STUDY ON ASSESSMENT OF PROGRESS

Early Learning and Development Programme based on the Early Learning and Development Standards

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CONTENT

EXECUTIVE SUMMARY

The goal of the study is to obtain relevant information on the progress and the impact from the implementation of the first phase of the UNICEF-supported Programme for Early Learning and Development[1] based on the Early Learning and Development Standards (ELDS), hereinafter referred as to the Programme, in pilot kindergartens and Early Childhood Development (ECD) centres.

Specifically, the objectives of the study are as follows:

- To obtain information about the differences of the learning and the development outcomes of children aged 4 to 6 years-old who attended the pilot kindergartens and ECD centres during the first phase (2009) of the Programme, compared to the outcomes of children of the same age who did not attend the Programme (i.e. control group - children from the non-project kindergartens and children who have not attended any kindergarten or ECD centre).
- To obtain information about the differences in the learning and development outcomes of children aged 4 to 6 years-old who attended the pilot kindergartens included in the first phase (2009) of the Programme and the outcomes of children of the same age children attending kindergartens that are not included in this programme (i.e., children from the control kindergartens).
- To obtain information about the differences in the learning and development outcomes of children aged 4 to 6 years-old who attended the ECD centres as part of the Programme and the outcomes of children of the same age and the same background who have neither attended an ECD centre nor a kindergarten.
- To obtain information about the degree of implementation, concern and degree of support provided to the educators who are applying or are planning to apply the principles and approaches of the Programme.
- To provide guidance for future activities in the implementation of the Programme.

The following two comparative cluster samples were included in the study:

- **The project group** – the sample from all the kindergartens and ECD centres included in the first phase of the Programme (a total of 13 ECD centres and 5 kindergartens: three in Macedonian and two in both Macedonian and Albanian language of instruction).
- **The control group** – the sample from the control kindergartens included 6 kindergartens, three in Macedonian language only, two in both Macedonian and Albanian language, and due to the small number of children in Albanian language, one additional kindergarten in Albanian language only, was included to complement the two kindergartens in both languages of instruction, and children who have not attended a kindergarten and ECD centre.

Fifty (50) children aged 4 to 6 years were randomly selected from each of the languages used in that kindergarten. In this way, 350 children were selected from the project kindergartens and from the control kindergartens, and 250 of these in Macedonian and 100 in Albanian language of instruction.

Based on the number of children attending, the ECD centres were divided into small and large centres. Five children were randomly selected from the small ECDs and 10 from the large centres.

1 According to the new law on Child Protection the name of the pre-school education curriculum is Programme for Early Learning and Development

The sample from the ECD centres included a total of 110 children. The same number of children were randomly selected from amongst those who neither attended an ECD centre nor a kindergarten.

A total of 460 children from kindergartens and ECD centres who participated in the Programme and the same number of children who did not participate in the Programme were included in the sample.

The sample of parents consisted of one parent of each of the selected children in the sample. The sample of directors consisted of the directors of the kindergartens included in the sample. The sample of educators consisted of all educators who implement the Programme with children aged 4 to 6 years from the kindergartens and ECD centres included in the sample.

The research instruments used in the study included:

- Questionnaire for educators
- Questionnaire for directors and expert services
- Questionnaire for parents
- Instrument for assessing children's learning and developmental outcomes (IALDO)

General observations from the study

The Programme has a positive effect on the learning of children in kindergartens and ECD centres.

- In the project group, the average percentage of completion of IALDO was 81.55%, with no significant differences with regards to language of instruction. In the control group of children, the average percentage of completion was significantly lower, at 73.56%.
- The differences in the outcomes of children included in the kindergartens and ECD centres involved in the Programme are in direct correlation with the duration of the exposure of the children to the Programme. The children who participated in the Programme for three or more years have nearly 9 per cent better outcomes than those children who participated for only one year. The difference between the learning and developmental outcomes of these subgroups of children was at the level of 0.01.
- There is a small difference between the average percentage of completion of IALDO between the children from the control kindergartens (78.83 %) and the project kindergartens (79.76 %). However, there is a difference in terms of average percentage of completion with reference to language: the children using Macedonian language in the control kindergartens had an average percentage of completion of 80.33%, compared to 74.85% amongst the children using Albanian language. While this difference between the project kindergartens is not significant.
- The differences in the average percentage of completion of the IALDO between the children who attended the ECD centres and the children who did not attend any kind of preschool institution was significantly larger than the difference between the control and project kindergartens. A high percentage of completion, or 86.8%, was achieved by children who attended ECD centres because they have been implementing the innovative principles, focusing on outcomes, and applying an individualized approach while following children's and families' interests and needs. This average percentage of completion is higher than that achieved among the children in the project kindergartens (79.76%), and significantly higher than the children who had not attended any early childhood development programmes (57.18%).
- Analysis of the average percentage of completion of the IALDO by specific domains shows differences in the learning and developmental outcomes of the children from the project and control groups, but overall the outcomes in the domain of 'language and literacy' were the lowest: 79.1% in the project group and 71.9% in the control group. It should be emphasized that the outcomes of the children in the ECD centres are higher compared to children in the

project kindergartens in all three developmental domains. The children who had not attended any type of early learning and development programmes show the lowest results.

Table 1: *Comparison of the learning and developmental outcomes in specific domains between the children from the project and the control groups.*

Domain	Project group Average percentage of completion			Control group Average percentage of completion		
	Total	Kindergartens	ECDC	Total	Kindergartens	Children not attending any programme
Language and literacy development	79,1%	77%	85,34%	71,9%	76,4%	57,97%
Socio-emotional development	87,56%	86,11%	91,88%	79,26%	84,20%	63,89%
Cognitive development	80,10%	78,32%	85,40%	71,80%	77,61%	53,74%

- The distribution of the educational level of the parents of the surveyed children shows that 31.84% of the parents of the children who attend kindergartens have completed higher education, compared to only 9.3% of parents whose children do not attend any early learning and development programme. Some 49.71% of the parents of children who do not attend any early learning and development programmes have primary education or incomplete primary school education, while only 2.98% of the parents whose children attend kindergartens have such low levels of education.
- Over 90% of the educators interviewed were familiar with the ELDS. It should be emphasized that more than 90% of the educators in the control kindergartens stated that they apply the ELDS in their practice. To realistically assess how the ELDS are implemented, additional analysis was carried out on the level of acceptance, implementation and level of support provided to educators for applying the principles and techniques introduced with the Programme. Only 43% of the educators reached the impact stage, i.e. they are concerned about the effects that the programme has on children and their development milestones, which points to the fact that most of the educators are still concerned with the implementation of the programme and not with the effects of the programme on the child's developmental outcomes.
- Following the four-year implementation of the Programme, more than half of educators (52%) have assessed themselves as being at the level of improvement. They are mostly focused on making variations in the implementation of the programme in order to increase the outcomes and maximize the effects of the programme on the children.
- Only 8% of the educators stated that they were still reading literature and gathering information related to the Programme. Some 4% of educators were ready for application and have planned and prepared for application of the Programme.
- Most educators from the ECD centres or 64% assess themselves as being at the highest level of application, i.e., the level of integration and modification, while only 23% of educators from the project kindergartens assess themselves as being at this level.
- Almost all of the educators from both the project group and the control group stated that they need further support for implementation of the Programme.

The results achieved by the children included in the assessment, together with the overall data obtained from the questionnaires, point to the following future directions for action:

- Increasing access to programmes that focus on early learning and development in order to decrease the differences in developmental outcomes and school readiness between children who attend preschool institutions and those who do not.
- Strengthening the quality of preschool education and promoting the concept of early learning and development based on the ELDS in all preschool institutions, as well as strengthening the capacity of the institutions that have legal responsibilities to provide support.
    - » Preschool programmes for early learning and development that are based on standards and follow a system for monitoring are characterized as being more efficient in promoting the learning and developmental outcomes of preschool age children. The pilot kindergartens and ECD centres implemented the pilot Programme for Early Learning and Development which is based on the ELDS.
- Supporting professional development and continuous education of all ECD personnel in preschool institutions should be based on standardized modules for professional development that are focused on developmental outcomes and school readiness. The project kindergartens and ECD centres were trained in modules for professional development[2] based on modern approaches to supporting young child development.
- Strengthening the capacities of the institutions involved in the development of preschool education curricula to ensure that the curricula are based on the latest internationally recognized concepts in curriculum development as opposed to the development of rigid and prescriptive curricula that do not follow children's needs and interests.

2 These are six modules: Theoretical basis of child development; Early Learning and Development Standards; Learning and Teaching Strategies for Preschool Children; Creating a Stimulating Environment for Early Learning; Assessing and Documenting Child Development Outcomes; Building Partnerships with Parents. These training modules were drafted by the faculties of pedagogy in cooperation with the Teachers' College of Columbia University.

1. INTRODUCTION (Basic information about the project)

This report presents the observations from the assessment of the situation after the first phase of the UNICEF-supported ECD Programme based on the *Early Learning and Development Standards (ELDS)* focused on the developmental outcomes of children aged 0 to 6 years.

The country has are a total of 56 public institutions for the care and education of preschool children located in 44 municipalities[3] out of the total 80 municipalities in the country. Additionally, 18 ECD centres[4] in the municipalities of Bitola, Radovish, Shtip, Tetovo, Chair (Skopje) and others were being opened at the time of the preparation of this report. The ECD centres are implementing the pilot Programme for Early Learning and Development of preschool children aged three to six years, i.e. up to the start of primary school. These centres are implementing short programmes in the duration of three hours a day with flexible working hours according to the needs of the children, the parents and the communities. Their work programme is based on the ELDS.

Almost 90% of the funds for financing kindergartens are decentralized which increases the responsibility of local self-government for expanding the capacities and increasing access for a larger number of children through different types of early learning and development programmes. As per the national legislation, the funds for the establishment and functioning of the ECD centres are to be provided by the founder.

As part of the priority for providing quality education for all in the "*National Development Plan for 2008–2013 of the Republic of Macedonia*" the importance of supporting early childhood development for all preschool aged children is emphasized. In order to monitor the development of preschool children, the Early Learning and Development Standards for this age group were developed and adopted.

In the course of the past several years, UNICEF has provided support to its governmental partners and to the non-governmental sector for the reform of pre-school education sector and change of the overall policy environment in the direction of promoting a holistic approach to early childhood development.

Since 2008, the focus has been on defining and finalizing the national ECD policy environment with the objective of increasing and improving the existing capacities of kindergartens, but also of promoting alternatives, such as ECD centres in rural and marginalized communities. Another important focus has been supporting holistic child development and early learning based on the implementation of the ELDS.

In the period from 2008 to 2012, a huge step forward was made in applying a systematic approach to early childhood development through the following initiatives:

- The development and implementation of ELDS for children aged 0 to 6 years, based on the scientific concept of early childhood development, as well as on the specific local context in terms of what children should know and are able to do at a certain age. These standards are a reference for quality used to promote adequate care and early stimulation of child development in a holistic manner, aimed at acquiring skills, i.e. what children are able to do and should know at the age of 0 to 6 years, in a stimulating environment that offers numerous opportunities for early learning.

