergenerational social mobility; more female labor market participation; increased fertility rates; and better social and economic development for the society at large (OECD, 2012). All these effects yield high return in investment, higher than any other intervention in early years (Disability and Development Cooperation, 2011). When we place education in early childhood within the field of

human rights, it requires giving attention to the needs and rights of the child on an individual basis with clear benefits for their future, though principally within the context of their current situation (Muñoz, 2012).

*Early Childhood Development (ECD) center.* The creation of ECD centers in the former Yugoslav Republic of Macedonia began in the year 2000, when the World Bank made a grant available that enabled communities to start their own centers with the assistance of UNICEF. From the beginning, the objective was to reach out to disadvantaged children. Namely, there were major concerns about their low level of enrolment in formal kindergartens and their health and development status. These children did not only have very limited access to formal kindergartens, but the conditions in their home environment were equally worrisome. As a consequence, the repertoire of activities of the center is broader than that of the formal kindergartens. The ECD centers:

- support the local community to identify vulnerable groups of children;
- organize activities focused on providing support to young children and their parents in the community (intensive cooperation with parents);
- assist and support the parents to improve access to basic social services for their young children;
- use Early Learning and Development Standards (ELDS) to enhance early stimulation and child development, for better preparation for formal education and life;
- raise the awareness of the importance of ECD in the local community (van Ravens, 2010).

These activities can be very successful, but it is very important that these activities are being implemented in the right way. Several factors of successful ECD programs are:

- A comprehensive nature of ECD programs: programs should include a range of services related to health, nutrition, early care and stimulation that address multiple needs of children. The program should focus on supporting these needs at the same time;
- ECD programs should in general respond to the needs of all children. However, they also need to include specific attention and support to the needs of the most marginalized and the disadvantaged;
- ECD programs should be of sufficient intensity and duration to ensure quality as measured by opportunities for continuous training of staff; opportunities for children to express initiative and explore in their learning environment; and opportunities for parents to be involved.

There is no universal ECD strategy that meets the holistic needs of children worldwide. The policy formulation and developing effective ECD strategies need to be based on the specific country context, as well as national values and views about the importance of education to human development (Disability and Development Cooperation, 2011).

*Primary school.* Primary schools are a school-based provision for children of compulsory school age within the education system (OECD, 2001). Children are starting going to primary school when they are six years old. In the former Yugoslav Republic of Macedonia, the curriculum is the competence of the state. Even though the process of decentralization in education has started and the educational units of the local self-government have become larger authorities concerning the management, leadership and financing of the primary school. This means that the Macedonian primary school children from every part of the country practice equal teaching plans and programs. The compulsory subject that is paid greatest attention is the official language, Macedonian (Miovska-Spaseva, 2009).

### **Early Learning and Development Standards (ELDS)**

Over the last twelve years, UNICEF has supported a global ELDS movement focused on identifying country-specific early learning standards, developing measures of the standards, validating the standards and the measures and assessing progress toward meeting the standards over time. Over the past few years, UNICEF continued supporting the regional and country investments in ELDS by conducting regional workshops and conferences for countries new developing ELDS and for countries that are validating their existing ELDS. ELDS specify the skills and competencies children are expected to achieve at certain ages. These standards play an important role in helping policymakers, service providers and caregivers understand child development and take steps to promote it. They can serve as a basis for developing curricula for early education initiatives; for monitoring the quality and outcomes of ECD services; and for assessing children's progress over time. They can also be a platform for advocacy to implement or scale up ECD interventions. By 2008, about forty countries had started the process of developing ELDS with UNICEF support and in 2011, approximately all countries had implemented ELDS or were in various stages of development. ECD activities focused on ELDS are highly relevant to development and implementation of national standards for school readiness (Evaluation office, 2011).

The process of developing the ELDS began in the former Yugoslav Republic of Macedonia in 2006. The primary aim of this initiative has been to develop a set of nationally acceptable early learning and development standards focusing on positive outcomes in the holistic development of children aged zero to six years. The process of developing the ELDS is guided by the following principles:

- All children, regardless of sex, ethnic origin, religion, socio-economic and cultural differences, different health and special needs, should have the opportunity to have access to the education system.
- All children can learn. They deserve high performance expectations from their learning process in accordance with their age and socio-cultural context.

- Children learn best through play. In the learning process, play is accepted as a learning instrument.
- The children's learning environment encourages curiosity and corresponds with their physical and emotional needs, and thus they feel safe.
- Children's learning development fully depends on quality caregivers who are interested in their own continued professional training, development and collaboration with children and their parents.
- Respect for the personality and individual characteristics, needs interests and abilities of every child, including children with special needs and children of all socioeconomic and ethnic groups.
- The content of the standards covers all domains of development of the children's personality, without favoring certain domains. The holistic approach in the standard development is the basis for their design, considering that the child perceives the world as a whole.
- Joint action in the family and community to encourage the development of children's early learning.
- All children have the potential to achieve the expected standards to a great extent at a specific age, if given the adequate support, instruction and stimulation for their early learning development.

To a great extent, the ECD occurs through complementary, interlinked domains of development. This means that the child's progress in one domain greatly influences the child's progress in another domain of development.

The standards are expectations of what the children should know and be able to do at a given age. That is why the ELDS in the former Yugoslav Republic of Macedonia are divided in age groups as follows:

- 0-2 years (0-6 months, 6-18 months and 18-24 months);
- 2-3 years (24-36 months);
- 3-4 years (36-48 months);
- 4-6 years (48-60 months, 60-72 months) (Unicef, 2009).

The ELDS are being used for several goals: improve instruction; develop curriculum; promote parenting education; improve teacher preparation; evaluate programs; monitor national progress; and improve public knowledge of children's development. The advantage of using these standards as the core is that they promote an integrated approach to early education (Kagan & Kauerz, 2012).

### **Developmental skills**

*Health and motor development.* The health and well-being of children are key factors in the growing up and learning process which occur during the early period. Children's growth and development is a

parallel and complementary process. However, growth refers to the increase of weight and height and size of the body. Development, on the other hand, refers to the changes in the degree of complexity when performing certain functions and acquiring certain skills (Unicef, 2009). Such skills, which involve coordinated physical movements of the body, are widely employed in human performance. Examples of these skills are: eating, dressing, walking, writing and riding a bicycle (Hargie, 2006). According to Gagné (2005) the motor skills are developed when they are a *'precise, smooth and accurately timed execution of performances involving the use of muscles'*. Regarding this domain, hypothesis A is formulated. Explanation of the experimental group and the control group can be found in the chapter *'Methodology'*.

*Hypothesis A: The experimental group is scoring significantly better in the health and motor development than the control group.*

*Socio-emotional development.* This domain is related to acquiring and learning new skills which raise self-awareness and self-control. Research shows that the gained social skills and the emotional development are an important part of the child's school preparedness. The characteristics of this domain of development indicates close connection between the social and emotional component. These components are complementary. The successful social contacts ensure development of the child's positive self-image, but at the same time development of the emotional skills of self-control. Every child's adequate socio-emotional development is significantly related to their further success in life and in school. Children in their early years establish social contacts with their parents, caregivers, peers and other adult individuals. The quality of these social relationships encourages the children's proper socio-emotional development (Unicef, 2009). Hargie (2006) argues that a social skill involves *'a process in which the individual implements a set of goal-directed, interrelated, situational appropriate social behaviors, which are learned and controlled'*. The life cycle theory, which represents the stages through which all humans pass from birth to death, indicates that children at the end of the preschool period (approximately six years old) have many relatively stable emotions. Expansiveness, curiosity, pride and gleeful excitement related to the self and the family are balanced with coyness, shyness, fearfulness, jealousy and envy. Capacities for empathy and love are developed but are fragile and easily lost if competitive or jealous strivings intervene (Sadock & Sadock, 2007). The following hypothesis is drawn for this domain:

*Hypothesis B: The experimental group is scoring significantly better in the socio-emotional development than the control group.*

*Language, communication and literacy development.* Children need language to express their thoughts and feelings, but they also need it to understand the other persons with whom they communicate on an everyday basis (Unicef, 2009). The ability to communicate through language allows human to learn a lot more than other animals can learn. Through language it is possible to

communicate across cultures. The early social interaction between infant and caregiver are essential for understanding other people and being able to communicate with them through language (Gazzaniga & Heatherton, 2006). Differences in language skills of young children, such as vocabulary and grammar, appear to be largely due to environmental influences, though genetic effects also play a significant role. On the other hand, differences in speech skills appear mostly due to genetic effects, though environmental factors also play a significant role (Hayiou-Thomas, 2008). For this domain, hypothesis C is formulated.

*Hypothesis C: The experimental group is scoring significantly better in the language, communication and literacy development than the control group.*

*Cognitive development and general knowledge acquisition.* Cognitive development refers to increasing a child's intellectual and mental abilities. More specifically, it is a progressive process which occurs as a result of the child's interaction with the rest of the objects, subjects and events happening in their surroundings. This domain of the child's development includes at the same time how the children think and what they know. The cognitive development refers to the strategies that children use to explore and learn about the world around them. Knowledge acquisition is a process of gathering information which they receive through their interaction with the outside world with the goal to actively participate in the problem solving and to improve their critical thinking skills. It is the foundation for the children's everyday activities, including their approach to learning. The stimulation of the cognitive development is the foundation for the success the children will achieve in their further process of education. The cognitive development is not an isolated process, it depends on the developmental degree in the other domains, especially the physical health and the socio-emotional development (Unicef, 2009). According to Piaget (Driscoll, 2005), activity is of paramount importance in the growth of intelligence. Children acquire knowledge through their actions, and thinking is considered to be action-based. Thus, a learning environment should be created that encourages children to initiate and complete their own activities. Another point from Piaget is that peer interactions are essential in helping children to move beyond egocentric thoughts. This domain leads to the following hypothesis:

*Hypothesis D: The experimental group is scoring significantly better in the cognitive development and general knowledge acquisition than the control group.*

*Approaches to learning.* These approaches are related to the way in which children learn, and not what they should learn. It is about how the children can give themselves orientation and direction in the learning process. A well-conceived environment that encourages initiative, curiosity and interest to learning are the key factors that promote the approach to learning of young children (Unicef, 2009). Children between four and six years old develop a sense of purpose by taking on responsibilities and initiative, but also develop the capacity to feel guilty for misdeeds (Gazzaniga & Heatherton, 2006).

Curiosity is a strong motivator of learning. Teachers can make good use of interesting events to stimulate curiosity in children. Another means of sustaining curiosity involves fantasy. This provides a meaningful context for learning that is easy to augment with their imaginations (Driscoll, 2005).

Hypothesis 5 is drawn for this domain:

*Hypothesis 5: The experimental group is scoring significantly better in the approaches to learning than the control group.*

### **Other factors**

*Socioeconomic status (SES).* Bornstein (2002) says there are many different definitions of SES. SES is most commonly measured using education, occupation and income. However, in reality many other factors, including physical health, home environment, early education and neighborhood characteristics, vary systematically with SES and are likely to play a role in creating the SES gap in cognitive performance and achievement (Noble, Norman & Farah, 2005). In this study, the following definition of SES is used: *'Household income, parental education, and family structure need to be measured separately. These measures index three types of resources that are important to children:*

- *Financial capital, or the ability to buy the things children need;*
- *Human capital, or the ability to communicate high academic aspirations and concrete help in achieving those aspirations;*
- *Social capital, or the ability of parents to provide connections to the larger community'*  
(Bornstein, 2002).

According to Bradley and Corwyn (2002), one of the most cited link between SES and well-being is access to resources. Children from poor families have less access to a wide variety of different recreational and learning materials from infancy through adolescence. These children are less likely to go on trips; visit a library or museum; attend a theatrical performance; or be given lessons directed at enhancing their skills. Access to these kind of resources mediates the relation between SES and children's intellectual and academic achievement from infancy through adolescence. Thus, the connection between SES, stimulating experiences and children's cognitive functioning is well established. Such experiences provide learning opportunities for children as well as serving as a motivational base for continued learning. Furthermore, learning materials and experiences also afford opportunities for social exchanges and, thereby, engage social arousal mechanisms in a generally productive way.

*Parental awareness.* Informal education and school preparation at home play a crucial role in child development. Through everyday problem solving situations, the parents represent a model of communication and conflict resolution. It is the lack of support to literacy and education as reading and writing that happens in the family as the most important risk factor in creating an educational gap

(Disability and Development Cooperation, 2011). In a study from OSCE and ODIHR (2010), questionnaires about early education processes were sent to all OSCE participating States and to NGO's that were active in the field of Roma. The following obstacles for early education processes were identified by both State and NGO representatives:

- A low level of awareness among Roma parents regarding the importance of early education.
- Lack of interest among Roma parents in enrolling their children and ensuring they attend early education institutions regularly.
- Parental unemployment and the poor economic condition of Roma families are making it difficult to enroll and ensure regular attendance of their children in early education.
- Distrust of Roma families towards the authorities and public services.

State and NGO representatives conclude that the main obstacles to the enrollment and participation of Roma children in early education are encountered at the family level, namely Roma parents' perceptions, attitudes and lack of trust.

*Parental engagement.* Assessing the value of parental engagement in children's early development performance is important because engagement is something that can be altered (Marcon, 1999). Epstein's model (1995) is paying attention to the influence of school on parental engagement and focuses on the school's role in facilitating the home-school partnership. This model is developed for pre-school, primary, secondary and high school. His framework contains six types of parental engagement:

- Parenting: Helping all families establish home environments to support children as learners.
- Communicating: Designing effective forms of school-to-home and home-to-school communications about school programs and children's progress.
- Volunteering: Recruiting and organizing parent help and support.
- Learning at home: Providing information and ideas to families about how to help students at home with homework and other curriculum-related-activities, decisions and planning.
- Decision making: Including parents in school decisions, developing parent leaders and representatives.
- Collaborating with community: Identifying and integrating resources and services from the community to strengthen school programs, family practices, and children's learning and development.

Parental engagement is increasingly seen as an important policy lever to enhance healthy child development and learning. Parental engagement, especially in ensuring quality children's learning at home and communicating with ECD staff, is strongly associated with children's later academic success, high school completion, socio-emotional development and adaptation in society (OECD,



2012). The ECD centers are paying much attention to the support to parents. Not only are parents being educated in order to better care for their children in the home environment, they are also being empowered to claim good child services. For illiterate mothers, literacy courses are provided so that they can read to their children; they have better access to written information about child rearing; and they become more aware of their rights and opportunities (van Ravens, 2010).

*Transition.* Transition to school is not a point in-time-event, but rather an experience that starts well before, and extends far beyond the first day of school (Department of Education and Early Childhood Development, 2009). There are different definitions of the word transition. Dunlop and Fabian (2002) define transition as *'being the passage from one place, stage, state, style or subject to another over time'*. This is a general definition of transition. Fabian (2007) made a definition of transition that is more specifically related to early childhood education, namely as *'the time between the first visit in the new educational context and the final setting'*. Kagan distinguished vertical and horizontal transitions (1991): *'Vertical transitions deal with moves and changes for the child between educational settings such as pre-school or school or between home and pre-school when children start pre-school. Horizontal transitions involve children's transitions during their everyday lives between, for instance, after school center and primary school'*.

Any form of transition can be viewed and analyzed in the Bronfenbrenner's ecological developmental model with the following interrelated levels: macro-, exo-, micro-, and meso systems. Related to the child's transition, the model of Bronfenbrenner can be used to get information of the content of the three environments or microsystems: children's home world, the pre-school world and the school world. In addition, the interrelations between the three worlds which make up the meso system, where the three worlds are working together, exchange information and empower the children (Vrinioti, Einarsdottir & Broström, 2010). According to Mortlock, Plowman & Glasgow (2011), in terms of children's preparation for school, adults need to think beyond the acquisition of academic skills. When thinking about transitions between early childhood and school in relation to these principles it is evident that not only are children making the transition but their families are also. A high quality transition-to-school approach should recognize this and respond to this and many other factors shaping this period of a child's life, including the cultural background of the child and their family, participation in early childhood services, the school environment and the social and emotional skills of the child (Department of Education and Early Childhood Development, 2009). The level of success during transition to school or transfer between phases of education, both socially and academically, can be a critical factor in determining children's future progress and development (Vrinioti, Einarsdottir & Broström, 2010). Many studies have identified the importance of a positive start at school. Most of these studies are focused on children, in some other cases they are focusing on the impact of a positive start at school. There are clear findings that:

- A positive start at school is linked to positive school outcomes in both academic achievement and social competence.
- Children's images of themselves as learners are influenced greatly by their school experiences.
- Children who experience academic and social difficulties in the early school years are likely to continue having problems throughout their school careers, and indeed throughout their adult life.
- Children starting school bring with them a wide array of experiences and understandings. As a result they experience the transition to school in different ways.
- Children who experience similar environments and expectations at home and school are likely to find the transition to school an easier process.
- The expectations of participant shape the transition experiences of children starting school (Dockett & Perry, 2007).

## CURRENT RESEARCH

### Objectives

The main objective of the current research is to assess the effects of the ECD center SUMNAL on the developmental skills of the Roma children that are attending. Another objective is to find factors which are contributing to the differences between the Roma children that attended SUMNAL and the Roma children that have not attended any kind of kindergarten. Furthermore, an aim is to find out what the biggest differences between these two groups are according to their developmental skills. The last objective is to find out what the opinions about SUMNAL are.

### Main research question

The main question of this current research is: *‘What are the effects of the ECD center SUMNAL on the developmental skills of Roma children?’*

### Sub-questions

The following questions are contributing to the answer of the main research question:

- *What are the differences in health and motor development between Roma children that attended SUMNAL and Roma children that have not attended any kind of kindergarten?*
- *What are the differences in socio-emotional development between Roma children that attended SUMNAL and Roma children that have not attended any kind of kindergarten?*
- *What are the differences in language, communication and literacy development between Roma children that attended SUMNAL and Roma children that have not attended any kind of kindergarten?*
- *What are the differences in cognitive development and general knowledge acquisition between Roma children that attended SUMNAL and Roma children that have not attended any kind of kindergarten?*
- *What are the differences in approaches to learning between Roma children that attended SUMNAL and Roma children that have not attended any kind of kindergarten?*
- *What impact has SUMNAL got on the socio-economic status, the parental awareness, the parental engagement and the transition to primary school?*
- *Which other factors, apart from the attendance on SUMNAL, are contributing to the developmental skills of Roma children?*

# METHODOLOGY

## Design

This research involved one ECD center located in the municipality Topaana: SUMNAL. This study also involved a primary school in the municipality Chair: Vasil Glavinov. Both are located in Skopje. For gathering the information that was needed for this research, both quantitative and qualitative methods were used.

The ELDS instrument was used for quantitative measurements. The ELDS exist of 5 domains: 'health and motor development', 'socio-emotional development', 'language, communication and literacy development', 'cognitive development and general knowledge acquisition' and 'approaches to learning'. These domains were divided in subdomains:

- Health and motor development: '*Gross motor development*'; '*fine motor development*'; '*health and safe behavior*'; and '*sensomotoric development*'.
- Socio- and emotional development: '*Social development*' and '*emotional development*'.
- Language, communication and literacy development: '*Communication*', '*reading*' and '*writing*'.
- Cognitive development and general knowledge acquisition: '*Logic and thinking*'; '*Mathematics and numbers*'; '*Arts*'; and '*sciences*'.
- Approaches to learning: '*Curiosity and taking initiative*' and '*creativity and persistence*' (Unicef, 2009).

In total, there were 124 items which were representing certain skills. They were not equally divided over the five domains. The 'health and motor development' domain had 21 items; the 'socio-emotional development' domain had 24 items; the 'language, communication and literacy development' domain had 24 items; the 'cognitive development and general knowledge acquisition' domain had 42 items; and the 'approaches to learning' domain had 13 items. All items were scored with 0,1 or 2. Items with the score 0 meant that the participant was at the first step with the development of that certain skill. When an item was scored 1, it meant that the participant had been making progress in that skill. If a participant possessed the skill, the participant had reached the goal and scored a 2 on that item.

Regarding the qualitative data, nine interviews were conducted among staff from SUMNAL, teachers from primary school and mothers of Roma children that were attending SUMNAL at that moment. Each interview existed of eleven questions, but not all questionnaires were the same. There was a questionnaire for the SUMNAL staff, one for the teachers from the first grade, one for the teachers from second and third grade and one for the mothers. All questionnaires existed of open questions only. Most of the interviews were kept individually. Two interviews were held with two persons at the same time. The questions were related to the five domains of developmental skills and

some questions concerned parental awareness, parental engagement, the transition and indirectly the socioeconomic situation.

The research started with sixteen participants. However, four children were excluded from participation, because two children were too old for being measured by the ELDS and two children in the control group had attended a public kindergarten before they went to primary school. After this exclusion, twelve participants were left over in the study. All these twelve participants were Roma children, six or seven years old and in the first grade of primary school. The design of the quantitative method was a comparative study which compared two groups with each other, namely a group of six participants that have attended SUMNAL (experimental group) and a group of six participants that have not attended any kind of kindergarten (control group). The independent variable was the 'group' which the participant existed of. The dependent variables were the five developmental skills, because the results of these skills were dependent on which group they belonged to. These variables are further on in this chapter explained.

### **Sample**

The kind of sample that was being used for the quantitative study was the convenience sample, because the participants needed to be in primary school for comparing the two groups. Secondly, the children had to be between zero and six (or early seven) years old to be included in the ELDS. There were only six children that attended SUMNAL and met these requirements. The participants in the control group were selected on their developmental level. The participants that were chosen within the three classes were the most averaged developed Roma children in that class. The teachers of these classes made this decision.

In the qualitative part of this study, eleven people were interviewed in nine interviews. Three of them were staff at SUMNAL; three teachers from the first grade; one teacher from second grade; one teacher from third grade; and three mothers of children that were going to SUMNAL.

### **Response**

Everybody was willing to cooperate with the interviews. Because of a lack of time which some interviewees had, it was not always possible to provide further details on a certain subject and some people had to be interviewed at the same time. Despite of this, all interviews were useful for this study and all questions were answered.

The three teachers from first grade cooperated with filling in the ELDS lists. Though, as mentioned before, two participants from the control group needed to be excluded from participation, because they had been to a public kindergarten. Two other participants in the experimental group were too old and therefore excluded from participation.

### **Variables**

In the quantitative study, the five dependent variables were '*score in health and motor development*',

‘score in socio-emotional development’, ‘score in language, communication and literacy development’, ‘score in cognitive development and general knowledge acquisition’ and ‘score in approaches to learning’. The independent variable was the ‘group’ to which the participant was assigned.

The most important terms for the qualitative study were ‘health and motor development’, ‘socio-emotional development’, ‘language, communication and literacy development’, ‘cognitive development and general knowledge acquisition’ and ‘approaches to learning’. Other important terms in this study were: ‘Socioeconomic status’, ‘parental awareness’, ‘parental engagement’ and ‘transition’.

### Data collection

Several kinds of instruments were used to collect the data. The ELDS and the interviews were the most important instruments. Free observations and informal conversations with the SUMNAL staff were also valuable for the research. The several kinds of instruments for data collection and which variables they focused on are showed in table 1.

Table 1.

*Presence of variables in the instruments*

	ELDS	Interviews	Free observations	Informal conversations
Health and motor development	X	X	X	X
Socio-emotional development	X	X	X	X
Language, communication and literacy development	X	X	X	X
Cognitive development and general knowledge acquisition	X	X	X	X
Approaches to learning	X	X	X	X
Socioeconomic situation		X		X
Parental awareness		X	X	X
Parental engagement		X	X	X
Transition		X		

### Reliability and validity

The interviews were increasing the reliability of the test. The scores on the ELDS were only measuring the scores of progress in the developmental skills of the participants without any explanations. The interviews were giving more sense to the ELDS and gave the study more insight and declarations. Furthermore, the interviews were giving the opportunity to involve the terms ‘socioeconomic status’, ‘parental awareness’, ‘parental engagement’ and ‘transition’ as well.

The construct validity in the ELDS was good, because the items within a domain were measuring a certain standard within that domain. This validity was also high in the interviews, because the answers of the participants on the questions were genuine responses. Apart from the construct validity, the extern validity from the interview was also good because it was possible to generalize to

other children that attended SUMNAL and children that are going to attend SUMNAL. A combination of the ELDS list and the interviews ensured the highest external validity in this test, because these instruments were complementing each other. The study was too specific to make it possible to generalize the results of this study to other ECD centers.

## RESULTS

The test results are giving an answer to the following question: ‘*What are the effects of the ECD center SUMNAL on the developmental skills of Roma children?*’ Each developmental skill will be tested separately. The results are subdivided in the results of the ELDS (quantitative research) and the results of the interviews, free observations and informal conversations (qualitative research).

### **Early Learning and Development Standards (ELDS)**

Three teachers filled in the scores of the ELDS list (Appendix A) for sixteen children divided over three classes. As already mentioned earlier in the methodology, four of these children were excluded from participation. That is why twelve of the sixteen lists that were filled in are used for this study. Six of these children have attended SUMNAL and the other six children have not attended SUMNAL or any other kind of Kindergarten. The dependent variables are the scores of the five domains of developmental skills: ‘*Scores in health and motor development*’, ‘*scores in socio-emotional development*’, ‘*scores in language, communication and literacy development*’, ‘*scores in cognitive development and general knowledge acquisition*’ and ‘*scores in approaches to learning*’. The differences within a certain dependent variable between the two groups are tested. The variable ‘*group*’ is the independent variable. So each dependent variable is tested separately to measure the differences between the groups: Hypothesis A to E. The hypotheses can be found in the theoretical background. Two different kinds of tests are implemented to see whether there are significant differences between the two groups in a certain developmental skill domain: a parametric test and a nonparametric test.