3 http://www.mtsp.gov.mk/default.asp?ItemID=9C5DA314698653419561D3E92FD44262

4 During the writing of this report, the Law on Child Protection just adopted and started implementation which includes ECD centers as a form of pre-school education provision

- Strengthening the capacities of municipalities and local communities. In 2009, in the first phase of the project, five municipalities, Tetovo, Skopje-Chair, Radovis, Stip and Bitola, were selected for piloting of ELDS implementation. Specific interventions were introduced for improving the inclusiveness and the quality of early learning and care services for preschool aged children at local level. At the same time, interventions aimed at increasing parental involvement, including efforts to raise awareness amongst families of the significance of the early childhood period for improving the academic results and skills of children in the formal educational system were introduced.
- In addition to the five pilot municipalities, in 2009, three regional workshops were conducted to provide basic orientation training for educational and management staff in kindergartens, including 124 participants from the remaining 46 kindergartens.
- Strengthening the institutional capacities of the kindergartens in the pilot-municipalities of Tetovo, Bitola, Radovish, Shtip and Skopje-Chair for implementing the ELDS through a series of training sessions, distribution of training materials and technical support for the ECD personnel. In the period of 2010–2011, four types of training in the implementation of the ELDS were supported for 95 educators and caretakers in the pilot-municipalities.
- In the second phase, additional kindergartens were included from seven other municipalities—Gostivar, Krushevo, Kichevo, Kumanovo, Gevgelija, Makedonska Kamenica and Prilep—as well as the two municipalities of Zhelino and Lipkovo, which expressed an interest in opening ECD centres. A series of training sessions for a total number of 45 educators were conducted in the period 2011–2012.
- In 2013, at the request of the Ministry of Labour and Social Policy, support was extended to eight new municipalities (4 in the territory of the city of Skopje and in the towns of Kochani, Veles, Kavadarci and Ohrid. This training was provided for 148 educators.
- The development of six training modules for the professional development of educational personnel. All teacher training faculties that educate personnel for pre-school education participated in the development of the training modules with the support from Columbia University, US. The purpose of these module is to facilitate broader and more in-depth understanding of ELDS for implementation in daily practice with children in kindergartens and other preschool institutions.
- The development of materials for parents and training for kindergartens on strategies for developing greater cooperation with parents based on these materials.
- The development of a comprehensive communication strategy to inform and raise awareness amongst the public about the importance of early childhood development and about the factors that influence and support developmental readiness of young children.
- The development of a legal framework, a new law on pre-school education to increase access to preschool education for all children, especially for the most marginalized, and to improve the quality, strengthen the system of record keeping and database management as a way to increase the accountability at all levels of the pre-school education system.

Table 2. *Training in ELDS conducted within the Programme*

Programme phase	Municipalities	No of local community representatives	No of educators	Training modules	Level of implementation
2009	All municipalities		146	Promotion of ELDS and importance of ECD	Orientation training without implementation support
2009-2011	Tetovo, Radovish, Shtip, Skopje (Chair), Bitola, Prilep, Krushevo, Gostivar, Zhelino, Lipkovo, Kumanovo, M.Kamenica, Kichevo, Gevgelija	103		• Importance of the local community in ECD promotion • Networking for ECD in the local community	• Awareness raising with key stakeholders at local community, and municipality-Commissions for Children's Rights). • Technical support to municipalities for expanding the network of kindergartens and ECD centers
2010-2013 (фаза 1)	Tetovo, Radovish, Shtip, Skopje (Chair), Bitola		95	ELDS • Application in daily practice • Assessment and documenting children's outcomes • Planning early learning activities • Building partnerships with parents	• Full training based on modules • Monitoring and expert support for ELDS implementation • Mentoring visits by the expert team • Distribution of materials • Support in conducting workshops for parents • Regular meetings with the expert team
2012-2013 (фаза 2)	Gostivar, Krushevo, Kichevo, Kumanovo, Gevgelija, Makedonska Kamenica, Prilep, Zhelino, Lipkovo		45	ELDS • Application in daily practice • Assessment and documenting children's outcomes • Planning early learning activities • Building partnerships with parents	• Full training based on modules • Monitoring and expert support for ELDS implementation • Mentoring visits by the expert team • Distribution of materials • Support in conducting workshops for parents • Regular meetings with the expert team
2013-2014	Skopje (Aerodrom, Kisela Voda, Centar, Gazi Baba), Kavadarci, Veles, Ohrid, Kochani		148	• Piloting of training modules: • ELDS • Teaching strategies for the implementation of ELDS	Ongoing training based on the modules

2. METHODOLOGY

The methodology was designed in order to assess the progress of the Programme implemented in the pilot kindergartens and ECD centres that were included in the first phase. The Early Learning and Development Programme is based on the Early Learning and Development Standards and the methodological approach adopted for assessing the progress of the Programme is based on the importance of following principles:

- Providing valid and precise information related to the evaluation of the project objectives and the impact of the project activities;
- Providing information to help explain the current situation and context;
- Providing data that can be used to plan and organize future project activities;
- Rationality in terms of duration, involvement of human resources and financial resources.
- This study employed both a qualitative and quantitative methods.

2.1 Study objectives

The objective of this study is to obtain relevant information about the situation at the end of the first phase of the implementation of the Programme. This information was obtained by comparing the responses of the interviewees who participated in the Programme and the responses of those who did not. The analysis of this information provided the basis for assessing the level of progress achieved by the Programme. The specific objectives of this study include the following:

- To obtain information about the differences between the learning and developmental outcomes of those children aged 4 to 6 years who attended the pilot kindergartens and ECD centres included in the first phase (2009) of the implementation of the Programme and the outcomes of those children of the same age who did not participate in this Programme, i.e., children from the control kindergartens and children who neither attended an ECD centre nor a kindergarten.
- To obtain information about the differences between the learning and developmental outcomes of those children aged 4 to 6 years who attended the pilot kindergartens included in the first phase of the Programme since 2009 and the outcomes of those children of the same age who attended kindergartens not included in the Programme or children from the control kindergartens.
- To obtain information about the differences between the developmental outcomes of those children aged 4 to 6 years who attended the ECD centres that apply ELDS in the work with the children from the very beginning and the outcomes of children of the same age and same environment who neither attended ECD centres nor kindergartens.
- To provide information about the level of implementation, concerns and level of support provided to educators who are applying or who plan to apply the principles and techniques promoted in the Programme.
- To offer guidance for further activities in the implementation of the Programme.

2.2 Conceptual framework

The measuring method "with and without activities" has been used to make an assessment of the Programme. This is a quasi-experimental approach with two groups, one, project group that includes kindergartens and ECD centres that have benefited from programme activities, such capacity building of educators, continuous monitoring of early learning activities, mentoring support,

development and distribution of materials, including materials for parents and guardians; and the second group, or control group of kindergartens and ECD centres that have not participated in any programme activities and have maintained the usual approach in working with children. In addition, the situation in the project group has been examined, as well as the difference between the project group and control group with reference to:

- Factors related to the children and their family; and
- Factors related to organization and work delivery in the kindergartens and the ECD centres.

The research procedures used in the study included: scaling, polling, observation, interviewing and content analysis.
The research instruments used in the study included:

- Questionnaire for educators;
- Questionnaire for directors;
- Questionnaire for parents and guardians;
- Instrument for observing the children's activities;
- Instrument for assessing the children learning and developmental outcomes.

To ensure objectivity in the study's comparative assessment, most of the research instruments used for the project and the control group were identical. For the same reason, most of the data collected for the study is quantitative.

Questionnaire for educators- consists of 3 sections:

- Section contains 4 questions related to the demographic characteristics of the interviewees;
- Section contains 2 questions and a 3-degree scale with 5 claims related to the *ELDS*;
- Section contains:
    - » a 7-degree scale with 29 claims related to the concern about the Programme;
    - » a 3-degree scale with 4 claims and self-assessment regarding the level of application of the Programme.

The success of a specific intervention in education depends to a great extent upon the concern of educators in charge of implementation, as well as on the timely and appropriate support to educators to overcome their concerns and apply greater levels of changes.

In most of the assessments conducted in this regard, the Concerns Based Adoption Model (CBAM) or more specifically the 'Stages of Concern' was used to assess the affective aspect of the change, such as reactions, feelings and perceptions of the individual/educator towards change and the 'Levels of Use' with regards to the behaviour and the presentation of the behaviour of the educator towards the change. The third section of the questionnaire for educators thus included claims that reflect these instruments.

Questionnaire for directors- consists of two sections:

- Section contained:
    - » 5 questions related to the demographic characteristics of the interviewees;
    - » 4 questions related to the demographic characteristics of the institution, as well as a 3-degree scale with 2 claims.
- Section contains 3 questions regarding the *ELDS.*

Questionnaire for parents consists of 3 sections:

- Section contains 6 questions related to the demographic characteristics of the parents;
- Section contains 4 questions related to the parent-child relationship and a 3-degree scale with 3 claims;
- Section contains 7 questions related to the child's attendance of a kindergarten or ECD centre.

Instrument for observation of children's activities

The researchers conducted one-hour observations of each of the educators of the children aged 4 to 6 years by applying the instrument for observation of children's activities. With this instrument, the researchers recorded the type of activity implemented, the organization of the activity, the materials used, and the purpose of the activity. The researchers also assessed the level of the children's engagement and involvement in the activity.

Instrument for assessing and comparing the children's learning and developmental outcomes- IALDO

The instrument for assessing and comparing the children's learning and development outcomes was developed based on the ELDS for children aged 4 to 6 years and refers to the following three developmental domains:

- *Language, communication and literacy development;*
- *Socio-emotional development;*
- *Cognitive development and general knowledge acquisition*.

The developmental domain *Approaches to learning* was not included at this stage since this domain requires long-term observation. The standards within this domain measure the way in which a child is learning rather than what the child has learnt.

The instruments included 12 activities with 19 "discrete" requirements for children to complete in order to assess the level of acquired skills and concepts related to numbers, space, forms, quantities, ability to follow instructions, phonological awareness- the connectedness of sounds with letters and recognizing faces and emotions. For each requirements there was a defined maximum score and criteria for giving points to reach the maximum score. The researchers defined the score (1-6) depending on the completed activity and requirement by the child.

In order to assess the learning and development outcomes of children in the domain of *Language, Communication and Literacy Development,* the instruments included certain activities related to development of the expressive and receptive language, comprehension and phonological awareness- connectedness of sounds and letters.

The assessment of the *receptive language* was done with an instrument that assessed the extent to which children can follow instructions with different levels of complexity- is able to follow complex instructions, is able to follow simple instructions and is not able to follow any instructions.

The assessment of acquiring *expressive language* was done with an instrument that assessed the extent to which children are able to tell a story by using picture, active and passive vocabulary. How high the score was depended on the complexity of the sentences that the children used, as well as the number of words they used.

Phonological awareness as a pre-condition of the child readiness for reading was assessed with an instrument that required children to name the object on the picture, to identify the first sound (the letter) of the object name and to identify pictures that start with the same sound (letter). The score was determined by the level of completed activity by the child.

The assessment of language skills was done with an instrument that assessed the language skills of the child for expression of sequential thinking sklls. This is a basis for reading with comprehension. The maximum score was determined with the extent to which the child was able to identify the correct sequence of the pictures of the whole and describe them with words.

In the domain of Cognitive Development, the instruments assessed the chidlren's skills for acquiring mathematical and science concepts (numbers, space, quantities, classification and seriation).

The numerical concepts were assessed with instruments that required children to identify pictures with higher or lower number of elements, connecting symbol of a number with the related picture, classification and seriation of pictures with fruits and vegetables, recognizing forms and their classification, as well as recognizing numbers and outing them in order. The space and orientation concepts were assessed with an instrument that required children to identify space orientation of objects in the picture (forward-behind; up and down).

The total score of the children's outcomes in the domain of Cognitive Development and acquiring general knowledge was determined based on the complexity of completed activities.

In the Social and Emotional domain, the instruments required that the children identify pictures with different emotions (sadness, joy, anger), name them and demonstrate, as well as the intensity and the speed of establishing social contact with the resreachers (unknown adults). The maximum score of the outcomes in this domain was determined by the level of completed activity (identification, naming and demonstrating emotions, and the intensity of establishing contact with the researcher).

The instrument for assessing the developmental outcomes (IALDO) of the children contained 12 activities with 19 requirements to observe the children:

- 2 from the area of *Socio-emotional development,* with 5 requirements;
- 3 from the area of *Language, communication and literacy development*, with 4 requirements;
- 7 from the largest area, *Cognitive development and general knowledge acquisition*, with 10 requirements.

Every child included in the sample was observed with an instrument for assessing their learning and development outcomes.

The assessment of the children's developmental outcomes was conducted by trained researchers experienced in working with this age group of children. The researchers gave the activities to the children, observed and assessed them. In order to establish rapport between the researcher and the child, which is particularly important for this age group, the researchers gave the children one initial activity as an ice-breaker.