*Parametric test.* Firstly, the ‘*two sample t significance test*’, is implemented. This test is the best suited parametric test, because it is testing whether the population means of the two groups differ significantly from each other. One of the requirements for using this test is that there should be a normal distribution. That is why a stemplot and a normal quantile plot for each domain is needed to see whether the distribution is normal, these can be found in appendix B. In a stemplot, there is a normal distribution when there are not big empty spaces between the numbers. With a big sample size, the numbers are having the shape of a pyramid with a normal distribution. In a normal quartile plot, the distribution is normal when all dots are approximately in one straight line. In all domains the distributions are quite normal, especially considering the small sample size (n=6) in both groups. Because all the domains are distributed quite normal, it is possible to implement this test. The descriptive statistics of the groups can be found in table 2a and 2b.



Table 2a.

*Descriptive statistics of experimental group*

	N	Min. score	Max. score	Mean	St. deviation
Health and motor development	6	15	42	27,83	10,647
Socio-emotional development	6	24	48	33,00	10,954
Language, communication and literacy development	6	14	42	27,00	11,696
Cognitive development and general knowledge acquisition	6	35	78	57,33	17,072
Approaches to learning	6	7	26	14,67	8,687

Table 2b.

*Descriptive statistics of control group*

	N	Min. score	Max. score	Mean	St. deviation
Health and motor development	6	5	30	17,67	10,501
Socio-emotional development	6	7	48	27,00	16,407
Language, communication and literacy development	6	2	48	21,50	17,248
Cognitive development and general knowledge acquisition	6	10	84	42,17	28,081
Approaches to learning	6	1	26	11,00	9,839

The descriptive statistics are showing that the standard deviations in the experimental group are lower in nearly all domains, except in the health and motor development domain where they are almost the same. This means that the spread of the other four domains are less in the experimental group, thus the scores in the experimental group are closer to each other in these domains. However, the standard deviations are in both the experimental group and the control group very high, which means that the spread in each domain within both groups is large. Though, the experimental group has scored better in each domain, because the means are in every domain higher compared to the control group. It is very difficult to make any conclusions according to these descriptive data, that is why it is important to perform a 'two sample t significance test'.

Because this study intends to show that the means of the experimental group (group 1) are significantly better than the means of the control group (group 2), the hypotheses are:

$$H_0 : \mu_1 = \mu_2$$

$$H_a : \mu_1 > \mu_2$$

Hypothesis A to E are tested in both parametric and nonparametric tests.  $H_a$  expresses the effect we hope to find evidence for. For example, the hypotheses for the domain health and motor development are:

$H_0$  : There are no differences in the health and motor development between the experimental group and the control group.

$H_a$  : The experimental group is scoring significantly better in the health and motor development than the control group.

The same construct of the hypotheses are being used for the other four domains. Tests of significance assess the evidence against  $H_0$ . If the evidence is strong,  $H_0$  can be rejected confidently in favor of the alternative. Failing to find evidence against  $H_0$  means only that the data are consistent with  $H_0$ , not that there is clear evidence for  $H_0$  to be true (Moore & McCabe, 2006).

Using SPSS, the outcomes of the tests are showing that the experimental group is not scoring significantly better in any of the domains when  $\alpha = 0.05$ , because all the P-values are higher than 0.05 (see table 3). This means that the data do not provide sufficient evidence to reject the null hypothesis. So according to this test only, it is not possible to say that SUMNAL has a significant effect on any of the developmental skills.

Table 3.  
*P-value per domain*

	<b>P-value</b>
Health and motor development	$0.05 < P < 0.10$
Socio-emotional development	$0.20 < P < 0.25$
Language, communication and literacy development	$P > 0.25$
Cognitive development and general knowledge acquisition	$0.10 < P < 0.15$
Approaches to learning	$P > 0.25$

*Nonparametric test.* A nonparametric test, the *Wilcoxon Rank Sum Test*, is also implemented. Nonparametric tests are having less stronger assumptions, which can be useful in this study because of the small sample size. The *Wilcoxon Rank Sum Test* is based on rank scores and not on the actual scores of the participants. The results of this nonparametric test and the parametric test are quite the same. In each domain, the mean rank is higher in the ranking scores of the experimental group (see table 4.a. & 4.b.).

Table 4a.  
*Ranking scores of the experimental group*

	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Health and motor development	6	8.08	48.50
Socio-emotional development	6	6.92	41.50
Language, communication and literacy development	6	7.00	42.00
Cognitive development and general knowledge acquisition	6	7.33	44.00
Approaches to learning	6	7.33	44.00

Table 4b.

*Ranking scores of the control group*

	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>
Health and motor development	6	4.92	29.50
Socio-emotional development	6	6.08	36.50
Language, communication and literacy development	6	6.00	36.00
Cognitive development and general knowledge acquisition	6	5.67	34.00
Approaches to learning	6	5.67	34.00

However, the results are showing, just like they did in the parametric test, that the experimental group is not scoring significantly better in any of the domains. The P-values are even higher than the P-values from the parametric test, which means there is even less evidence to reject  $H_0$  in the nonparametric test than in the parametric test (table 5). According to this test, we can conclude that SUMNAL has no significant effect on any of the developmental skills.

Table 5.

*P-value per domain*

	<b>P-value</b>
Health and motor development	0.069
Socio-emotional development	0.369
Language, communication and literacy development	0.335
Cognitive development and general knowledge acquisition	0.231
Approaches to learning	0.229

*Correlation analysis.* The correlations between two variables are shown in table 6. All domains are strongly positively correlated with each other ( $r > 0.7$ ). For example, if participant A has a high score on the health and motor development, the chance is very high that participant A has a high score on approaches to learning as well. And when participant B has a low score on the health and motor development, it is most likely that participant B has also got a low score on approaches to learning. All correlations are significant at the 0.01 level (2-tailed), which means that there is a very small chance that two variables are not correlated with each other. Especially the socio-emotional development has a strong positive correlation with the other four domains. The health and motor development is least significant correlated with the other domains.

The indicators of one standard within a domain are also strongly correlated in general. Thus, when participant A has a high score on 'climbing rope' in the standard 'body controls', it is most likely that participant A has a high score on the other two indicators of that standard as well (jumping over obstacles and jumping backwards with one foot). Damkovska et al. (2009) already shown that the ELDS is from high quality and explicitly tested on its validity.

Table 6.

*Correlations between five domains*

	1	2	3	4	5
1. Health and motor development	1,000	,871**	,771**	,771**	,885**
2. Socio-emotional development		1,000	,968**	,938**	,965**
3. Language, communication and literacy development			1,000	,974**	,938**
4. Cognitive development and general knowledge acquisition				1,000	,875**
5. Approaches to learning					1,000

\*. Correlation is significant at the 0.05 level (2-tailed)

\*\* . Correlation is significant at the 0.01 level (2-tailed)

After implementing tests for the quantitative data, we can conclude that the results of the five hypotheses are not rejecting the null hypothesis. This is because the differences between the groups are not significant regarding the ELDS. Although the experimental group is scoring better in every domain, this instrument is not sufficient to reject the null hypothesis. A reason why it is not sufficient could be the small sample size. One outlier can lead to different results when the sample size is small. When the sample size would be bigger, one outlier will probably not have a very big effect on the results.

### **Interviews**

The interviews were held among the SUMNAL staff, the first grade teachers from primary school, the second and third grade teachers from primary school and mothers from children that are attending SUMNAL. In each domain of the developmental skills, these four groups will be analyzed separately, because they had different questionnaires. The questionnaires can be found in appendix C.

### ***Health and motor development***

*SUMNAL staff.* SUMNAL is very important for the motor skills of the children. This is contributing to the neighborhood Topaana. At SUMNAL, special activities are being organized which are improving the motor skills of the children, like making a drawing for the mothers on March 8<sup>th</sup> (mothersday) or sports activities. The children will learn more through playing games. According to the health development, attention is paid to the importance of hygiene and drama activities are being used to reduce specific prejudices or anxieties (e.g. going to the doctor). Sometimes, policemen and doctors are visiting SUMNAL to talk about their profession with the children. The children learn at SUMNAL how to use their senses and body balance which is also important. The aim of SUMNAL is to help children developing their motor skills as a preparation for primary school. Regarding the biggest differences between the two groups, the differences in health and motor skills are in second place out of the five domains.

*First grade teachers from primary school.* In Topaana, the motor development (e.g. drawing) has improved in general. There are also big differences in the motor development between the two groups. In the beginning the differences are not very big, but after a while the differences are getting bigger. Although the differences are already quite big, more attention should be paid to the motor development at SUMNAL if possible, because there are still difficulties with it now. SUMNAL has also taught the children about hygiene and that is why these children are more hygienic than the children who did not attend SUMNAL.

*Second and third grade teachers from primary school.* All of the skills are less developed regarding the children that did not attend SUMNAL. Especially the motor skills are less developed.

*Mothers of children that are attending SUMNAL.* At SUMNAL, the children can learn something and their motor development has become much better. There are many benefits regarding learning for the children, like drawing. Children are sometimes drawing much better than their mothers. Before they came at SUMNAL, the children did not know how to write and how to hold their pen. Now they do know. At the end of each class, the teacher that was educating the children is telling the mothers what to do. They are doing these tasks with their children at home (e.g. painting and drawing). But also daily activities like tooth brushing and washing hands.

### ***Socio-emotional development***

*SUMNAL staff.* SUMNAL is a comfortable place where children can play just like home and a place where they can learn. Ninety percent of the families that are coming here are social cases. They cannot afford this kind of happiness, like buying toys. It is very important to have a center like this, because it is a happy place that is bringing hope. The children can feel happy here and play together. They do not have to sit all the time, because they have the chance to be active as well. In this way, it is very easy for them to socialize with the other children. The purpose of the activities at SUMNAL is the independence of the children, to make something their own. Also increasing self-confidence, self-initiative and being happy with what they are doing. They need to feel proud and important. When the children are playing together at the end of the class, they are free to do what they want. Drama is also good for expressing themselves better. It is important that the children feel free and express themselves during activities. Drama is also used to reduce specific prejudices or anxieties and for helping children that are embarrassed. This will give them confidence and they will become less afraid. The children are learning habits like to come on time and other manners to behave properly. When the children from SUMNAL attend primary school, they can easily socialize with the other children at school, because they have self-confidence. Compared to the Roma children that did not attend SUMNAL, they are more prepared and can easily adapt in a new environment.

*First grade teachers from primary school.* According to the socio-emotional development, the children

that attended SUMNAL are more liberated, communicative and more socialized with other children. They are also more open and active. Their period of adaptation to primary school is shorter. The children that did not visit SUMNAL have big problems in communication with the teachers and other people. Everything is new for them. They are more stressed because of the new environment, so they are withdrawing in themselves and they are crying more. However, there still needs to be paid more attention to this skill at SUMNAL if that would be possible.

*Second and third grade teachers from primary school.* Children that have stayed at home are having more problems in communicating with the other children than the children that have attended SUMNAL.

*Mothers of children that are attending SUMNAL.* The children are not only learning knowledge here at SUMNAL, but also good manners (e.g. how to respect their elders and how to communicate with them). The children can have good discussions with others because of SUMNAL, so attending SUMNAL is good for their social development and for their preparations to go to school.

### ***Language, communication and literacy development***

*SUMNAL staff.* SUMNAL is a place to gain knowledge for the first grade so they can break the language barrier. This is very important because their mother tongue is the Roma language. At SUMNAL, the staff is strictly speaking the Macedonian language. The most important skills to develop are the language development and communication skills, because it is very important for children to overcome the language barrier. However, the language development costs more time to teach than all the other skills. It takes a lot of time for the children to understand the Macedonian language and to repeat after the educators. The parents of these children are talking in Roma language to their children and that makes it very difficult. The mothers are learning the Macedonian language from their children instead of the other way around. Before the children start school, they have to do a test in Macedonian language to get enrolled in primary school. If they fail the test, they are not allowed to attend school. That is why it is very important that they understand the Macedonian language. At SUMNAL, most attention is paid to language and communication skills. When the children have reached primary school, they can develop the other skills. The educator at SUMNAL is explaining the activities and the children repeat after the educator. Repeating is very important for children to remember and to understand what the educators are saying. From 2004 to 2008, the educators of SUMNAL went to the primary school and they were helping the teachers from first grade with the language barrier of the Roma children. During these years the results were very big and the teachers were glad that the educators were helping them. But now it is not possible anymore because of the lack of time. However, the teachers of primary school can still call the staff of SUMNAL anytime and the SUMNAL staff will support the teachers then (e.g. helping children individually with

their language barrier). Regarding the communication skills, the teachers in first grade are saying that they have the opportunity to talk more to the children that attended SUMNAL, because they are more prepared for communication than the other children.

*First grade teachers from primary school.* SUMNAL is contributing to the neighborhood Topaana, because they are teaching the children to overcome the language barrier before they are going to primary school. SUMNAL is also helping the children with their communication skills. The biggest differences between the two groups are in the language, communication and literacy development. Children that have not visited SUMNAL have big problems in communication with the teachers and other people. The children that have attended SUMNAL have acquired knowledge in monitoring, in sitting straight, in paying attention and in communicating with others. Because these children understand the Macedonian language, they understand what the teachers are saying. The differences are becoming bigger between these two groups over time, especially in oral expression. There needs to be paid more attention to this skill at SUMNAL, because it is a big barrier. In 2005-2006, there was a pre-school group at primary school. The SUMNAL staff used to support this group by helping the children with their language barrier, because these children did not speak the Macedonian language at all. Now, there is no pre-school group at primary school anymore.