2.3 Sample

The study was conducted in kindergartens, ECD centres and, in the case of children who did not attend neither kindergartens nor centres, in their homes. In line with the objectives of the assessment, the following two cluster samples were selected:

- Cluster sample from the project kindergartens and ECD centres;
- Cluster sample from the control (equivalent) kindergartens and homes of the children who did not attend kindergartens or ECD centres.

Five (5) kindergartens and 13 ECD centres were included in the first phase of the implementation of the Programme. The research included all the kindergartens and ECD centres involved in the first phase. Of the five kindergartens included in the first phase, two work in both Macedonian and Albanian language.

Equivalent control kindergartens were then carefully selected to ensure they were as similar as possible to the pilot kindergartens for the purpose of comparative assessment. Key factors considered in this selection process included the number of children cared for in the same age group of 4 to 6 years, the language of instruction, the social background of the children, and the urban/rural location of the kindergarten, i.e. they were selected from the same town or a similar town. In addition, the kindergartens from the second phase of the Programme were excluded. Three kindergartens with Macedonian language of instruction (equivalent to the three kindergartens included in the first phase of realization of the Programme in Macedonian language of instruction only) were selected in this manner, as well as two kindergartens in both Macedonian and Albanian language (equivalent to the two kindergartens included in the first phase of realization of the programme) and one kindergarten in Albanian language of instruction only. Since no kindergarten could be found with a number of children attending kindergarten in Albanian similar to the one from the project group, an additional kindergarten was selected in the control group (due to the significantly smaller number of children attending kindergarten in Albanian language).

In the project kindergartens, 50 children aged 4 to 6 years were randomly selected and in the kindergartens with both languages of instruction, 50 children were selected in each language. The selection of children from the kindergartens included in the first stage of the Programme was carried out by dividing the total number of 4–6-year-old children in the same language kindergarten by 50. Subsequently, the decimal number obtained was rounded off to the first integer. Starting with a specific initial given number, every n-th child was selected until all 50 children were selected. The same principle was used to select 50 children from the control kindergartens.

A total of 350 children from the project and control kindergartens were included in the sample (250 in Macedonian language and 100 in Albanian language of instruction).

The ECD centres were divided into small and large according to the number of 4 to 6 years aged children attending the centre. Small centres were defined as those with up to 15 children aged 4 to 6 years, while the large centres were those with more than 15 children. The sample included five small centres with 5 children and 9 large centres with 10 children. A total of 110 children were included in the sample from the centres. Ensuring the same, or as similar as possible urban/rural location, the equivalent number of children - who did not attend a kindergarten or ECD centre - were also selected randomly.

Table 3: *Sample of children from kindergartens and ECD centres based on the language of instruction*

	Project		Control		Total
Children from	**Macedonian language**	**Albanian language**	**Macedonian language**	**Albanian language**	
kindergartens	250	100	250	100	700
ECD centres-children who do not attend neither ECD center nor kindergarten	90	20	90	20	220
Total	340	120	340	120	920

The sample of children consists of 460 children from the kindergartens and ECD centres included in the Programme and the same number of children who did not participate in this Programme. A total of 920 children were thus assessed.

The sample of parents consisted of one parent per every child selected in the sample.

The sample of directors consisted of the directors of the kindergartens included in the sample.

The sample of educators consists of all the educators employed by the kindergartens and ECD centres working with 4–6-year-old children included in the sample.

Table 4: *Data on the sample and extent of realization*

Kindergartens		**Early childhood development centres**		**Educators**		**Children**		**Parents**	
Selected	assessed	selected	assessed	selected	replied	selected	assessed	selected	replied
11	11	13	13	109	109	920	886	920	757
100%		100%		100%		96,30%		82,28%	

Table 4 shows that almost all of those selected for the sample completed the assessment instruments. All of the kindergartens and ECD centres participated, as well as all the educators, 96.3% of the selected children and 82.28% of the parents; 71.20% of the questionnaires were completed by parents and guardians of the children included in the sample from the kindergartens, while 28.80% were completed by parents and guardians of children from ECD centres and children who neither attended kindergartens nor ECD centres.

2.4 Data-collection, data processing and data analysis

All instruments were pretested and based on the pretesting conclusions were made regarding their functionality and the need for their modification. The researchers tasked with administering the instruments were trained in research methodology and methodology for administering the assessment instruments. After the pretesting, the main study followed.

The data collection lasted from July 20–September 15, 2013 and some difficulties were encountered because of the summer holiday and the reduced number of children in kindergartens and ECD centres, especially in kindergartens in two languages. However, these difficulties were overcome thanks to the engagement and efforts of the researchers.

Special MS Excel formats for inputting the data were developed for all of the assessment instruments.

The responses to open questions were first individually reviewed and subsequently coded, while responses to questions with multiple-choice options and scales of viewpoints were directly input in the specially developed formats. After all the data had been entered, the results were reviewed and processed. The following software was used for processing the data:

- TiaPlus programme was used for checking the psychometric characteristics of the instrument for observing children. The results of the children's outcomes in the instrument were calculated and a comparison was done between the results of the project group and the control group.
- SPSS programme was used to process the responses to the questions and to compare those submitted by the project group and the control group.
- SOCQ 075 Graph and Print Excel and Microsoft Excel were used for processing the data from the Concern scale about the Programme.

3.CHILDREN'S OUTCOMES

This section of the study provides information about the learning and developmental outcomes of children according to the groups into which they were divided for the study, as well as their results within each separate development domain. This section further provides indicators of the influence of certain factors on the children's achievements.

The *Early Learning and Development Standards* for children aged 4 to 6 years were used as the basis for determining the developmental outcomes of the children.

All the children included in the sample, i.e., those that participated in the Programme as well as those that did not— were tested by the researchers with the instrument for assessing children's outcomes. As described, the instrument included a total of 12 activities with 19 requirements. When designing the activities and the related requirements, it was considered that they should primarily measure skills and abilities of the child rather than fact-based knowledge. In addition, the requirements were developed in such a way to ensure that they are motivating for this age group of children.

3.1 Children's outcomes by group

The maximum score[5] of the instrument for assessing the children's outcomes was 61. The average score[6] of **all the tested children** (886) was 47.28. This means that the average percentage of completion (Average P- value -APV) was 77.51%.

Average P- value (APV) is obtained by dividing the average test score by the maximum possible test score and multiplying this by 100.

Table 5: *Results of the assessment of the learning and developmental outcomes of all assessed children according to gender*

Girls		Boys	
% of children	Average percentage of completion of IALDO	% of children	Average percentage of completion of IALDO
48%	78,30%	52%	76,80%

Of all the children who took part in the assessment, 48% were girls and 52% were boys. As in most other studies of this age group of children, the girls in the study achieved higher scores than the boys.

With reference to the language of instruction, it can be concluded that the children supported in Macedonian language achieved better results than the children attending ECD in Albanian language. The average percentage of completion of the IALDO of the children supported in Macedonian language was 77.82%, while the average of the children supported in Albanian was 76.66%.

In terms of ethnicity, 527 of the children tested were Macedonian, 250 were Albanian, 14 were Turkish, 58 were Roma, while another 37 were of other ethnic backgrounds. The best results were achieved by the ethnic Macedonian children, followed by children of Albanian, Roma and Turkish ethnicity. The average percentage of completion of the IALDO of the children of Macedonian ethnicity was 80.18%,

5 The total possible points of the instrument for assessing the degree of children's achievements
6 The mean value of the instrument for assessment of the degree of children's outcomes obtained from the total results

while for ethnic Albanian children this average was 76.41%, for Roma children it was 66.00%, for Turkish children it was 63.58%. The average for children of other ethnicities was 70.18%.

In line with the objectives of the assessment, analyses of results was conducted according to the comparative groups included in the sample, and conclusions were drawn.

I. COMPARISON:

1. PROJECT GROUP – children included in the kindergartens and ECD centres participating in the Programme

The average score of the **children from the project group** (a total of 438 tested children) was 49.74, i.e., the average percentage of completion was 81.55%.

Table 6: *Results of the assessment of the learning and developmental outcomes of the children from the project group, according to gender*

Girls		Boys	
% of children	average percentage of completion of the IALDO	% of children	average percentage of completion of the IALDO
44%	82,28%	56%	80,97%

Of the project group of children, 44% were girls and 56% were boys. In most cases within the study, the comparison of their learning and developmental outcomes shows that girls scored higher averages than boys.

Looking at the average results of the children by language of instruction, it can be concluded that the children in Macedonian language achieved better results than the children in Albanian language. The average percentage of completion of the IALDO of the children in Macedonian language was 82.06%, while the average of the children in Albanian language was 80.22%.However, there is no statistically significant difference between the outcomes of these two subgroups of children.

Table 7: *Results of the assessment of the learning and developmental outcomes of the children from the project group according to the number of years spent in kindergarten or ECD centre*

Years in kindergarten or ECD centre	Number of children	In %	average percentage of completion of the IALDO
1	106	24,20%	75,83%
2	119	27,17%	81,18%
3 or more	213	46,63%	84,66%

Within the project group of children, the best results were achieved by the children who had attended a kindergarten or an ECD centre for three or more years. Their average percentage of completion of the IALDO was 84.66%. The average for those who had attended a kindergarten or an ECD centre for only one year was 75.83%. The difference between the outcomes of these subgroups of children was at the level of 0.01.

2. CONTROL GROUP – children attending kindergartens which are not part of the Programme and children who neither attended an ECD centre nor a kindergarten

The average score of the **children of the non-project group** (a total of 448 tested children) was 44.87, i.e. the average percentage of completion was 73.56%.

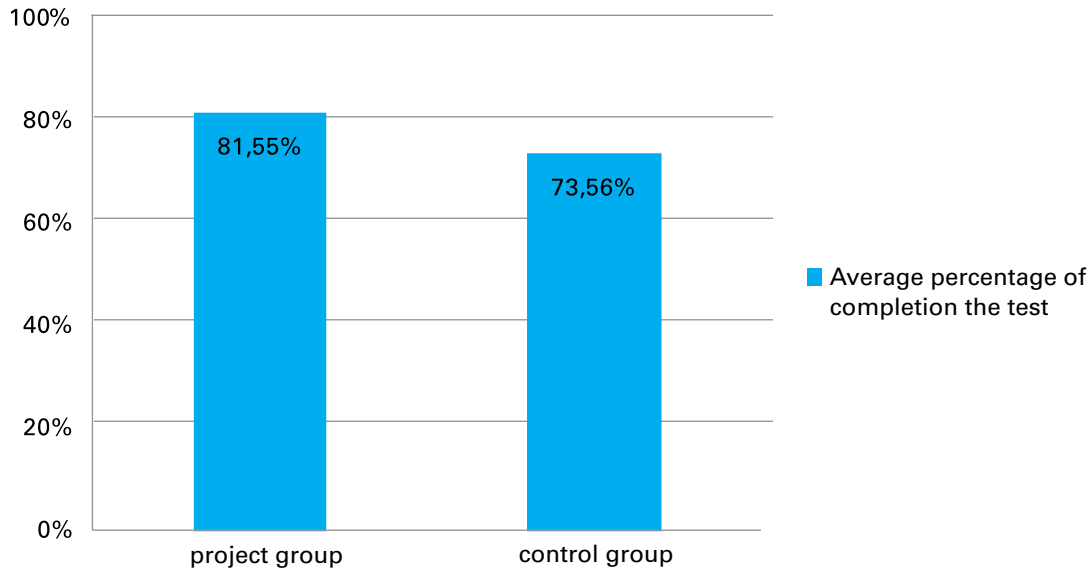
Table 8: *Results of the assessment of the learning and developmental outcomes of the children of the non-project group, according to gender*

Girls		Boys	
% of children	average percentage of completion of the IALDO	% of children	average percentage of completion of the IALDO
51%	74,96%	49%	72,84%

Of the children in the non-project group, 51% were girls and 49% were boys. Comparison of their learning and developmental outcomes shows that the girls achieved higher scores than the boys, as it was the situation in most cases throughout the study.

If the average results of the children are reviewed with reference to the language of instruction, it can be concluded that the children in Macedonian language of instruction achieved better results compared to the children who were supported in Albanian language of instruction. The average percentage of completion of the IALDO of the children in Macedonian language of instruction was 73.80%, while the average for the children in Albanian language of instruction was 72,84%.

Chart 1: Results from the assessment of all *children's learning and development outcomes in both project and control groups*



Conclusions:

- The average results of the children included in the kindergartens and ECD centres that participated the Programme were 8% higher than the results of the children that did not participate in the Programme. The difference between the outcomes of these two subgroups of children was at the level of 0.01.
- The average results of the girls who attended the kindergartens and ECD centres that participated in the Programme were 8% higher than the results of girls who did not attend

the Programme. The difference between the outcomes of these two subgroups of girls was at the level of 0.01.

- The average results of the boys who attended the kindergartens and ECD centres that participated in the Programme were 8% higher than the results of boys who did not attend kindergartens or centres that are part of the Programme. The difference between the developmental outcomes of these two subgroups of boys was at the level of 0.01.
- The same difference (8%) can be observed among the children supported in Macedonian language/Albanian language in the compared respective two groups- project and control groups. The difference between the developmental outcomes of these two subgroups of children was at the level of 0.01.
- The differences in the outcomes of the children who attended the kindergartens and ECD centres that participated in the Programme is in direct correlation with the number of years they attended. The outcomes of those children who attended these institutions for three or more years were almost 9% better than those who attended for only a year. The difference between the outcomes of these subgroups of children was at the level of 0.01.

II. COMPARISON

Children from the kindergartens included in the Programme and those not included

The average score of the **children from the kindergartens** included in the sample (a total of 667 children) was 48.37, i.e. the average percentage of completion of the IALDO was 79.29%.

Table 9: *Results of the assessment of the learning and developmental outcomes of the children who attended kindergartens (project and control)*

Project kindergartens		Control kindergartens	
% of children	average percentage of completion of the IALDO	% of children	average percentage of completion of the IALDO
49%	79,76%	51%	78,83%

Of the total number of children from kindergartens, 49% of the children assessed were from the kindergartens included in the Programme, while the other 51% were from kindergartens not supported according to the techniques and principles of the Programme. The average percentage of completion of the IALDO of the children included in the Programme was 79.76%, slightly higher than the 78.83% average for those who were not included in the Programme.

Table 10: *Results of the assessment of the learning and development outcomes of children from the kindergartens, according to gender*

Girls		Boys	
% of children	average percentage of completion of the IALDO	% of children	average percentage of completion of the IALDO
49%	79,86%	51%	78,74%

Of the children from the kindergartens who were tested, 49% were girls and 51% were boys. Comparison of their results shows that the girls achieved better results than the boys, as was the situation in most cases throughout the study.

Comparison of the average results of the children who attended kindergartens shows that the children in Macedonian language of instruction achieved better results than the children in Albanian language of instruction. The average percentage of completion of the IALDO of children from the kindergartens in Macedonian language of instruction was 80.56%, while the average for children in Albanian language of instruction was 76.19%.The difference between the outcomes of these subgroups of children is at the level of 0.01.

1. PROJECT KINDERGARTENS (PROJECT GROUP) – children attending the kindergartens part of the Programme

Of the children from the project kindergartens, 45% were girls and 55% were boys. Comparison of their results shows that girls achieved better results than the boys, as was the situation in most cases throughout the study. The average percentage of completion of the IALDO of girls attending the project kindergartens 80.32%, while the average for boys was 79.30%.

Comparison of the average results of the children from the project kindergartens shows that the children in Macedonian language of instruction achieved better results than the children in Albanian language of instruction.The average percentage of completion of IALDO of children from the project kindergartens in Macedonian language of instruction was 80.80%, while the average for children in Albanian language of instruction was 77.42%.

Table 11: *Results of the assessment of the learning and developmental outcomes of children from the project group kindergartens according to the number of years spent in kindergarten*

Years in kindergarten	Number of children	in %	average percentage of completion of the IALDO
1	89	27,13%	74,43%
2	76	23,17%	77,03%
3 or more	163	49,70%	83,95%

The children who attended project kindergartens three or more years achieved the highest results, while those who attended kindergarten for only a year achieved the lowest results. The difference between the outcomes of these subgroups of children was at the level of 0.01.

2. CONTROL OR NON-PROJECT KINDERGARTENS (CONTROL GROUP) – children from kindergartens not included in the Programme

Of the children included in the control group of kindergartens, 53% were girls and 47% were boys. Comparison of their outcomes shows that girls achieved higher results than the boys, as it was the case throughout the study.The average percentage of completion of the IALDO from the non-project kindergartens of the girls is 79.48%, and of the boys it is 78.10%.

Comparison of the average results of the children from the control kindergartens shows that those in Macedonian language of instruction achieved higher results that the children in Albanian language of instruction. The average percentage of completion of the IALDO of children in Macedonian language is 80.33%, and of children in Albanian language it is 74.85%. The difference between the developmental outcomes of these subgroups of children was at the level of 0.01.

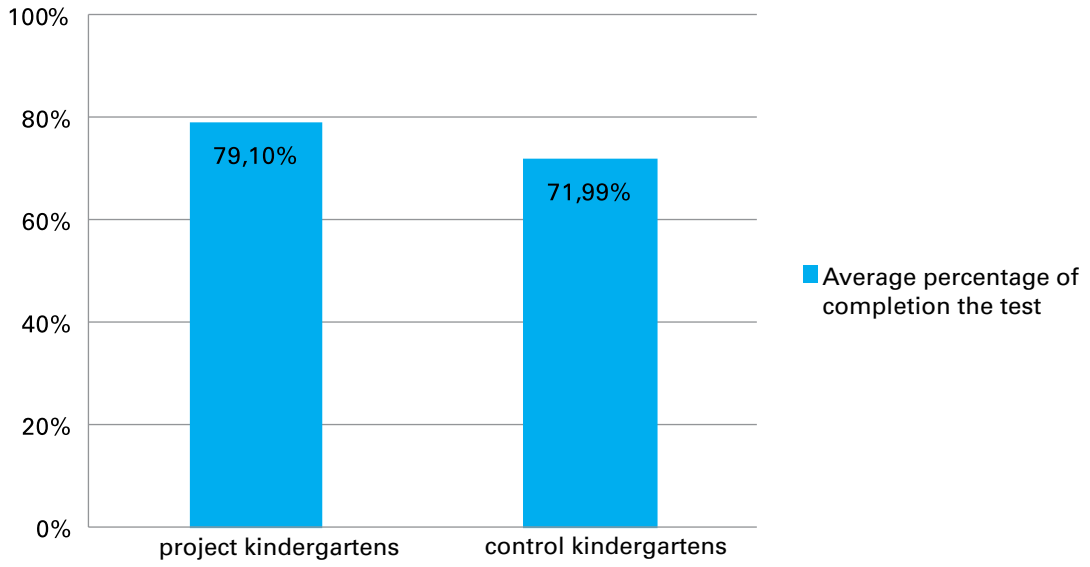
Table 12: Results from the assessment of learning and *developmental outcomes of children from the control group kindergartens according to the years they attended kindergarten*

Years in kindergarten	Number of children	in %	average percentage of completion of the IALDOC
1	75	22,12%	74,27%
2	73	21,53%	74,85%
3 or more	191	56,34%	82,14%

As in the case of children attending project kindergartens, the children from the control kindergartens that attended kindergartens for three or more years achieved the best results while those who attended kindergarten for only a year scored the lowest results. This difference in the results of children who attended the control kindergartens was slightly lower, at 7.87%, than the difference in the results of those who attended the project kindergartens. However, the difference between the outcomes of the subgroups of children from the control kindergartens was at the level of 0.01—the same difference as was found in the outcomes of children from the project kindergartens.

Chart 2 compares the average percentage of completion of the IALDO of children from both project and control kindergartens.

Chart 2: Results from the assessment of learning and development outcomes of *children from project and control kindergartens*



Conclusions:

- The outcomes of the children who attended the project kindergartens included in the Programme were slightly higher than the outcomes of the children in the control group kindergartens.
- The outcomes of the girls who attended the kindergartens were higher than the outcomes of the boys.
- The outcomes of the girls who attended the project kindergartens and the control kindergartens were higher than the outcomes of the boys.
- The outcomes of the children who attended kindergartens in Macedonian language of instruction were higher compared to the outcomes of children in kindergartens in Albanian language of instruction. The difference between the outcomes of these two subgroups of children was at the level of 0.01.

- The outcomes of the children who attended the project kindergartens in Macedonian language of instruction were higher than the outcomes of those who attended kindergartens in Albanian language of instruction.
- The outcomes of the children who attended the control kindergartens in Macedonian language of instruction were higher than the outcomes of those who attended the control kindergartens in Albanian language of instruction. The difference between the outcomes of these two subgroups of children was at the level of 0.01.
- The differences between the outcomes of the children included in the project kindergartens are in direct correlation with the number of years they had participated in the Programme. The outcomes of the children who attended the Programme for 3 or more years were some 9.5% better than the outcomes of those children who attended the project kindergartens for only a year. The difference between the outcomes of these subgroups of children was at the level of 0.01.

III. COMPARISON

Children who attended ECD centres and children who neither attended ECD centre nor kindergarten

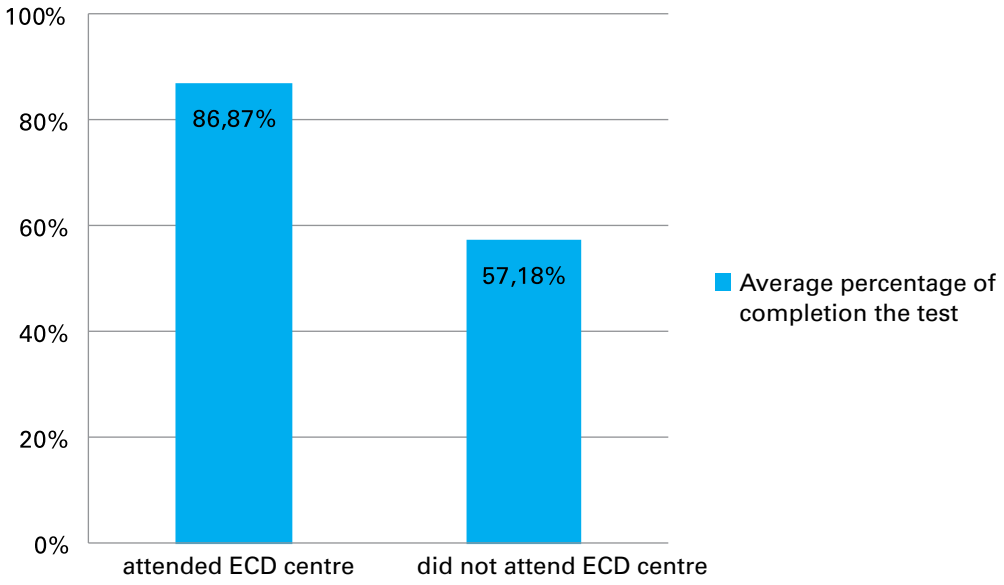
The average score of the **children from this group** included in the sample (a total of 220 children) was 43.98, i.e. the average percentage of completion of the IALDO was 72.09%.

Table 13: Results from the assessment of learning and *development outcomes of children who attended an ECD centre and of children who neither attended ECD Centre nor kindergarten*

Attended ECD centres		Attended neither an ECD or kindergarten	
% of children	average percentage of completion of the IALDO	% of children	average percentage of completion of the IALDO
50%	86,87%	50%	57,18%

The average percentage of completion of the IALDO by children who attended an ECD centre as part of the Programme was higher, at 86.87%, than the 57.18% average of completion by those children who neither attended ECD centre nor kindergarten. The difference between the outcomes of these subgroups of children was at the level of 0.01. Again, the girls in these subgroups achieved better results than the boys. The average percentage of completion of the IALDO of the girls who attended an ECD centre was 72.80%, while the average for the boys who attended an ECD was 71.57%.