*Second and third grade teachers from primary school.* The most important topic at SUMNAL is the language barrier. Regarding this language barrier, there are differences between the two groups. The children that attended SUMNAL are more developed in knowledge and in the Macedonian language. Teachers from primary school can continue to work with the children from SUMNAL without problems. That is why SUMNAL is very efficient. The entire community in Topaana has benefits from SUMNAL. When they are going to school, to the market or to the doctor, they are more prepared for communication. But there still needs to be paid more attention to these developmental skills, because it is the key these days.

*Mothers of children that are attending SUMNAL.* The children are learning Macedonian at SUMNAL and it is improving each time they come here. Children are sent to SUMNAL, so they can learn how to write, how to read, how to speak and to develop all other kinds of skills. It is also possible to borrow books from SUMNAL and read them back at home. Many mothers are doing this. Several mothers are uneducated and that is why they cannot help their children with several aspects of learning. However, by going to SUMNAL the mothers are also learning writing and reading skills, so they can help their children now. Thanks to SUMNAL, the children are speaking Macedonian. They also learned how to respect their elders, how to communicate with them and how to make good discussions with other people. It will be easier for the children to go to primary school, because they know how to speak the Macedonian language. This is according to one of the mothers the greatest advantage for her child.

### ***Cognitive development and general knowledge acquisition***

*SUMNAL staff.* SUMNAL is a place where stories are being told to children. It is very important for the cognitive development of children. Because the mothers are present during the activities, they can repeat the same activities at home. For example when cooking, the mother can hold something in her hand (e.g. a carrot) and ask the child: ‘What is this?’ and ‘What color has it got?’. The aim of SUMNAL is to help children to develop their intellectual level as a preparation for primary school. During activities, the children are listening to a story and retelling the story afterwards. When the children passed the test and heard they are enrolled in primary school, the SUMNAL staff works with these children that are going to first grade during the summer. The SUMNAL staff is teaching the children to count, name colors, the alphabet, etcetera. It is easy for the teachers in first grade to work with the children from SUMNAL, because they have acquired more knowledge and they do not have to start teaching from the very beginning.

*First grade teachers from primary school.* Children between two and six years old are going with their mothers to SUMNAL in order to have some acquired knowledge and to be prepared for primary school. The SUMNAL staff helps the children a lot. They are helping the children with learning in general and learning as a process. There are big differences in cognitive development between the two groups. The children from SUMNAL are showing more general knowledge. Because these children are coming with more acquired knowledge, the teachers from first grade are able to upgrade this knowledge to a higher level.

*Second and third grade teachers from primary school.* The children that attended SUMNAL are more developed in knowledge and it is therefore easier to work with these children. In second grade, the children are learning ten letters in three weeks. Children that not went to SUMNAL are not going to school on a regular basis, so they are missing a lot when they are not attending. These children miss the continuation of the classes, so the differences in the developmental level between the two groups become bigger and bigger.

*Mothers of children that are attending SUMNAL.* At SUMNAL, children start counting and recognizing colors. The memory of the child is much better and also the knowledge about the community has improved. At home, mother and child are learning the alphabet, reading books and playing memory together. During cooking, the children can provide assistance by giving the right vegetables. In this way, the children are learning by doing. Before SUMNAL, the children in Topaana knew less. Now, the children are more intelligent and they are gaining knowledge.

### ***Approaches to learning***

*SUMNAL staff.* The purpose of the SUMNAL activities is the independence of the children, to make



something their own. Also increasing self-confidence, self-initiative and being happy with what they are doing is important. The approaches to learning are getting a lot of attention here. The children that did not attend SUMNAL are having problems with catching up and problems to concentrate, like sitting on the chair for a couple of hours. The children that went to SUMNAL have already learned these habits.

*First grade teachers from primary school.* There are differences in the development of approaches to learning between the two groups. The children from SUMNAL attend classes on a regular basis. This is the most important difference. They are more motivated to follow lessons, they are persistent to finish their tasks and they also understand the explanation from the teachers better. These children also understand the meaning of the tasks also better with the help from their parents. The children that have not attended SUMNAL are more withdrawing in themselves and they need more encouragement to participate. The children that have attended SUMNAL are taking more initiative and are more independent than the children that have not attended SUMNAL. They are also paying more attention, are more open and more active during the classes. They bring homework on a regular basis. Sometimes when they did not go to SUMNAL, they forgot to do it or someone else did their homework. But in general they are doing their homework better than the ones that did not attend SUMNAL. The children that did not attend SUMNAL are not doing it, forget to bring their homework to school or the parents are not helping them with their homework. Attending school is also a big problem with these children. The children are eager to learn, but it is a problem when the parents are not bringing their children to school, which happens a lot. SUMNAL is helping the children with learning as a process. If there would be more time, it would be good to pay more attention to this domain.

*Second and third grade teachers from primary school.* The approaches to learning are better developed with the children that attended SUMNAL. The concentration and awareness in the class is higher with the children that went to SUMNAL. Their affection towards learning and going to school is also higher. They are more motivated to do their homework and they complete their homework and attend school on a regular basis. That is the most important difference, that these children are coming to school on a regular basis. Children from SUMNAL are continuing to come, they are willing to come and they develop normal. It is necessary to pay much attention to this domain at SUMNAL. Other children that did not attend SUMNAL do not come on a regular basis to the classes. They have no continuation in their process, so the teachers are forced to start from scratch with these children every time.

*Mothers from children that are attending SUMNAL.* None of the mothers mentioned this domain during her interview.

### ***Socioeconomic status, parental awareness, parental engagement and transition***

These four variables are less about the differences between the two groups, but mostly about the benefits of SUMNAL.

*Socioeconomic status.* According to the SUMNAL staff, the most important difference between a public kindergarten and SUMNAL is that a public kindergarten costs 1500 denar (about 25 euros) each month and SUMNAL is free. This difference is very important for the people that are coming to SUMNAL, because ninety percent of these families are living from social payment of the government. Some of these families are collecting plastic bottles in order to survive. Most families that are attending SUMNAL cannot afford to send their children to a public kindergarten. By sending their children to SUMNAL, their family budget will stay the same. Furthermore, SUMNAL is supplying the children with the material needs for first grade. SUMNAL is giving notebooks, pens and everything that is necessary to each child that attended SUMNAL. One mother mentioned that she wanted to learn more about sewing and tailoring, but she did not have the money to finish the courses. SUMNAL made this possible for her and gave her a sewing machine, so she could start working as a tailor.

*Parental awareness.* SUMNAL is raising the awareness of the parents about the importance of education. The SUMNAL staff is saying that this is very important at SUMNAL. SUMNAL is much more intimate than a public kindergarten, because the mothers are gaining skills in how their family life could become better and to develop their awareness. Mothers can see the children develop and that will give them an idea of their development. It is not usual for fathers to be present, because that is not common in a Roma community. The SUMNAL staff is developing the awareness of the parents so they could get a better way of living. The children will learn what is right in life. The parents that are going to SUMNAL are concerned about the future of their child and they want their children to succeed. This is very important according to the SUMNAL staff. The results at SUMNAL are great and the parents notice this as well. The level of development is acceptable, the parents are pleased and they see a future for their children. SUMNAL is organizing workshops for the mothers to raise their awareness (e.g. to understand their children better and about children needs at different ages). There were big problems in the beginning to convince the parents to go to SUMNAL. They had problems at home and they did not understand why they had to go to SUMNAL. The families in Topaana are traditional families and the mothers need to be at home to do entire household. By changing the time of the classes to four o'clock in the afternoon it was not a big problem anymore to convince the parents to attend SUMNAL, because then the mothers had the time to come. The teachers in first grade are mentioning that the parents from SUMNAL are more curious about the classes and the development of their child. Differences between the two groups in attendance can also be explained by the awareness of the parents.

*Parental engagement.* The mothers are spending a lot of time with cooking at home. At SUMNAL, they have the opportunity to talk with other adults. SUMNAL is a place for mothers to exchange opinions while the children are playing and they are learning something, which is new for them. The SUMNAL staff is getting the confidence of the mothers that are attending by telling these mothers what the staff is doing with the children. There is always someone one of the SUMNAL staff that is talking with the mothers during the activities of the children. At the end of each class, the teacher that was educating the children is telling the mothers what to do at home, like drawing or painting. When a mother is visiting SUMNAL for the first time, the educator will explain the program to her. Besides the children's activities, workshops are organized twice a month for mothers only with topics like '10 steps for better parenting', 'How to behave with your children?' and 'Resolving problems'. Mothers are bringing their experiences back home and they are practicing with the whole family at home. They can use the information from the workshop to raise their children, like how to work with children that are afraid and how to give their children compliments when they are doing something good. But they are also gaining information during the workshops for their own health. Women have many body controls which they are doing at home now because of those workshops. They are more motivated to visit the doctor and they are more aware regarding to this field. These workshops are giving the mothers more confidence. There is a high rate of illiteracy under the Roma families. SUMNAL is learning these mothers how to read and how to write. Furthermore, the parents feel free to talk to the SUMNAL staff about problems, advices etcetera. They are also coming to SUMNAL when they do not have classes. When the children are in first grade, the parents of SUMNAL want to be informed and they are more interested regarding the development of their children than the mothers that have not attended SUMNAL. The other parents are not interested in school at all; they are not motivated; they do not pay attention; and they do not ask any questions. They do not bother about the development of their own children. While the parents of SUMNAL are calling to inform about the homework or asking how their child was behaving in class. These parents are more willing to learn and to literate themselves in order to help their children.

*Transition.* The children at SUMNAL are prepared for the transition from the ECD center to primary school by their program that is based on the ELDS. SUMNAL is paying attention to all the developmental skills, so the children are prepared when they are going to primary school. By then, they know the Macedonian language, they can easily socialize with the other children at school and they have more self-confidence. During a child's last year at SUMNAL, the SUMNAL staff starts giving homework to these children. The staff is telling the children how to do their homework and they are helping these children with it. When the children hear that they are enrolled in primary school, SUMNAL will work with these children during the summer. The staff of SUMNAL is teaching them basic things like counting, naming colors and the alphabet, but they are also explaining these children why they are going to school. Furthermore, the SUMNAL staff and the teachers from first grade are

visiting the families from SUMNAL to tell them which documents are needed for the first grade. In this way, the families will be more informed and motivated to bring their children to primary school. They are also organizing workshops with the parents so they can talk about the most necessary things for the transition. It is easy for the teachers from first grade to work with the children from SUMNAL, because they have more acquired knowledge and they know how to behave during the lessons. The period of adaption in primary school is shorter for the children that attended SUMNAL than the period of the children that have not attended SUMNAL. The differences are getting bigger and bigger after the transition.

### **Free observations and informal conversations with the SUMNAL staff**

The observations and the conversations were taken place at the same time, so they will not be described separately. The program of the ECD center at SUMNAL is built on the ELDS. Mothers are present during the children's activities and the goal is to make it possible that the mothers can help their children at home. There are approximately 250 children that are attending SUMNAL, divided in three age groups. The children from seven to fourteen years old are going to SUMNAL for one hour five days a week. They bring their own lesson materials with them. Some are doing the same task and then they are helping each other. The teacher asks frequently to the children to show what they have answered and gives tasks to some children. The children are curious in what the other children are doing. They have good discipline and motivation and they really want to learn. The children from four to six years old are attending SUMNAL three times a week for ninety minutes. The mothers of these children are sitting at a different table than the children and they are paying attention to the lesson or they are talking to each other. The classes are based on a theme, like 'the dentist'. All activities during that class are linked with that theme and the activities are focusing on several developmental skills. The children between two and four years old are visiting SUMNAL twice a week for sixty to ninety minutes. The duration of the activities is much shorter than the activities of the four to six years old group. The mothers are sitting with their children and they are helping them. When the mother is not able to come, the grandmother or an elder child will come instead. But this does not happen a lot.

### **Concise summary of the results**

The tests in the quantitative analyze are showing that the effect of SUMNAL on the developmental skills is not significant. However, the interviews are showing a lot of advantages which are not able to measure with the quantitative instrument. All persons that were interviewed are positive about SUMNAL and they are all convinced that the effect of SUMNAL on the developmental skills is big or even enormous. According to most interviewees, the biggest differences between the two groups can be found in the domain of language, communication and literacy development. Especially the language barrier is mentioned many times in all the interviews. The interviews, free observations and informal conversations are supporting each other in their findings. By using the mixed method

analysis of both the quantitative data (ELDS) and the qualitative data (the interviews, free observations and informal conversations), the conclusion is that SUMNAL has a great impact on the developmental skills of the Roma children that are attending and have attended SUMNAL. The results of the quantitative research are not significant enough, but the qualitative research is supporting the results of the quantitative research in a positive way. Besides the influences of SUMNAL, there are two other factors which are important for the development of the skills: education level of the parents and the living conditions of the family.