Chart 3: results from the assessment of learning and development outcomes of *children who attended ECD centres compared to children who neither attended ECD centre nor kindergarten*



Conclusions:

- The outcomes of the children who attended ECD centres were significantly higher than the outcomes of the children who neither attended ECD centre nor kindergarten. The difference in the outcomes of these subgroups of children was at the level of 0.01.
- The outcomes of the girls were higher than the outcomes of the boys.

3.2 Children's outcomes according to the developmental domains

The instrument for assessing children's learning and development outcomes included activities in the following developmental domains:

- *Language, communication and literacy development:* 3 activities with 4 requirements.
- *Socio-emotional development:* 2 activities with 5 requirements.
- *Cognitive development and general knowledge acquisition:* 7 activities with 10 requirements.

The small number of requirements for each of the developmental domains in the instrument for assessing the children's learning and development outcomes is a limitation that does not allow for generalization of the conclusions for the entire domain.

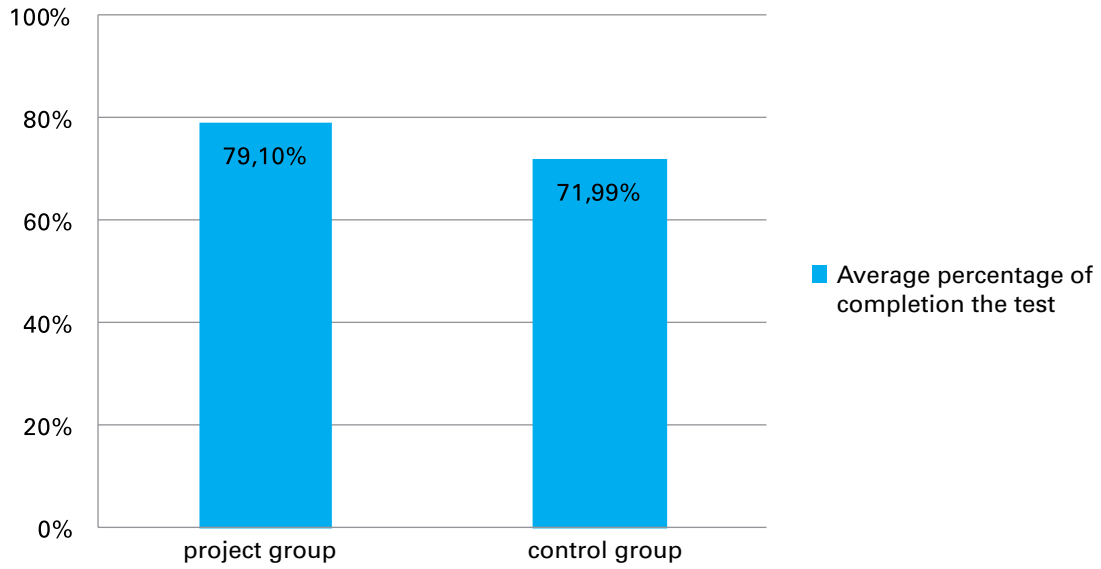
Analysis of the IALDO results of all the children shows that the highest results were achieved in the *Socio-emotional development domain*, followed by *Cognitive development and general knowledge acquisition domains*. The lowest results were achieved in the domain of *Language, communication and literacy development*. The same order of results applies for the results of the children who attended kindergartens. When comparing only the results of the children from the ECD centres and of those who neither attended ECD centre nor kindergarten the best results are again shown in the domain of *Socio-emotional development,* while the lowest results in *Cognitive development and general knowledge acquisition.*

Language, communication and literacy development

The activities in the domain of *Language communication and literacy development* were related to the basics of reading, including the identification of letters /sounds, and to comprehension and speaking.

The average percentage of completion of the IALDO of this developmental domain of all children included in the sample was 75.50%.

Chart 4: *Results from the assessment of outcomes of children from the project and the control groups in the developmental domain of Language, communication and literacy development*

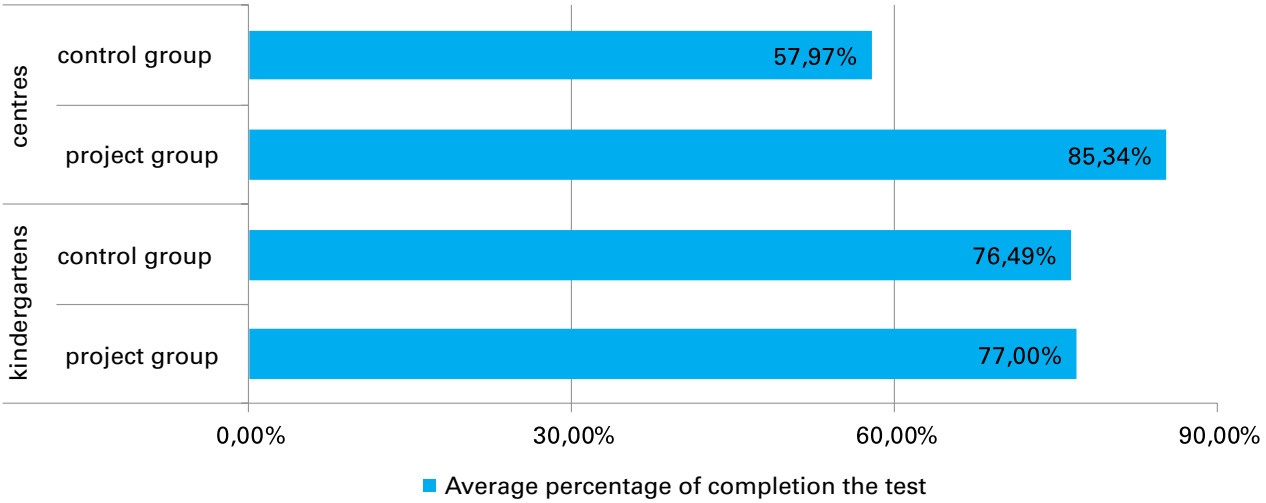


The outcomes in this developmental domain of the children who attended project kindergartens or ECD centres were better than the outcomes of the children from the control group kindergartens and the children who neither attended a kindergarten or an ECD centre. The average percentage of completion of the IALDO of the children from project kindergartens and ECD centres for this developmental domain was 79.10%, while the average for the children who did not participate in the Programme was 71.99%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.

The outcomes of the girls in this developmental domain were again better than the results of the boys. The average percentage of completion of the IALDO by the girls was 76.62%, compared to an average of 74.49% completion by the boys.

The results of the children in Albanian language of instruction were slightly higher than the results of the children in Macedonian language of instruction. The average percentage of completion of the IALDO of the children in Macedonian language of instruction was 74.98%, while the average for the children in Albanian as their language of instruction was 76.95%.

Chart 5: *Results from the assessment of outcomes of children from the control and project group kindergartens and ECD centres in the domain: Language, communication and literacy development*



The average percentage of completion of IALDO of the children from the project kindergartens in the developmental domain *Language, communication and literacy development* was 77% accurately completed requirements. The average percentage of completion of IALDO of the children from the control kindergartens in this developmental domain was 76.49%.

The average percentage of completion of the IALDO of the children who attended ECD centres for this developmental domain was 85.34%. The children who neither attended kindergartens or ECD centres scored the lowest average percentage of completion of the IALDO in this domain, with 57.97%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.

Conclusions- *Language, communication and literacy development*:

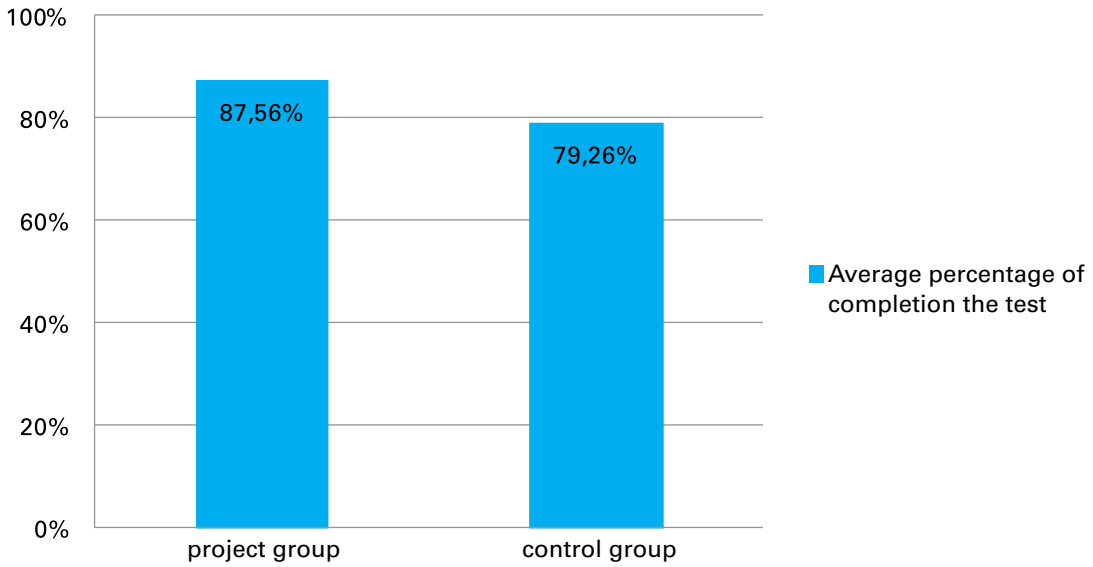
- The results of all of the children from the project group were some 8% higher than the results achieved by the children from the control group. The project group's average percentage of completion of the IALDO for this developmental domain was 79.10%, while the average for the control group was 71.99%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.
- The children who attended the project kindergartens achieved slightly higher results than the children from the control kindergartens. The children who attended the project kindergartens achieved an average percentage of completion of the IALDO for this developmental domain of 77.00%, while the average for the children who attended the control kindergartens was 76.49%.
- The results of the children who attended the ECD centres were some 27% higher than the results of the children who neither attended ECD centres nor kindergartens. The average percentage of completion of the IALDO of the children from the ECD centres for this developmental domain was 85.34%, while the average of the children who neither attended ECD centres or kindergartens was 57.97%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.
- Girls achieved better results than the boys.
- The results of the children in Macedonian language of instruction were slightly higher than the results of the children who were supported in Albanian language.

Socio-emotional development

The activities measured in this developmental domain were related to following instructions and recognizing and expressing emotions.

The average percentage of completion of the IALDO for this developmental domain by all of the children in the sample, at 83.36%, was higher than for all other domains.

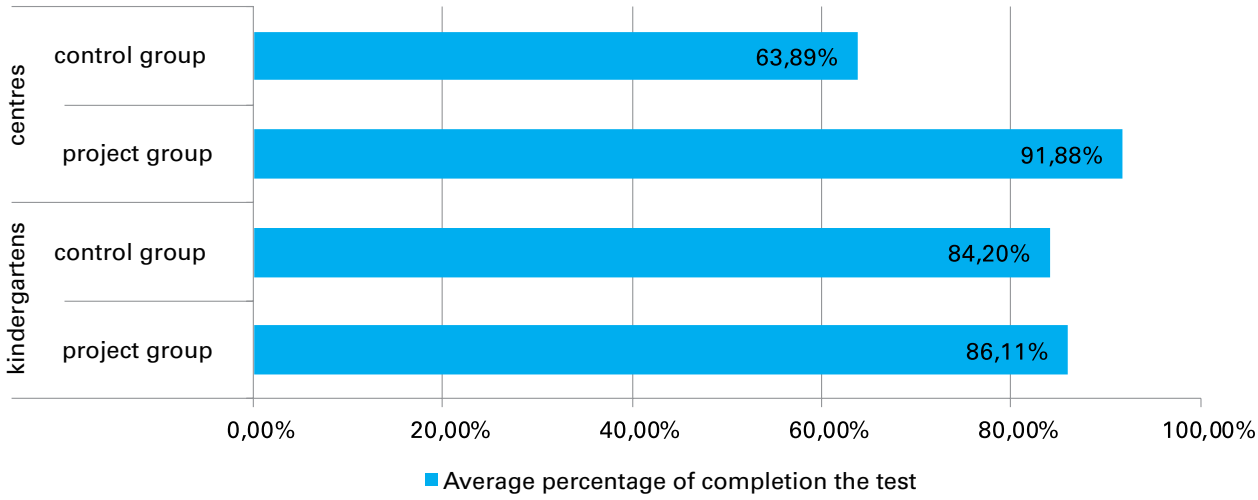
Chart 6: *Results of the assessment of outcome of all children (from the project group and the control group) in the domain of Socio-emotional development*



In the developmental domain of *Socio-emotional development*, the outcomes of the children from the project kindergartens and ECD centres were better than the results of the children from the control group kindergartens and the children who neither attended a kindergarten or an ECD centre. The average percentage of completion of the IALDO for this developmental domain of the children from the project kindergartens and ECD centres was 87.56%, while the average of those who did not attend this programme was 79.26%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.