## SUMMARY AND CONCLUSIONS

The purpose of this study was to gain more insight in the effects of SUMNAL regarding the developmental skills of the children that attend SUMNAL to eventually answer the following question: ‘*What are the effects of the ECD center SUMNAL on the developmental skills of Roma children?*’ In order to answer this question, several sub-questions needed to be answered first. Six questions were related to the developmental skills (health and motor development; socio-emotional development; language, communication and literacy development; cognitive development and general knowledge acquisition; and approaches to learning). Another sub-question was a question about the impact of SUMNAL on factors apart from the developmental skills. The last sub-question was related to other factors than the attendance to the ECD center, which contribute to the developmental skills of Roma children. These questions were answered by using the ELDS, interviews, free observations and informal conversations. The sub-questions are discussed in the next section and that section is finished with an answer on the main research question.

### ***Sub-question 1: What are the differences in health and motor development between Roma children that attended SUMNAL and Roma children that have not attended any kind of kindergarten?***

The biggest differences in general between the two groups according to the quantitative data are found in the health and motor development. The experimental group has a minimum score of 15 and a maximum score of 42, while the control group has a minimum score of 5 and a maximum score of 30. The differences in scores are also shown in the mean of the scores. The experimental group has a mean of 27.83 and the control group has a mean of 17.67. The spread of scores within both groups is nearly the same. The P-value in the parametric test is between 0.05 and 0.10, which means that the effect of SUMNAL on the health and motor development is almost significant. This applies the same for the P-value (0.069) in the nonparametric test. Thus, the differences in ranking between both groups are also nearly significant. The experimental group has a mean rank of 8.08 and the mean rank of the control group is 4.92. The correlation of this group with the other groups are the lowest correlations. This means that the health and motor development is least correlated with the other domain. However, the correlations of this group with the other groups are still strongly positive correlated.

According to the qualitative data, there are big differences in the motor development between the two groups. In the beginning the differences are not very big, but after a while the differences are getting bigger. At SUMNAL, there are many benefits regarding this domain. Before the children came at SUMNAL, they did not know how to write and how to hold their pen. Now they do know. Mothers of children that attend SUMNAL are doing tasks at home with the children (e.g. painting and drawing). But also daily activities like brushing teeth and washing hands. SUMNAL has also taught

the children about hygiene and that is why these children are more hygienic than the children that did not attend SUMNAL.

***Sub-question 2: What are the differences in socio-emotional development between Roma children that attended SUMNAL and Roma children that have not attended any kind of kindergarten?***

The differences in this domain, according to the quantitative data, are not very big. Though, the minimum score of the control group (7) is much lower than the minimum score of the experimental group (24). The maximum score in both groups is 48, which is the highest possible score in this domain. This means that in both groups at least one participant possesses all the socio-emotional skills fully. There is also not much difference in the rank scores of both groups. The control group has a mean rank score of 6.08 and the experimental group had a mean rank score of 6.92. The P-values in both parametric test and non-parametric test is far from significant, respectively between 0.20 and 0.25 in the nonparametric test and 0.369 in the nonparametric test. This domain is very strongly positive correlated with the other domains. According to these quantitative data, there are not much differences in the progress of the socio-emotional development between the two groups.

The qualitative data showed that the children that attended SUMNAL are more liberate, communicative and more socialized with the other children. They can easily socialize with the other children at school, because they have self-confidence. Compared to the Roma children that did not attend SUMNAL, the children from SUMNAL are more prepared and they can easily adapt in a new environment. They are more open and active. Their period of adaption to primary school is shorter. The children that did not visit SUMNAL have big problems in communication with the teachers and other people. Everything is new for them. They are more stressed because of the new environment, so they socially withdraw and they cry more. The qualitative data show many differences between both groups in their socio-emotional development. The teachers that filled in the lists are also mentioning these differences. Looking at the individual scores in this domain on the ELDS list, all children in the experimental group are scoring averagely between 1 and 2. While the control group has average scores between 0.29 and 2.00. This could mean that other factors are also playing a part in the socio-emotional development in the scores of the ELDS list.

***Sub-question 3: What are the differences in language, communication and literacy development between Roma children that attended SUMNAL and Roma children that have not attended any kind of kindergarten?***

The results from the parametric test are showing that the mean of the experimental group (27.00) is higher than the mean in the control group (21.50). The control group has much more spread in the scores than the experimental group. The control group has a minimum score of 2 and a maximum score of 48, which is the highest score possible in this domain. The experimental group has a higher minimum score (14), but a lower maximum score (42) in this domain. The P-value in the parametric

test is higher than 0.25 and the nonparametric test shows a P-value of 0.335. There is not much difference between the rank scores. The mean rank score is 6 in the control group and 7 in the experimental group. Thus, the effect of SUMNAL on this domain is far from significant regarding these tests.

According to the qualitative data, the biggest differences between the two groups are in this domain. Children that have not visited SUMNAL have big problems in communication with the teachers and other people. The children that have attended SUMNAL are having acquired knowledge in monitoring, in sitting straight, in paying attention and in communicating with others. When they are going to school, to the market or to the doctor, they are more prepared for communication. The teachers in first grade are saying that they have the opportunity to talk more to the children that attended SUMNAL, because they are more prepared for communication than the other children. These children understand the Macedonian language and they understand what the teachers are saying. The differences are becoming bigger between these two groups over time, especially in oral expression. The children that attended SUMNAL are more developed in knowledge and in the Macedonian language. Teachers from primary school can continue to work with the children from SUMNAL without problems. That is why SUMNAL is very efficient. The entire community in Topaana has benefits from SUMNAL. All the interviewees emphasized the great impact SUMNAL has on this domain, especially to overcome the language barrier.

***Sub-question 4: What are the differences in cognitive development and general knowledge acquisition between Roma children that attended SUMNAL and Roma children that have not attended any kind of kindergarten?***

In this domain, the control group also has more spread in the scores than the experimental group. The control group has 10 as the minimum score and 84 as the maximum score, which is the highest score possible in this domain. The experimental group has a minimum score of 35 and a maximum score of 78. The mean of the experimental group is 57.33 and the mean of the control group is quite some lower (42.17). The P-value in the parametric test is between 0.10 and 0.15, which is fairly far from the significance level. The ranks are higher in the experimental group with a mean rank of 7.33 and in the experimental group a mean rank of 5.67. The P-value in the non-parametric test is 0.231, which is far from the significance level. Thus, according to these quantitative data, the experimental group is scoring averagely higher than the experimental group. But it is not enough to reject the null hypothesis: *There are no differences in the cognitive development and general knowledge acquisition between the experimental group and the control group.*

The results of the qualitative study show that there are big differences in cognitive development between the two groups. It is easy for the teachers in first grade to work with the children from SUMNAL, because they have more acquired knowledge and they do not have to start teaching from the very beginning. That is why the teachers from first grade are able to upgrade their knowledge



to a higher level. Children that not went to SUMNAL are not going to school on a regular basis and they are missing a lot when they are not attending. These children miss the continuation of the classes, so the differences in the developmental level between the two groups become bigger and bigger.

***Sub-question 5: What are the differences in approaches to learning between Roma children that attended SUMNAL and Roma children that have not attended any kind of kindergarten?***

Just like the other domains, the results of the domain approaches to learning also show that there is more spread in the scores of the control group (minimum: 1; maximum: 26) than the experimental group (minimum: 7; maximum: 26). Both groups have at least one participant that has the highest score possible in this domain. The mean of the experimental group (14.67) is also in this domain higher than the mean of the control group (11.00). The P-values in both parametric test ( $P > 0.25$ ) and nonparametric test ( $P = 0.229$ ) are far from significant. The experimental rank has a mean rank of 7.33 and the control group has a mean rank of 5.67, which is not a big difference.

The qualitative data are showing that there are differences in the development of approaches to learning between the two groups. The children from SUMNAL attend classes on a regular basis. This is the most important difference. Other children that did not attend SUMNAL do not come on a regular basis to the classes. There is no continuation in their process, so the teachers are forced to start from scratch with these children every time. The children that went to SUMNAL are more motivated to follow lessons, they are persistent to finish their tasks and they also understand the explanation from the teachers better. The concentration and awareness in class is higher with the children that went to SUMNAL. These children understand the meaning of the tasks also better with the help from their parents. The children that attended SUMNAL are more independent and they are doing their homework better. The children that have not attended SUMNAL are more socially withdrawn and need more encouragement to participate. They are having problems with catching up and also problems to concentrate, like sitting on the chair for a couple of hours. The children that went to SUMNAL have already learned these skills. These children are also taking more initiative than the children that have not attended SUMNAL. They are also paying more attention, are more open and more active during the classes. They bring homework on a regular basis. Sometimes when they did not go to SUMNAL, they forgot to do it or someone else did their homework. But in general they are doing their homework better than the ones that did not attend SUMNAL. The children that did not attend SUMNAL are not doing it, forget to bring their homework to school or the parents are not helping them with doing their homework. Attending school is also a big problem with these children. The children are eager to learn, but it is a problem when the parents are not bringing their children to school, which happens a lot.

***Sub-question 6: What impact has SUMNAL got on the socio-economic status, the parental awareness, the parental engagement and the transition to primary school?***

*Socioeconomic status.* Ninety percent of the families that are going to SUMNAL are living from

social payment of the government. By sending their children to SUMNAL, their family budget will stay the same, because SUMNAL is free. Furthermore, SUMNAL is applying the children with the material needs for first grade. SUMNAL is giving notebooks, pens and everything that is necessary to each child that attended SUMNAL. This saves a lot of money for the family. Thus, their socioeconomic status is not getting worse by bringing their child to school. Their socioeconomic status will even become better because of the financial support from SUMNAL. While the socioeconomic status of the families that have not been to SUMNAL is getting worse, because they have to provide their children with the material needs by themselves.

*Parental awareness.* SUMNAL is raising the awareness among parents about the importance of education. Mothers see the children develop and that will give them an idea of the development of their children. The SUMNAL staff is developing the awareness among parents so they could get a better way of living. The parents that are going to SUMNAL are concerned about the future of their child and they want their children to succeed. The level of development at SUMNAL is acceptable, the parents are pleased and they see a future for their children. SUMNAL is organizing workshops for the mothers to raise their awareness (e.g. to understand their children better and about children needs at different ages). The teachers in first grade are mentioning that the parents from SUMNAL are more curious about the classes and the development of their child. Differences between the two groups in attendance can also be explained by the awareness of the parents.

*Parental engagement.* SUMNAL is a place for mothers to exchange opinions while the children are playing and learning something. The SUMNAL staff is getting the confidence of the mothers that are attending by telling these mothers what the staff is doing with the children. At the end of each class, the teacher that was educating the children, is telling the mothers what to do at home (e.g. drawing or painting). Besides the children's activities, workshops are organized twice a month for mothers. These mothers are bringing their experiences back home and they are practicing with the whole family. But they are also gaining information during the workshops about their own health. SUMNAL is teaching illiterate mothers how to read and how to write. The mothers are also coming to SUMNAL when they do not have classes. When the children are in first grade, the parents of SUMNAL want to be informed and they are more interested in the development of their children than the mothers who have not attended SUMNAL. The other parents are not interested in school at all, they are not motivated, they do not pay attention and they do not ask any questions. They do not bother about the development of their own children. The parents of SUMNAL call to inform about the homework or ask how their child was behaving in class. These parents are more willing to learn and to literate themselves in order to help their children.

*Transition.* The children at SUMNAL are prepared for the transition from the ECD center to primary school by the program that is based on the ELDS. SUMNAL is developing all the

developmental skills, so the children are prepared when they are going to primary school. By then, they know the Macedonian language, they can easily socialize with the other children at school and they have self-confidence in general. During a child's last year at SUMNAL, the SUMNAL staff starts giving homework to these children. The staff tells the children how to do their homework and they help these children with their homework. The summer before they are going to primary school, the children are learning basic things from the SUMNAL staff like counting, naming colors and the alphabet, but they also explain to these children why they are going to school. Furthermore, the SUMNAL staff and the teachers from first grade are visiting the families from SUMNAL together to tell them which documents are needed for the first grade. In this way, the families will be more informed and motivated to bring their children to primary school. They are also organizing workshops with the parents to talk about the most necessary things for the transition. It is easy for the teachers from first grade to work with the children from SUMNAL, because they have more acquired knowledge; they know how to behave during the lessons; and their period of adaption in primary school is shorter.

***Sub-question 7: Which other factors, apart from the attendance to SUMNAL, are contributing to the developmental skills of Roma children?***

During the interviews, the importance of the educational level of the parents is mentioned several times. Especially the mothers are saying that they are glad to learn writing and reading skills at SUMNAL, so they can help their children at home. The teachers are also mentioning that they see differences in developmental skills of the children between children from educated parents and children from uneducated parents.

Besides the education of the parents, the living conditions of the family have an impact on the developmental skills of the Roma children. Even though all families which take part in this study, are living in poor conditions. However, there are differences in poor conditions and very poor conditions. Some children have to collect plastic bottles in order to survive. The parents are crying when they are coming to school, because of their poor living conditions. Most of these families are sending their children not on a regular basis to school, because they think their work at home is more important than the education of their children. The developmental skills of the children can be influenced by these circumstances.

***Main research question: What are the effects of the ECD center SUMNAL on the developmental skills of Roma children?***

With help from the answers from the sub-questions it is possible to answer this question. The experimental group has a higher score in all five domains of developmental skills regarding the ELDS list. This means that SUMNAL has a positive effect on all five domains of the developmental skills according to these results. The interviewees are very positive about SUMNAL and all of them are mentioning the great impact of SUMNAL on the developmental skills. The domain of language,

communication and literacy development shows the greatest differences between the experimental and control group. Especially the Macedonian language development is much better with the children from SUMNAL. Thus, according to the interviewees, the children are mostly benefiting from SUMNAL in the area of the Macedonian language. Other effects which are mentioned often, are great effects in the development of their communication, motor skills, acquired knowledge, social skills and motivation. Besides the effects of SUMNAL on the developmental skills, SUMNAL is also contributing to the socioeconomic status, parental awareness, parental engagement and the transition to primary school. This means that not only the children are benefiting from attending SUMNAL, but also the parents, the whole family and the neighborhood Topaana. Not all developmental skills that the children from SUMNAL have gained, can be assigned to the merits of SUMNAL. The educational level of the parents and the living conditions of the family can play an important role in the progress of the developmental skills.

The main conclusion of this study is that SUMNAL plays a crucial role in the community Toopana. It is very important that SUMNAL will continue like it does right now. When SUMNAL has got more time to spend with the children, more time should be spent on the development of the Macedonian language. Language is the key nowadays and it is for children the most important skill to develop during their time at SUMNAL. The way SUMNAL is engaging the mothers in the whole process and how they make them aware of the importance of the education of their children is very beneficial. This was mentioned many times during the interviews and the free observations also supported these opinions. It is important to keep on developing in this area, because there is so much more to gain regarding the parental engagement and parental awareness.

The final conclusion is: The effects of SUMNAL on the developmental skills, and many other factors, are of great value for the Roma families in Topaana and for Topaana as a community.

## DISCUSSION

This study gives a clear image of the influences of SUMNAL on the developmental skills of the Roma children. The several instruments support each other in their results and conclusions. All instruments were measuring aspects of the study that were relevant. The different types of persons that were approached for the interviews were also contributing to the study. In general, all interviewees had the same main positive opinions about SUMNAL. But they were explaining these thoughts from different perspectives. This led to new information and it was a way to gain more insight in the situation. The free observations and informal conversations were very important to get an idea of SUMNAL. Without these observations and conversations, it would not be possible to create a questionnaire of good quality and to interview the people. However, there are also limitations in this study. These limitations will be mentioned in the next section plus some recommendations for further research. First, the pros and cons of both quantitative and qualitative research in general will be compared with each other.

### **Quantitative versus qualitative research**

The qualitative methods were essential in this study, because these methods were underpinning the quantitative method. Even though the qualitative methods were descriptive and subjectively loaded, these methods were explaining the scores of the ELDS lists in this study. Without the qualitative methods, especially without the interviews, it would not have been possible to draw any conclusions on academic level. At first, the reliability would have been too low because of the small sample size. Secondly, the scores of the ELDS list would have been just numbers without a meaning. It is not possible to draw conclusions on the scores of the ELDS list without receiving any explanation. Besides this, other factors (socioeconomic status, parental awareness, parental engagement and transition) were mentioned during the interviews which were also relevant for this study, because SUMNAL has contributed to these factors as well. They should never be excluded from this study, which would have happened when the qualitative methods were not implemented. Finally, the qualitative methods made it possible to generalize this study to other children that attended SUMNAL or that are attending SUMNAL.

Table 7 shows some characteristics of both quantitative and qualitative research in general according to Leeds-Hurwitz (1995).

Table 7.  
*Characteristics of quantitative and qualitative research*

<b>Quantitative research</b>	<b>Qualitative research</b>
Numbers	No numbers
Statistics	No statistics
Empirical	Not empirical
Objective	Subjective
Deductive	Inductive
Hypothesis testing	Exploratory
Experimental	Nonexperimental

Regarding this study, in most cases, it was best to use both kinds of research, because the characteristics of both kinds were equally important. For example, it was equally important to implement both a method that had statistics and a method that had no statistics. This applied the same for the next characteristics: *numbers versus no numbers; empirical versus not empirical; objective versus subjective; deductive versus inductive; and experimental versus nonexperimental*. Though, the numbers are meaningless without the descriptions of the qualitative methods. On the other hand, the qualitative methods would still be useful without the numbers of the quantitative method. The exploratory part of this study was more important than the hypothesis testing of the ELDS lists. The flexibility of the quantitative method in this study was very limited, because of the specific items that were measured. That is why some important information did not emerge in this method. Thus, it was necessary to implement qualitative methods of research. However, the quantitative method gave a clearer view and a concise image of the results by showing numbers and statistics. For a quick survey, the results of the quantitative method were more useful. For analyzing the entire research, the qualitative methods were providing more information.

Besides these characteristics, there were also differences in the approaches of these two kinds of researches (Jean Lee, 1992). In the quantitative method, the researcher was an outsider. The researcher was not involved during this process. This led to objective results. However, during the interviews, the researcher was an insider and involved during the entire process. This led to subjectively loaded results. Though, the researcher was able to gain more information and that is why this descriptive analysis gave a broader scope of the current situation.

It is difficult to weigh the pros and cons of both quantitative and qualitative research against each other. A mixed method would be best. In a research with a big sample size, a quantitative method is better to implement, because it gives a clearer image. However, when the sample size is small, a qualitative research is necessary. In this study, both kinds of researches are very important. But the pros of the qualitative method outweigh the pros of the quantitative method and the qualitative methods are less dependent on the ELDS list than vice versa.

## **Limitations and recommendations**

The reliability of the ELDS lists in this study is difficult to determine, because there was only one short period in which the children were measured. It is unknown whether the given score is representative for the actual progress of the participant. For further research it is important that the teachers of the first grade are filling in the ELDS lists two times a year instead of one. A bigger sample size will also contribute to the quality of the ELDS lists. These changes will increase the reliability. Furthermore, it will make it possible to draw some conclusions based on the ELDS lists. Besides this, each ELDS list was filled in by only one teacher. This caused subjectively loaded lists. However, it is not possible to let two teachers fill in the list, because each class only exists of one teacher. That is why additional questions were asked during the interviews to the teachers that filled in these lists. These questions were about their procedure of filling in these lists. This increased the reliability of the ELDS lists. The results of the interviews are quite reliable, because several types of persons were interviewed. In this way, the opinions about SUMNAL were examined from different perspectives. Each type was represented by at least two persons, which made it possible to compare their opinions and statements with each other. The free observations and informal conversations were also increasing the reliability of the interviews, because they were supporting the statements that were made during the interviews. According to the reliability of this study, the results are legitimate by using all instruments. It is not possible to draw conclusions about this study regarding to only one instrument (e.g. the ELDS lists), because the reliability will be too low.

It is possible to generalize the results of this study to other children that attend or going to attend SUMNAL, because the results of the research seem to match everyday practice. This conclusion can be made by comparing the several instruments with each other. This research cannot be generalized to other ECD centers. Reasons for this are the small sample size, the specific family background and the socioeconomic status of the participants. For further research, the sample size needs to be bigger. This is not possible by involving SUMNAL as the only ECD center. Thus, more ECD centers, which are focusing on Roma families, need to be involved. Besides the involvement of more ECD centers, it is important to gather information about the family background and their socioeconomic status. Answers from the interviewees revealed that this also had an impact on the developmental skills of the children. That made it harder to interpret the results of the ELDS list, because it was unknown whether the child had educated parents or not. The socioeconomic status was poor in each family that was included in this study. However, the interviews showed that small differences in the socioeconomic status can be very influential for the families (e.g. whether children have to collect plastic bottles or not). Besides the interviews, it is also possible that the results of the ELDS lists were influenced by these factors. The spread within the control group was in every domain more than the spread in the experimental group. This could mean that the developmental skills of control group were more dependent on influences like the education of the parents and their living condition than the experimental group was. However, this is just an assumption. Further research is

needed to confirm or reject this assumption. Though, these factors are difficult to measure and much time is needed to get a clear image of the family situation.

*Parenting module.* In the conclusion, the importance of continuing developing in the curriculum regarding parental engagement and parental awareness was mentioned. Currently, a participatory parenting module for nonwestern immigrant mothers is recently implemented and tested, and ready for further implementation. This module (available in English) is designed to strengthen the parental competences. The target group of this module is ‘Mothers from non-Western immigrant groups with little or no education’. It focuses on the following topics:

- Parenting, the importance of daily rhythm
- Parenting, rules and development
- Parenting, communicating with children
- Parenting, using your imagination
- Parenting, contact with the school
- Parenting, contributing to your child’s life
- Parenting, leisure time
- Parenting, handling emotions
- Parenting, healthy food

This module (Themis / IDEAL) is developed for the context of western countries (and implemented and tested in the Netherlands, Sweden and Denmark, with support from the European Union).

However, these topics are also relevant for the Roma families in Topaana. This module, if adjusted to the Roma families that attend SUMNAL, can be very beneficial for the development of the parental awareness and parental engagement and thus indirectly, beneficial for the developmental skills of the children.

Firstly, structure is very important for the socio-emotional development of young children. Rules and limits are contributing to the structure in a household (Verhoeven, Junger, van Aken, Deković & van Aken, 2010). The topics ‘parenting, the importance of daily rhythm’ and ‘parenting, rules and development’ are specifically focused on the structure in a household. The topic ‘parenting, leisure time’ is also focusing on more structure in a daily or weekly routine. Each household has its own kind of structure, it is important to be aware of this.

Secondly, parents need to understand their children in order to help their children. Children are full of fantasy. This might cause problems for parents to understand their children. That is why parents need to use their imagination as well. Imagination is like a code that gives the parents access to the experiences and the behavior of their child. Another topic that is focusing on parents to understand their children, is ‘parenting, contributing to your child’s life’. Parents need to be informed about a child’s development and they need to know what they can realistically demand from children of a certain age. Another topic in this area is more specific, namely: ‘Parenting, contact with the school’. By communicating with the teachers and other parents, parents get more insight in the development of



their child in school and this will help the parents to understand their child better. The same applies for understanding a child's emotions in order to handle these emotions. This is also a topic of the parenting module.

Finally, parents are role models for their children. The way parents communicate with their children is very important. By communicating effectively, parents are a role model for their children. Most children learn by imitating the parent's behavior. Another important topic in this area is 'parenting, healthy food'. The way a parent relates to food will teach a child how to relate to food. Children are curious in nature, but if a mother has a negative attitude towards unfamiliar foods, children will learn to distrust their curiosity and become picky. That is why the role of the parent is very important in this topic.

All nine topics are relevant for the Roma families in Topaana, because these topics are regularly issues for some of these families. That is why this module could really contribute to the curriculum of SUMNAL. By implementing this module, the programmes focused on parental awareness and parental engagement will become more professionalized at SUMNAL.

The parenting module consists of a group meeting once a week that lasts three to four hours. It would be better to spread one topic over two weeks with group meetings of one and a half to two hours. Each group meeting of this module begins with half an hour 'play' (twenty minutes might be better in this situation). The mothers are learning different kinds of games, which they can play with their children afterwards. The mothers are also learning the importance of playing and to enjoy playing, so they will play more often with their children. Besides these group meetings, activities and excursions are also included in the program (e.g. cooking together or visiting a police office). The kind of activities should be adjusted to the Roma families in Topaana.

This parenting module fits the needs of the Roma mothers, because it is focused on marginalized families with little or no education. The module keeps in mind that the families cannot afford much. For example, the games are easy to understand and affordable for these families and that is why the families can play these games with their children at home.

The parenting module has not been published yet, because the evaluation process is still in progress. Thus, there are no references available yet, except for the 2005 evaluation of the first Dutch version. However, mr. Rogier A. van 't Rood is the author of this module, so he can be contacted for further information about the module.

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## **APPENDICES**

**Appendix A:** List of the Early Learning and Development Standards

**Appendix B:** Stemplots and Normal quantile plots for parametric test

**Appendix C:** Questionnaires

## APPENDIX A: List of the Early Learning and Development Standards

Name and surname of the child \_\_\_\_\_

Age: \_\_\_\_\_

Date of I assessment: \_\_\_\_\_

Date of II assessment: \_\_\_\_\_

### 1. Health and motor development 4-6 years old

Indicator	First step <sup>1</sup>		Progressing <sup>2</sup>		Reaching goal <sup>3</sup>	
	I	II	I	II	I	II
<b>1. Standard – Maintain balance</b>						
1.1. Running stable - no falling						
1.2. Jumping over obstacles						
1.3. Jumping backwards with one foot						
<b>2. Standard – Control of body parts</b>						
2.1. Climbing rope						
2.2. Stretching the body						
2.3. Using gymnastic equipment						
<b>3. Standard – Coordination</b>						
3.1. Rotates around the axis of the body						
3.2. Makes complex movements, for example dancing						
<b>4. Standard – barriers which are moving and immobile</b>						
4.1. Overcomes higher barriers						
4.2. Bypasses immovable objects while running fast						
<b>5. Control hands and fingers</b>						
5.1. Holding scissors and cutting paper based on a circular line						
5.2. Able to displace dense contents of a tube (plasticine, glue, toothpaste)						
<b>6. Standard- manages general purpose objects</b>						
6.1. Holding cutlery correctly knife, fork						
6.2. Ties his own laces						
6.3. Uses liquid with spoon or glass						
<b>7. Standard - Personal care and hygiene</b>						
7.1. Placing his hand on his mouth when coughing						

<sup>1</sup> Makes a first step towards meeting the standard - shows interest in the activity and tries to carry out the activity without accuracy.