The results in this developmental domain, with regards to gender, are slightly different. This is the only domain in which boys achieved slightly higher results than girls. The average percentage of completion of the IALDO of the boys was 83.63%, while the average for the girls was 83.07%. The results of the children in Macedonian language of instruction were for 5% higher than the children in Albanian language of instruction. The average percentage of completion the IALDO of the children in Macedonian language of instruction was 84.73%, while the average for those in Albanian was 79.55%. The differences between the outcomes of these two subgroups of children was at the level of 0.01.

Chart 7: *The results of the assessment of outcomes of children in control and project groups from the kindergartens and from the ECD centres in the domain of Socio-emotional development*



The outcomes of the children from the project kindergartens were about 2% higher than the outcomes of the children from the control kindergartens. Specifically, the average percentage of completion of the IALDO of the children from the project kindergartens was 86.11%, while the average of those from the control kindergartens was 84.20%.

The average percentage of completion of IALDO for this developmental domain by the children who attended ECD centres was 91.88%, while the average of the children who did not attend ECD centres or kindergartens was 63.89%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.

Conclusions-*Socio-emotional development*:

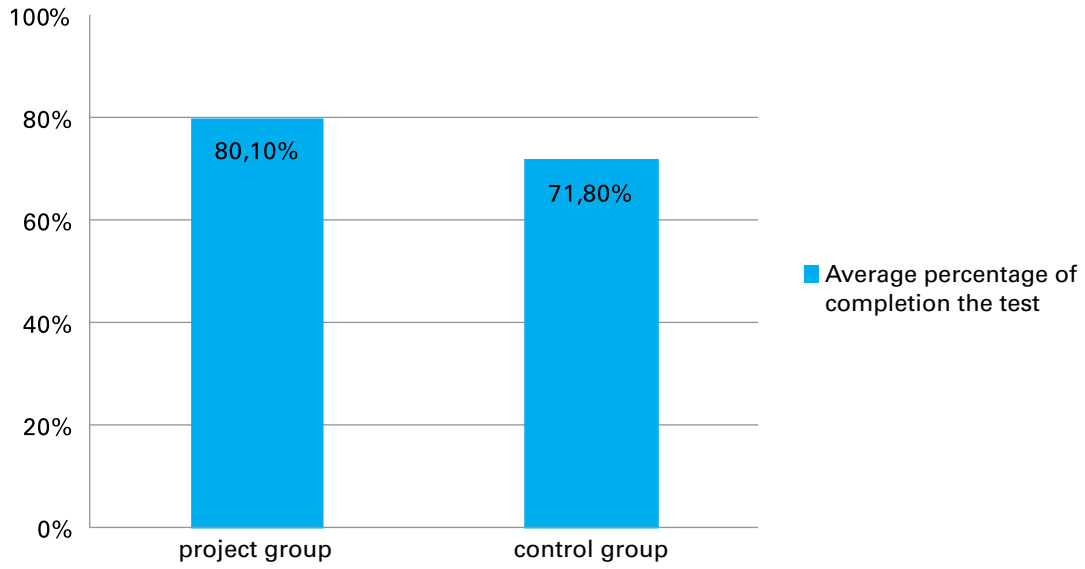
- The results of all children were highest in the domain of socio-emotional development.
- The results of the children from the project group in this domain were 8.3% higher than the results of the children from the control group. The average percentage of completion of IALDO for this developmental domain was 87.56% for the children from the project group, while the average for the children in the control group was 79.26%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.
- The results of the children who attended the project kindergartens were 2% higher than the results of the children who attended the control group kindergartens. The average percentage of completion of the IALDO for this developmental domain for children who attended the project kindergartens was 86.11%, while the average for children who attended the control kindergartens was 84.20%.
- The results of the children who attended ECD centres were some 28% higher than the results of the children who neither attended an ECD centre nor a kindergarten. The children who attended ECD centres achieved an average percentage of completion of the IALDO for this developmental domain of 91.88%, while the average achieved by the children who neither attended centre or kindergarten was 63.89%. The difference between the outcomes of these two subgroups was at the level of 0.01.
- This was the only developmental domain in which boys achieved slightly higher results than girls.
- The results of the children whose language of instruction is Macedonian were 5% higher than the results of the children whose language of instruction is Albanian. The difference between the outcomes of these two subgroups was at the level of 0.01.

Cognitive development and general knowledge acquisition

The activities in the developmental domain of *Cognitive development and general knowledge acquisition* measured logical thinking, spatial orientation, mathematical concepts and classification of fruits and vegetables.

The average percentage of completion of IALDO for this developmental domain for all children included in the sample was 75.90%.

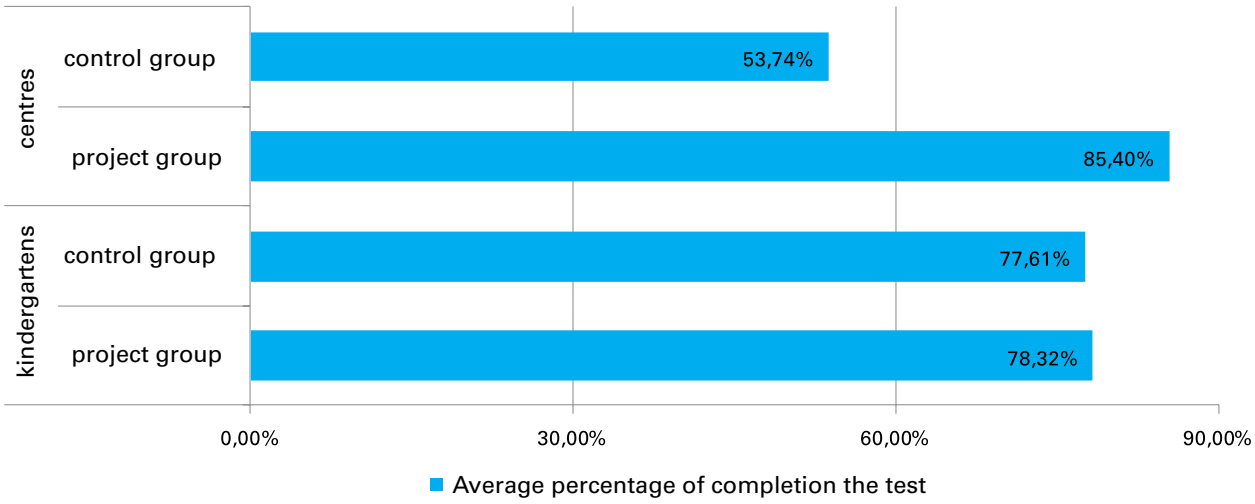
Chart 8: *Results of the assessment of outcomes of all the children from the project group and control group in the developmental domain of Cognitive development and general knowledge acquisition*



The learning and developmental outcomes of the children who attended the project kindergartens and ECD centres in the developmental domain of *Cognitive development and general knowledge acquisition* were better than the outcomes of the children from the control group kindergartens and the children who neither attended kindergarten nor ECD centre.The average percentage of completion of the IALDO for this developmental domain of the children from the project kindergartens and ECD centres was 80.10%, while the average for children who did not participate in the Programme was 71.80%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.

Girls achieved better results than boys in this development domain. The average percentage of completion of the IALDO by the girls was 77.01%, while the average for the boys was 74.90%. The children in Macedonian language of instruction achieved slightly higher results in this developmental domain than children in Albanian language of instruction. The average percentage of completion of the IALDO of the children in Macedonian language of instruction was 76.16%, while the average for those in Albanian language of instruction was 75.20%.

Chart 9: Results from the assessment of outcomes *of the children from the control and project kindergartens and ECD centres in the developmental domain of Cognitive development and general knowledge acquisition*



There were a number of insignificant differences between the outcomes of the children who attended the project kindergartens and the outcomes of the children who attended the control kindergartens in this developmental domain. The average percentage of completion of the IALDO of the children who attended the project kindergartens was 78.32%, while the average of those who attended the control kindergartens was 77.61%.

The children who attended ECD centres achieved an average percentage of completion of the IALDO of 85.40% for this developmental domain, while the average of achieved by the children who neither attended an ECD centre or a kindergarten was 53.74%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.

Conclusions- *Cognitive development and general knowledge acquisition*:

- The results of the children from the project group in this domain were 8.3% higher than the results of the children from the control group. The average percentage of completion of the IALDO of the project group for this developmental domain was 80.10%, while the average for the control group was 71.80%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.
- The results of the children who attended the project kindergartens were only 1% lower than the results of the children from the control kindergartens. The average percentage of completion of the IALDO for this developmental domain of the children who attended the project kindergartens was 78.32%, while the average for the children who attended the control kindergartens was 77.61%.
- The results of the children from the ECD centres were some 31% higher than the results of the children who neither attended an ECD centre or a kindergarten. The average percentage of completion of the IALDO of the children from the centres for this developmental domain was 85.40%, while the average of the children who neither attended an ECD centre or a kindergarten was 53.74%. The difference between the outcomes of these two subgroups of children was at the level of 0.01.
- The girls achieved slightly higher results than the boys in this developmental domain.
- The results of the children in Macedonian language of instruction were slightly higher in this developmental domain than the results of the children in Albanian language of instruction.

4. THE RELATIONSHIP BETWEEN CHILDREN AND THEIR FAMILIES, KINDERGARTENS AND ECD CENTRES

There are many factors related to the child and the family that influence children's outcomes. Section 3 of this report, analyses the children's outcomes and some of these key factors that influence these children's outcomes, such as gender, language of instruction and the number of years of attendance at kindergarten. This section will focus on presenting data from the responses to the questionnaire for parents. This questionnaire was developed while having in mind the need to include the influence of other indicators important for understanding differences in children's developmental outcomes. The questionnaire for the parents included questions on the following areas:

- Socio-economic conditions in the home;
- The relationships between parents and guardians with their children;
- The relationships between children and kindergartens and early childhood development centres.

The following section will present some of the information obtained

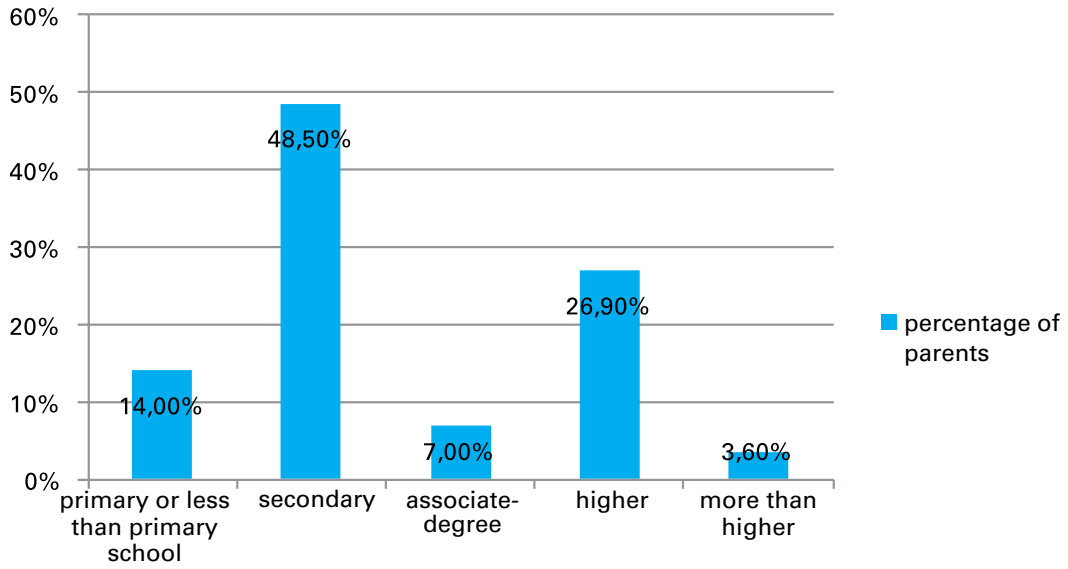
4.1 Characteristics within the home

The questionnaire for parents and guardians contained questions about the educational levels of parents, the socio-economic status of the family, the relationship between children and parents/guardians and the relationship between children and kindergarten and early childhood development centres.

Some 75% of the questionnaires distributed to parents/guardians of the children assessed for this report were completed by mothers. This could be another indication that mothers are more engaged with children at this age.

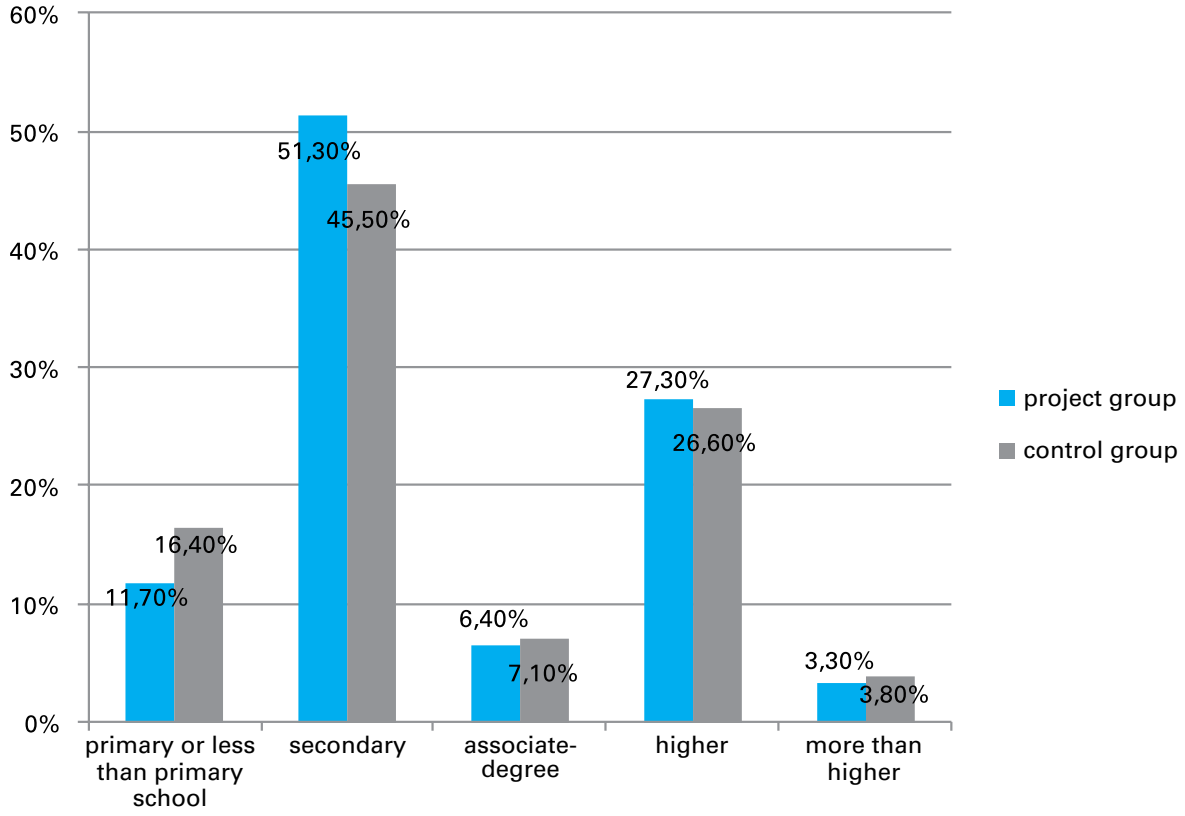
Some 73% of the parents and guardians interviewed were aged between 20 and 35. Only 0.5% of the interviewed parents were under 20 years-old, while the rest were over 36 years old.

Chart 10: *Formal education of the parents/guardians*



Approximately 48.50 % of the children's parents had secondary education, while 14% of the interviewed parents/guardians had primary education or lower. Some 30% had higher education.

Chart 11: *Formal education of the parents/guardians from the project group and from the control group*



It can be concluded that there are no significant differences between the educational levels of the parents and guardians of the children in the project group and the parents of children in the control group.

Chart 12: *Formal education of the parents/guardians of the children based on the type of institution the children attend / do not attend*

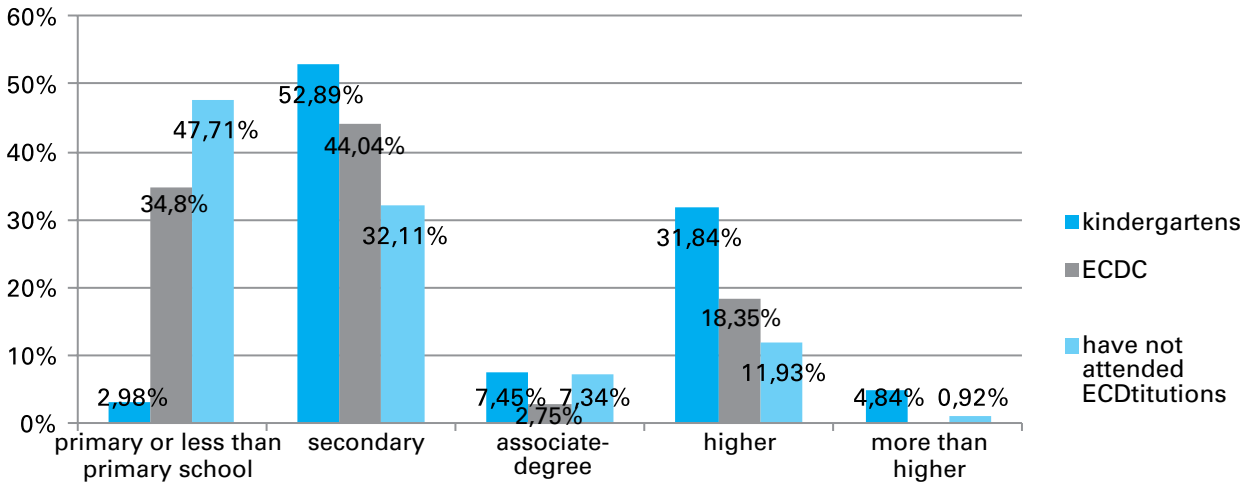


Chart 12 shows that the educational levels of the parents of children attending kindergartens were overall higher than the educational levels of parents of children attending ECD centres. Almost 35%

of the parents of the children attending ECD centres had primary school education or less, while only 2.98% of the parents of children attending kindergartens had such low levels of education. Some 44% of the parents of children attending kindergartens had higher education, while only 21% of the parents of children attending ECD centres had higher education. On the other hand, the outcomes of the children from the ECD centres were higher compared to the ones from the kindergartens.

Some 30% of the parents and guardians interviewed stated they were unemployed, while 78% of the children were from families with sufficient means.

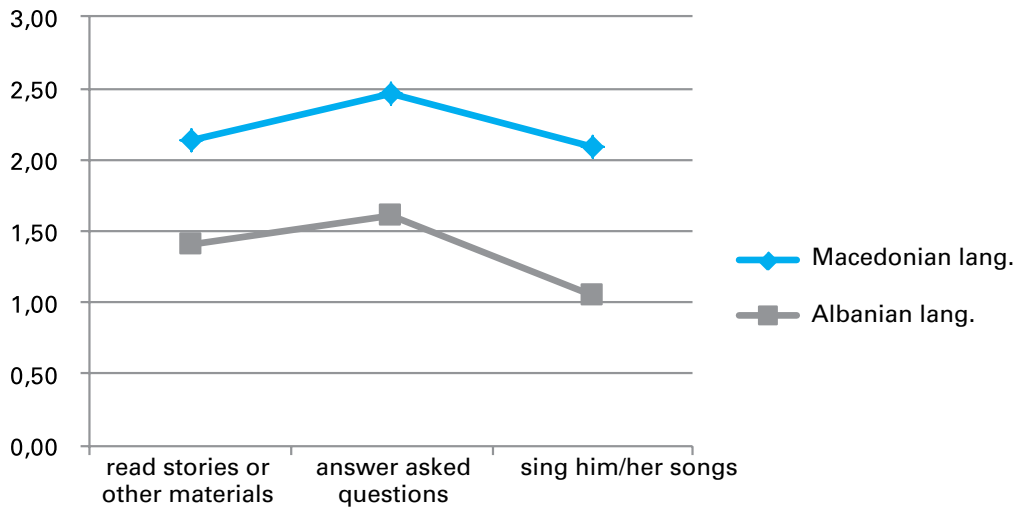
65% of the parents interviewed stated they speak to their children in Macedonian at home, 24% in Albanian, 4% in Roma, and the remaining 7% in other languages. There was no significant difference between the parents of the children in the project and those in the control group with regard to the languages spoken at home.

The average number of members per household of the children in the sample was 4. With reference to the language in which ECD is delivered, there are differences. The average number of members per household amongst the children attending ECD centres in Macedonian language was 4, while the average for children at ECD centres in Albanian language was 5. The average number of members per household of the children attending ECD centres and those neither attending centres nor kindergartens was 5, while the average for the children attending kindergartens was 4.

4.2 The child and the parent

The child-parent relationship has a significant influence on child development. To assess this factor, the parents were asked to identify, according to a 3-degree scale, how often or how many times in the course of one week they did the following activities with their children: read stories or other materials; answer their questions; and sing songs. According to the responses, the most frequent activity of the parents with their children was answering questions asked by their children, while singing songs was the least frequent.

Chart 13: Activities of *parents/guardians with their children according to the language of instruction*



With reference to language of instruction, Macedonian or Albanian, there is no difference in the order of the given activities. The parents of the children supported in Macedonian language carried out the abovementioned activities with their children more often than the parents of the children supported in Albanian language. The difference between these two groups of interviewees was significant, at the level of 0.05.

According to the parents' responses, they more frequently buy picture-books or other books for their children, while clothes and toys were the least frequently purchased.

Table 14: *How the parents learn about the interests of their children*

Activity	Percentage of parents
observation	41,88%
conversation	82,83%
active listening	29,46%

The parents learn about the interests of their children mainly through conversation (82.83%), followed by observation (41.88%), and the least through active listening (29.46%). There is no significant difference in this area of engagement with reference to the language of instruction.

Table 15: *How the parents learn about the interests of their children*

Activity	Percentage of parents	Percentage of parents in Macedonian language	Percentage of parents in Albanian language
conversation	79,39%	44,00%	35,39%[7]
reading picture-books	56,80%	31,57%	25,23%
walk	48,22%	25,89%	22,33%
preparing food	19,15%	11,23%	7,92%
bathroom activities	13,08%	7,00%	6,08%
watching television	41,22%	20,87%	20,34%

The parents learn about the interests of their children mainly through conversation, followed by reading picture-books, walks, watching television, preparing food, and activities in the bathroom. With reference to the language of instruction, the order of activities is the same.

4.3 The relationships between child and kindergartens and ECD centres

Based on the responses of the parents of the assessed children, the average period of attendance of kindergartens and ECD centres was 2.7 years.

Table 16: *Conversation of the parent with someone from the staff of the kindergarten/ECD centre regarding their children*

Staff	Percentage of parents
educator	74,80%
guardian	9,35%
educator and guardian	12,28%
pedagogue/psychologist	1,21%
manager	2,36%

7 Statistical signifiance of differences at the level of 0.05S

In the kindergartens and the ECD centres, the parents mainly discussed their children with educators (74.80%), and less with the caregiver, pedagogue/psychologist and the manager.