<sup>2</sup> Showing progress toward meeting the standard - occasionally carries out the activity with a certain level of accuracy.

<sup>3</sup> Meets the standard - shows interest in the activity, repeatedly carries out the activity with a great level of accuracy and persistence.

7.2.	Gathers toys, arranges room and bed by him/herself						
<b>8.</b>	<b>Standard – Recognizes harmful and dangerous situations</b>						
8.1.	Looks left and right when crossing the street						
8.2.	Alerts a friend if he/she is in danger to fall, to slip						
<b>9.</b>	<b>Standard – Regulation of movement using senses</b>						
9.1.	Makes creative structures with various materials						
9.2.	Accurately draws given figures						

Notes:



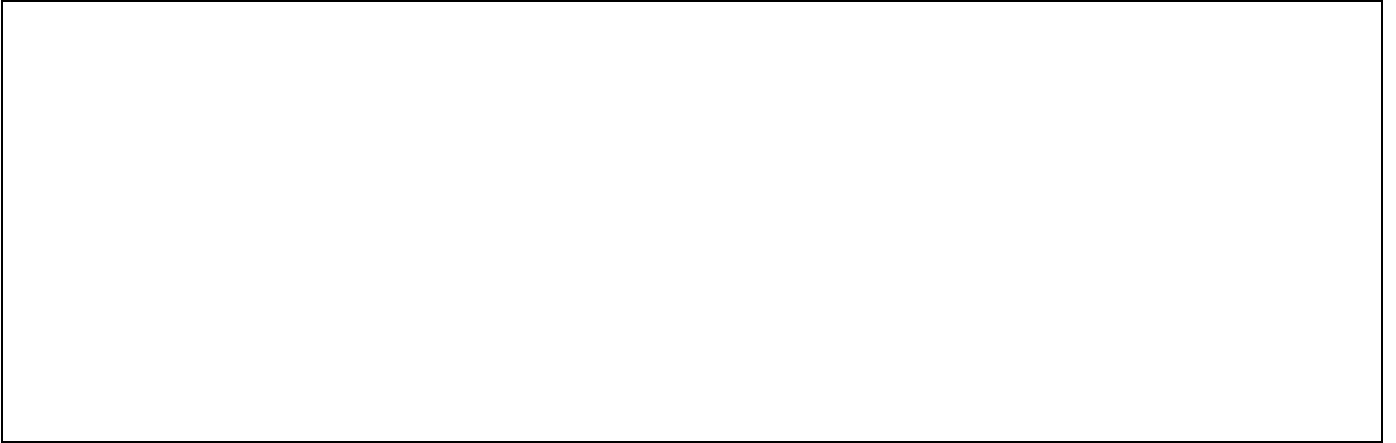
2. Socio- emotional development  
4-6 years old

Indicator	First step		Progressing		Reaching goal	
	I	II	I	II	I	II
<b>1. Standard – Distinguishes familiar and unfamiliar adults</b>						
1.1. Recognizes celebrities on photos						
1.2. Communicates with familiar faces in his/her surrounding						
1.3. Asks for help from familiar persons when facing with a problem						
1.4. Asks questions about an unfamiliar person						
1.5. Shares secrets with a close person						
<b>2. Standard – Can develop social skills in interaction with other children</b>						
2.1. Shows loyalty to friends						
2.2. Chooses to play with a new friend						
2.3. Contributes in group games						
2.4. Has friends at several places						
<b>3. Can develop social skills in interaction with adults</b>						
3.1. He/she greets a familiar person						
3.2. Seeks for help from adults						
<b>4. Can notice and respect similarities and differences between people</b>						
4.1. Able to describe his/her own appearance and to compare it with the appearance of other people						
4.2. Recognizes the different social roles						
4.3. Asks questions about other children						
<b>5. Standard – Develops self-awareness</b>						
5.1. Shares information about him/herself with other children						
5.2. Is aware of his/her own cultural identity						
<b>6. Standard – Recognizes and adequately expresses own emotions</b>						
6.1. Gives reasons and talks about his/her own emotions						
6.2. Expresses emotions through play						
<b>7. Standard – Is proud of his/her own achievements and believes in his/her abilities</b>						
7.1. Presents his/her own ideas and opinions						
7.2. Presents the completed task to an adult						
7.3. Is fully committed to assigned tasks						
<b>8. Standard – Can control his/her own feelings</b>						
8.1. Expresses anger and sadness in an appropriate manner, with a great deal of control						
8.2. Calms down own negative emotions and instant impulses						
8.3. Accepts going to school						
Notes:						



3. Language, communication and literacy development  
4-6 years old

Indicator	First step		Progressing		Reaching goal	
	I	II	I	II	I	II
<b>1. Standard – Can listen and understand verbal language</b>						
1.1. Gets involved in conversation, understands what he/she hears and responds appropriately						
1.2. Knows the importance of a few special words						
1.3. Can easily repeat a story						
<b>2. Can speak and communicate</b>						
2.1. Expresses his/her own ideas in different ways						
2.2. Discusses with peers						
2.3. Tells his/her own experience						
2.4. Uses different intonation						
2.5. Recites poem by changing the intonation of the voice						
<b>3. Standard – Can enrich his/her own vocabulary and speech and to show progress in speaking correctly</b>						
3.1. Recognizes words that are different from his/her mother tongue						
3.2. Knows the opposite meaning of a given word						
3.3. Participates in vocal games						
<b>4. Standard – Shows interest in printed materials</b>						
4.1. Reviews a picture book during a longer period of time						
4.2. Can describe an event according to certain pictures which he/she sees for the first time						
4.3. Uses the book to get some information						
4.4. Knows that the book has a title, author and illustrations						
<b>5. Recognizes written symbols and letters</b>						
5.1. Connects the sound with a certain letter						
5.2. Appoints letters in written text						
5.3. Recognizes his/her name written on paper						
5.4. Appoints 2-3 letters, connecting them in series						
<b>6. Standard – Can engage in activities related to writing</b>						
6.1. Writes or draws different shapes with many moves of the hand						
6.2. Writes a certain letter by copying						
6.3. Writes his/her own name						
<b>7. Standard – can present his ideas through written symbols and letters</b>						
7.1. Uses squiggles and drawings that look like letters to write a message						
7.2. Requires an adult to write something about his/her idea						
Notes:						



4. Cognitive development en general knowledge acquisition  
4-6 years old

Indicator	First step		Progressing		Reaching goal	
	I	II	I	II	I	II
<b>1. Standard – Demonstrates the ability to research and discover</b>						
1.1. Dismantles and reassembles various objects/toys						
1.2. Observes and discusses the changes he/she notices						
1.3. Foresees what will happen based on observations and research						
1.4. Builds bricks one on another to see at which point they will fall						
<b>2. Demonstrates knowledge of quantity, numbers and counting</b>						
2.1. Can name a number in a given text						
2.2. Indicates which number precedes and which number follows after 5						
2.3. Recognizes numbers form 1-10						
2.4. Can tell the number of the street where he/she lives						
2.5. Connecting the quantity with the symbol number						
<b>3. Demonstrates the ability of classification and serialization</b>						
3.1. Describes the daily activities according to the time of occurrence						
3.2. Sorts buttons according to the number of holes						
3.3. Draws patterns in a given position						
3.4. Sorts items in series, according to more characteristics						
<b>4. Obtains information about the surrounding through observation and manipulation</b>						
4.1. Uses standard objects to research the surrounding						
4.2. Experiments with objects and materials from the surrounding						
4.3. Identifies, describes and compares objects and phenomena and their meaning						
4.4. Searches and collects sensory information from the surrounding using his/her senses, observation and conversation						
4.5. Recognizes visual displays						
<b>5. Standard – Observes and describes the characteristics of plants and animals</b>						
5.1. Appoints and recognizes the benefits of certain plants and animals						
5.2. Shows concern and interest in plants and animals						
5.3. Appoints a variety of environments in which animals exist						
5.4. Recognizes hazards when in direct contact with some animals or plants						
<b>6. Standard – Observes and describes the characteristics of inanimate nature</b>						
6.1. Appoints certain geographical terms						

6.2. Is able to describe the characteristics of the four seasons						
6.3. Know about the existence of time related links and relations						
6.4. Names characteristics of various materials						
6.5. Shows basic knowledge of 'recognizing' weather changes						
<b>7. Standard – Recognizes people as social being</b>						
7.1. Knows and lists several functions of human organs						
7.2. Lists similarities and differences between people, animals and plants						
7.3. Dramatizes/imitates certain professions						
<b>8. Standard – Demonstrates the ability to distinguish different sounds/voices</b>						
8.1. Moves and follows the rhythm of the music						
8.2. Wants to listen to his/her favorite music						
8.3. Recognizes the words of his/her favorite song and is singing along during other activity						
<b>9. Standard – Shows interest in participating in musical activities</b>						
9.1. Demonstrates the type of music he/she wants to listen						
9.2. Able to sing part or a whole song						
9.3. Singing in the right position						
9.4. Participates in a variety of musical events						
9.5. Uses a variety of musical instruments, non-traditional instruments and other items						
<b>10. Standard – Shows interest in participating in various forms of visual creativity</b>						
10.1. Can independently draw familiar objects and make different models						
10.2. Combines different sizes of brushes while drawing and painting with watercolors						
10.3. Decorates various objects by drawing						
10.4. Makes various items						
Notes:						

5. Approaches to learning  
4-6 years old

Indicator	First step		Progressing		Reaching goal	
	I	II	I	II	I	II
<b>1. Standard – Can learn new things and gain new experiences</b>						
1.1. Develops a personal interest in certain things						
1.2. Shows interest and wants to know more about the events and stories						
1.3. Shows interest in discussions related to some new experiences and developments						
<b>2. Standard – May take initiative</b>						
2.1. Individually makes selection						
2.2. Asks a friends to join the game						
2.3. Develops a plan for his/her own activity and participates in it						
2.4. For the purpose of self-interest involved in a particular activity						
<b>3. Standard – Shows persistence in the undertaken activities</b>						
3.1. Endeavors to complete the activity successfully						
3.2. Accepts challenges and persist in the activity						
<b>4. Standard – Using creativity in everyday activities</b>						
4.1. Plays symbolic games						
4.2. Is capable of changing well known stories						
<b>5. Standard – can learn in different ways from their own experiences</b>						
5.1. Uses a variety of methods						
5.2. Is planning activities and creates goals						

Notes:

## APPENDIX B: Stemplots and Normal quantile plots for parametric test

### Stemplots

Health and motor development:

<i>Control group</i>			<i>Experimental group</i>	
7	5	0		
	5	1	5	7
8	1	2	5	
	0	3	4	4
		4	2	

Socio-emotional development:

<i>Control group</i>			<i>Experimental group</i>			
9	7	0				
		1				
	6	2	4	5	7	8
9	3	3				
	8	4	6	8		

Language, communication and literacy development:

<i>Control group</i>			<i>Experimental group</i>		
4	2	0			
		1	4		
4	0	2	0	1	4
	1	3			
	8	4	1	2	



Cognitive development and general knowledge acquisition:

<i>Control group</i>			<i>Experimental group</i>		
0	1	1 2 3 4 5 6 7 8			
			5		
7	7		4	5	
	4		5	0	
			6	1	
			7	5	8
	4		8		

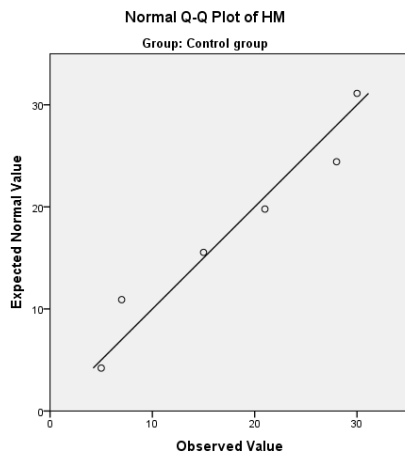
Approaches to learning:

<i>Control group</i>				<i>Experimental group</i>	
6	2	1	0 1 2	7	7
	8	3		0	3
		6		5	6

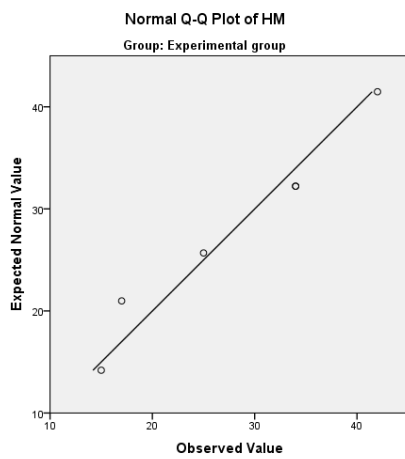
## Normal quantile plots

Health and motor development:

*Control group*

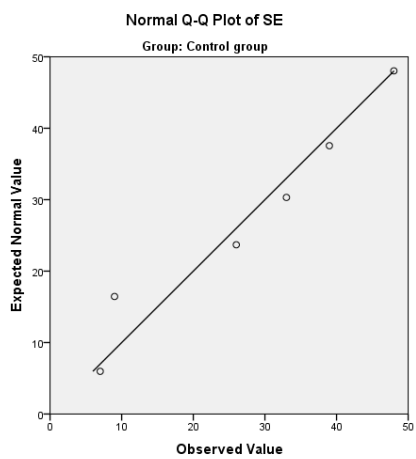


*Experimental group*

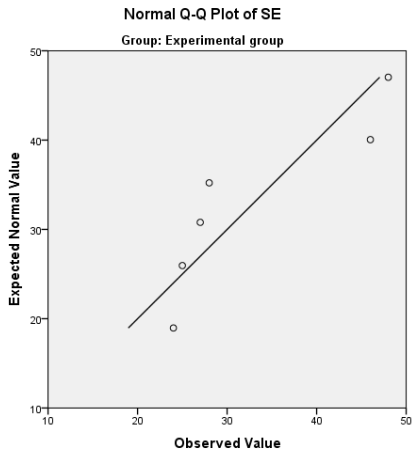


Socio-emotional development

*Control group*

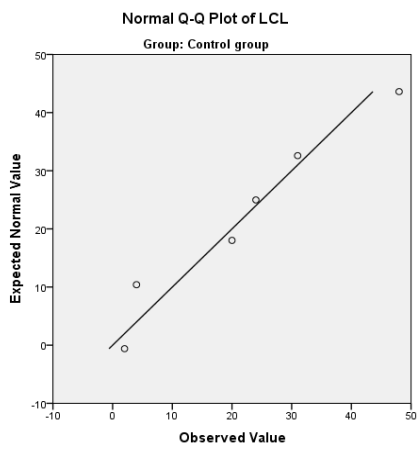


*Experimental group*

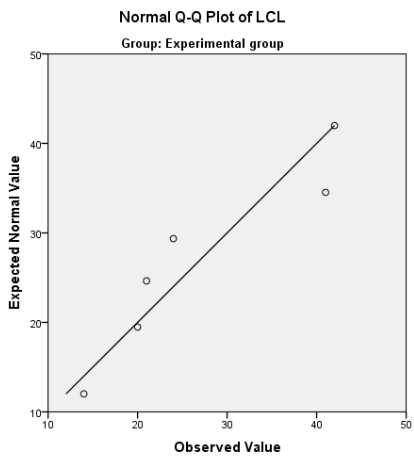


Language, communication and literacy development:

*Control group*

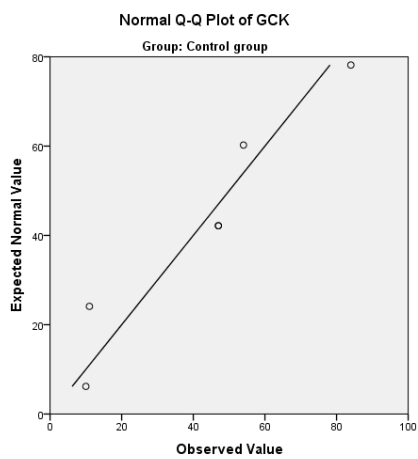


*Experimental group*

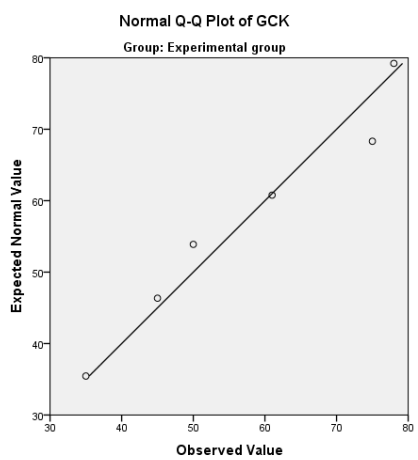


# Cognitive development and general knowledge acquisition

## *Control group*

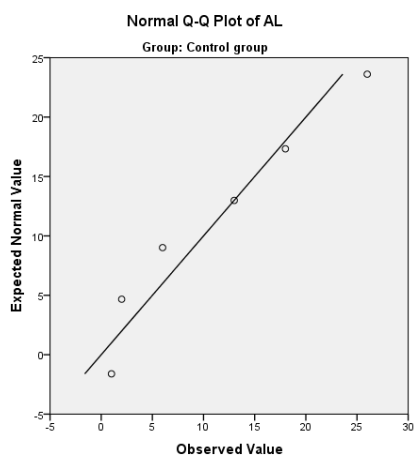


## *Experimental group*

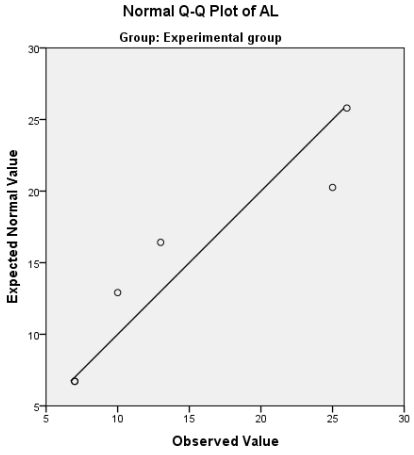


# Approaches to learning

## *Control group*



*Experimental group*



## APPENDIX C: Questionnaires

### Questionnaire SUMNAL staff

*Thank you very much for your cooperation. (My name is Liane and) I will ask you questions about SUMNAL. With these questions I hope I will get a deeper insight in SUMNAL in general and your opinion about SUMNAL. (Name interpreter) will be the interpreter during the whole conversation. The interview will take no longer than 45 minutes. The interview will be recorded, but I will only use the tape to listen some parts of the conversation back. I hope you don't mind? Have you got any questions before we start? Then we will start if you're ready.*

- 1. How would you describe the ECD center in general? What are the main goals of the ECD center?**
- 2. What are the differences between the ECD center and Kindergartens?**
- 3. What is the contribution of the ECD center to the municipality Topaana?**
- 4. What kind of activities are being organized at the ECD center and with which purpose? What do you think of these activities? Explain.**
- 5. Which developmental skills (1. Physical health and motor development; 2. Socio-emotional development; 3. Development of approaches to learning; 4. Language development, literacy and communication; 5. Cognitive development and general knowledge acquisition) get most attention in the ECD center? Why?**
- 6. Which developmental skill needs more attention in the ECD center? Why? How come that there is not enough attention for this skill at the moment?**
- 7. How do you ensure the engagement of the parents?**
- 8. Are you mostly communicating with the parents through the child or by communicating directly with the parents? Are the parents mostly communicating with you through their child or by directly communicating with you? Would you like to see this different?**
- 9. What do you think of the communication and collaboration between the ECD center and the primary school? (With which persons are you having most contact with? (Teachers first grade/director); What kind of communication? (only appointments or also meetings))**
- 10. How does the ECD center prepares the children for the transition to school? How is the school prepared to receive these children?**
- 11. What are you organizing for the children in primary school at the ECD center?**

*Is there anything else you would like to add to this interview? Thank you very much for answering these questions. I will keep you posted about the results of my research.*

## **Questionnaire teachers first grade**

*Thank you very much for your cooperation. (My name is Liane and) I will ask you questions about SUMNAL. I am doing research about the effects of the ECD center on the developmental skills of Roman children. With these questions I hope I will get a deeper insight in SUMNAL in general and your opinion about SUMNAL. I will also ask some questions about the differences between the two groups. And by that, I mean the group that attended SUMNAL and the group that did not attend SUMNAL. (Name interpreter) will be the interpreter during the whole conversation. The interview will take no longer than 45 minutes. It will be recorded, but I will only use the tape to listen some parts of the conversation back. I hope you don't mind? Have you got any questions before we start? Then we will start if you're ready.*

- 1. How would you describe the ECD center in general? How would you describe the ECD center in terms of its goal(s)?**
- 2. What is the contribution of the ECD center to the municipality Topaana?**
- 3. What is the main difference between the two groups according to their developmental skills** *(1. Physical health and motor development; 2. Socio-emotional development; 3. Development of approaches to learning; 4. Language development, literacy and communication; 5. Cognitive development and general knowledge acquisition)?*
- 4. What are the differences between the two groups in how they are behaving in class?** *(social behavior and initiative)*
- 5. What are the differences between the two groups in how often they are doing their homework?** *(motivation)*
- 6. According to you, which developmental skill needs more attention in the ECD center? Why?**
- 7. How is the communication between you and the parents? Do you notice any differences in engagement between parents from children from ECD centers and parents from children that did not go to an ECD center? Explain.**
- 8. Are you mostly communicating with the parents through the child or by communicating directly with the parents? Are the parents mostly communicating with you through their child or by directly communicating with you? Would you like to see this different?**
- 9. What do you think of the communication and collaboration between the ECD center and the primary school?** *(What kind of communication? (only appointments or also meetings))*
- 10. Do you notice any differences between the two groups in the transition period?** *(adaptation/communication/social and emotional development)*

**11. Do you think you can provide continuous support for the children that attended the ECD center? How?**

*Is there anything else you would like to add to this interview? Thank you very much for answering these questions.*

**Questionnaire teachers second and third grade**

*Thank you very much for your cooperation. My name is Liane and I will ask you questions about SUMNAL. I am doing research about the effects of the ECD center on the developmental skills of Roman children. With these questions I hope I will get a deeper insight in SUMNAL in general and your opinion about SUMNAL. I will also ask some questions about the differences between the two groups. And by that, I mean the group that attended SUMNAL and the group that did not attend SUMNAL. (Name interpreter) will be the interpreter during the whole conversation. The interview will take no longer than 45 minutes. It will be recorded, but I will only use the tape to listen some parts of the conversation back. I hope you don't mind? Have you got any questions before we start? Then we will start if you're ready.*

- 1. How would you describe the ECD center in general? How would you describe the ECD center in terms of its goal(s)?**
- 2. What is the contribution of the ECD center to the municipality Topaana?**
- 3. What is the main difference between the two groups according to their developmental skills (1. Physical health and motor development; 2. Socio-emotional development; 3. Development of approaches to learning; 4. Language development, literacy and communication; 5. Cognitive development and general knowledge acquisition)?**
- 4. What are the differences between the two groups in how they are behaving in class? (social behavior and initiative)**
- 5. What are the differences between the two groups in how often they are doing their homework? (motivation)**
- 6. According to you, which developmental skill needs more attention in the ECD center? Why?**
- 7. How is the communication between you and the parents? Do you notice any differences in engagement between parents from children from ECD centers and parents from children that did not go to an ECD center? Explain.**



8. **Are you mostly communicating with the parents through the child or by communicating directly with the parents? Are the parents mostly communicating with you through their child or by directly communicating with you? Would you like to see this different?**
9. **Are there differences in the degree of attendance between the two groups? Explain.**
10. **How many children in your class are still going to the ECD center to get some lessons to catch up? How many of these children attended the ECD center? What is your opinion about these extra lessons?**
11. **Do you think the differences between the two groups have become bigger or smaller comparing to the first grade? How do you notice?**

*Is there anything else you would like to add to this interview? Thank you very much for answering these questions.*

#### **Questionnaire mothers**

*Thank you very much for your cooperation. My name is Liane and I will ask you questions about SUMNAL. I am doing research about the effects of SUMNAL on the developmental skills of Roman children. With these questions I hope I will get a deeper insight in SUMNAL in general and your opinion about SUMNAL. (Name interpreter) will be the interpreter during the whole conversation. The interview will take no longer than 45 minutes. It will be recorded, but I will only use the tape to listen some parts of the conversation back. I hope you don't mind? Have you got any questions before we start? Then we will start if you're ready.*

1. **How would you describe the ECD center in general? How would you describe the ECD center in terms of its goal(s)?**
2. **What is the contribution of the ECD center to your neighbourhood, Topaana?**
3. **What is the reason that you have sent your child to the ECD center?**
4. **What are your experiences with the ECD center so far?**
5. **Do you participate in activities at the ECD center? In what way? (parent meetings/engagement children activities)**
6. **What activities are you doing at home that are related to your experiences with the ECD center? (as well with your child as on your own (reading))**
7. **What is the greatest advantage for your child to attend the ECD center?**
8. **What is the greatest advantage for your family that your child is attending the ECD center?**

- 9. Are you mostly communicating with SUMNAL through your child or by communicating directly with the SUMNAL staff? Is the SUMNAL staff mostly communicating with you through your child or by directly communicating with you? Would you like to see this different?**
- 10. How often do you talk about the ECD center with people that do not go there? How often do you talk about the ECD center with people that are going there?**
- 11. What are the opinions about the ECD center in your neighbourhood (Topaana)?**

*Is there anything else you would like to add to this interview? Thank you very much for answering these questions.*