The majority of parents (92.45%) were mainly satisfied with the communication with the kindergarten staff.

Some 51.29% of the parents stated that they were regularly informed about the activities of their children and the skills they were acquiring while in kindergarten or ECD centres. Then 20.57% reported they had received information only if they showed a personal interest for such information. 27.10% were regularly shown all of the work their children did, while only 0.8% were not informed by anybody about any activities and work of their children.

Around 54% of the parents received guidance by the kindergarten and ECD centre staff on how to support early learning of their child in a home environment.

Some 40% of the interviewed parents stated that they regularly attended workshops organized by kindergarten and ECD centre staff, while 35% said they sometimes attended. The remaining 25% of the parents never attended such workshops.

Around 44% of the parents stated that they had received some materials with guidance on how to encourage early learning of children at home.

5. THE ORGANIZATION AND WORK OF THE KINDERGARTENS AND EARLY CHILDHOOD DEVELOPMENT CENTRES

In addition to the data on the children's achievements, indicators about the organization and work of the kindergartens and ECD centres were also collected, primarily about the conditions in the kindergartens and the educational personnel.

Moreover, to understand the outcomes it was considered important to have indicators about the extent of acceptance, realization and the need for further support in applying the Programme.

This information will be key for understanding the context in which the children learn and it should be taken into consideration when evaluating the Programme.

5.1 Conditions in the kindergartens

Questionnaires for kindergartens were distributed in all the kindergartens included in the sample of this study (11 in total) and these were completed by the kindergarten directors. Questionnaires in all kindergartens were completed, so the answers should reflect the real situation in the kindergartens.

In the eleven kindergartens, the average number of enrolled children is 562, of whom 281 are 4 to 6 years-old. However, the number of children attending kindergarten regularly is much lower.

Based on the answers of the directors, it can be concluded that all kindergartens included in this study have: the document on the *Early Learning and Development Standards,* materials, brochures and leaflets for the parents, a playground used for outdoors play activities with the children and other types of centres (corners) for learning according to children's interests and needs (drama corner, literary corner, science corner, math corner, etc.).

Moreover, based on the directors' answers, it can be observed that all kindergartens from the project group used the *ELDS* when drafting the Annual programme of the kindergarten. Only one kindergarten from the control group is not using the ELDS.

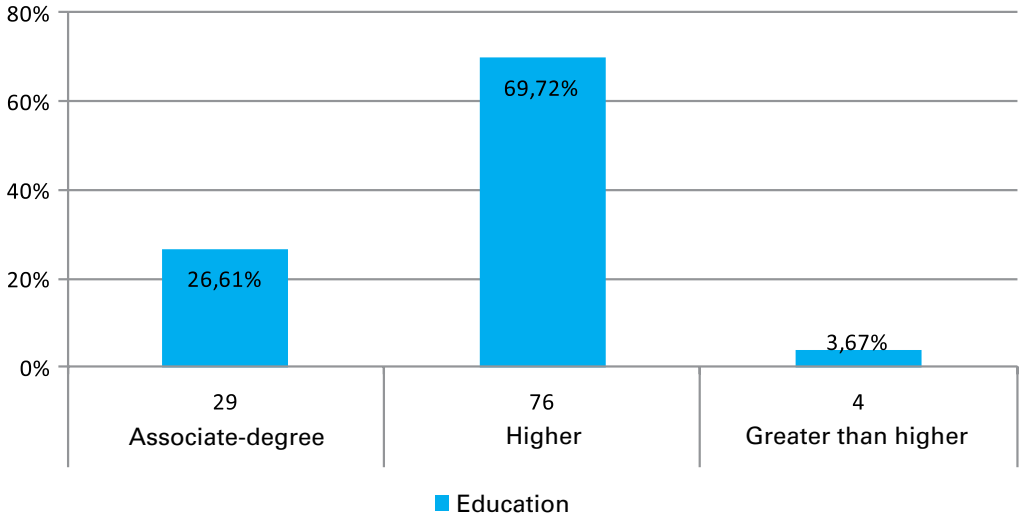
Four out of the five project kindergartens conduct training based on the *ELDS* with the educators and the caregivers at least once every two months. The control group kindergartens conducted such training twice a year or less.

Four of the five project kindergartens are proposing or organizing activities with the parents based on the *ELDS*, while only three from the six control kindergartens are doing the same. On the other hand, only two of the control kindergartens do not propose or organize any activities with the parents based on the *ELDS*.

5.2 Educational personnel

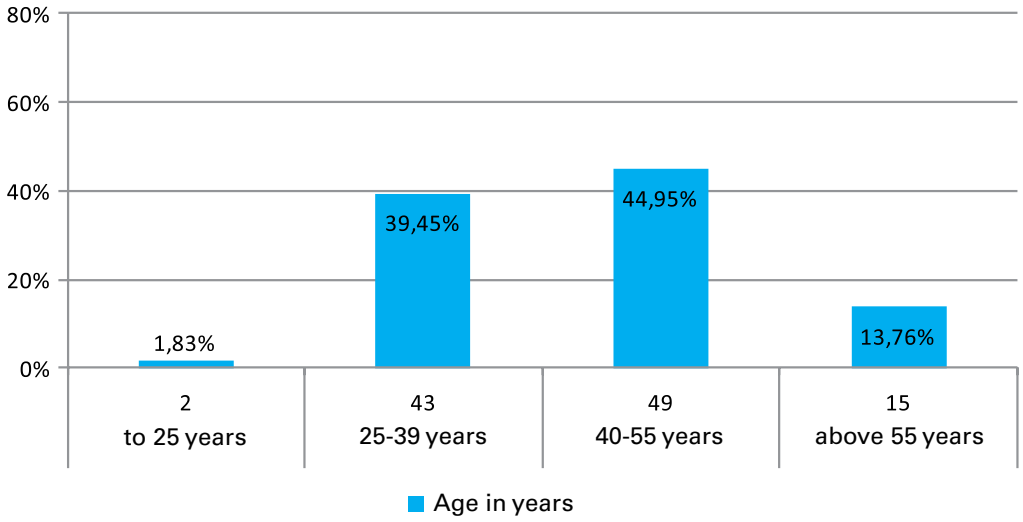
The educators in the kindergartens and ECD centres answered the questionnaire for the educators. According to their answers, it can be concluded that the general profile of an educator in the kindergartens and ECD centres is of adequate education and experience. Most educators are female, with less than 2% of male educators.

Chart 14: *Education of the educators from the kindergartens and from the ECD centres*



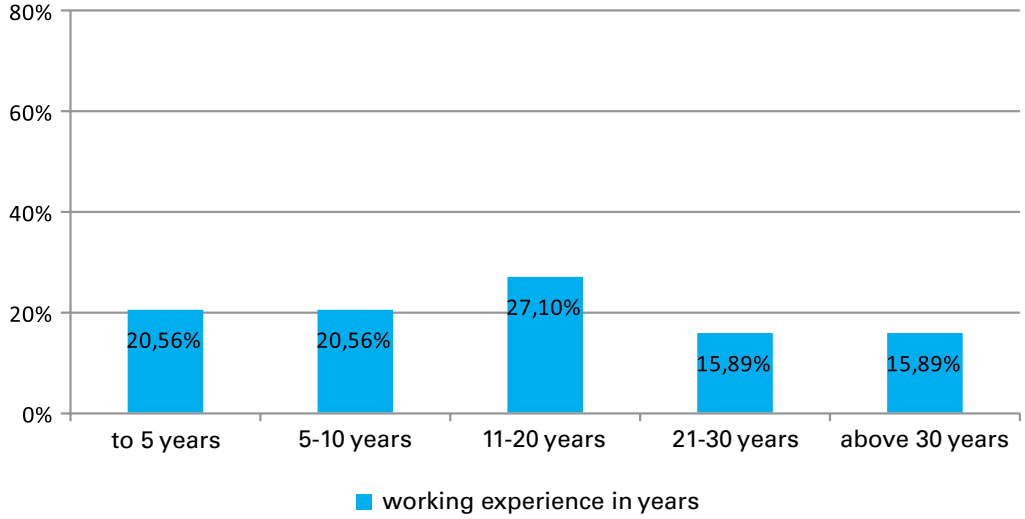
As can be seen from Chart 14, all interviewed educators had completed more than secondary education, as prescribed by the Law.

Chart 15: *Age of the educators from the kindergartens and ECD centres*



Less than 14% of the educators were above 55 years old, while some 85% were aged between 25 and 55 years.

Chart 16: *Working experience of the educators from the kindergartens and ECDC*



The average working experience of the educators working with the tested children was 16.16 years. 27% had working experience of 11 to 20 years. Around 20% had up to 5 years working experience, while 15% had more than 30 years of experience.

The educators were asked a set of questions about the *ELDS.* More than 97% of the interviewed educators were familiar with the *ELDS and a*lmost 93% were applying them. This means that the ELDS are being applied in the control kindergartens (i.e. the kindergartens not included in the Programme), even though the educators had not received training.

The educators answered the questions about the *ELDS application in* supporting and monitoring the children's outcomes by circling the 3-degree scale for every developmental domain. In order to obtain a more detailed picture of how the standards are being applied in every developmental domain, the level of application was assessed for each educator. An index showing the average level of application was then calculated for each development domain.

Table 17: *Average grade on the 3-degree scale for the application of the Early Learning and Development Standards per developmental domain*

Developmental domain	Average grade from 1 to 3
Approach to learning	2,69
Language	2,70
Communication and literacy	2,70
Cognitive development	2,61
Socio-emotional development	2,78

Table 17 shows that the use of the standards in every developmental domain is very high (the average grade from 1 to 3 is above 2.5). The educators apply the standards mainly in the *Socio-emotional development domain*, and least in the *Cognitive development domain*.

The educators were asked about the percentage of time that they spent using the approaches introduced with the Programme. According to their answers in the project kindergartens and ECD centres, 78% of their work is focused on these approaches, or more specifically, 75% in the project kindergartens and 86% in the ECD centres. In the non-project kindergartens, the reported realization of the Programme is also very high (57%) although the educators have not been trained for its realization.

The researchers also attended and observed educators' activities in the duration of 1 hour. They noted the type and the organization of the activity, the type of materials used, the children's learning and based on these the level of engagement and involvement of children was assessed with a 3-degree scale. In total, 99 activities were observed, of which 45 in the project kindergartens, 31 in the control kindergartens, and 23 in the ECD centres. The ECD centres had the highest grade for the level of engagement and involvement of the children (2.96), followed by the project kindergartens (2.87), and the lowest grade—though still a high—was observed in the control kindergartens (2.71).

Most of the activities observed referred to free conversation (17%), i.e. the educator encouraged the children to talk among themselves and with him/her about a certain topic. In addition, the educators mainly used manipulatives, such as blocks, puzzles, picture-books, soft toys, paper, felt-tip pens, and crayons, followed by audio-visual materials, such as posters, books, and video tapes. In most of the cases, all the children were included in these activities and were learning to think and answer questions about how to share things with others. The level of engagement and involvement of the children was assessed at 2.65 on a 3-degree scale.

Some 14% of the observed activities were free activities using manipulatives, i.e. children played with blocks, dolls and other toys without the involvement of the educator, but all children were included and learnt to share things with each other. The level of engagement and involvement of the children was assessed at 2.69 on a 3-degree scale.

The percentage of other observed activities was less than 10%.

5.3 Extent of acceptance, realization and need for further support in implementing the Programme

The successful implementation of every intervention largely depends on the concerns of the educators who are responsible to realize the given innovation, as well as upon the timely and appropriate support they receive to easily overcome the concerns and application towards higher levels of changes. The study applied instruments related to the acceptance, realization and support of the educators for applying the principles and techniques of the Programme.

The acceptance of the Programme and the concern of the educators regarding its application were measured by a seven-degree *Scale of concern* with 29 claims. Only the educators working in the project group of kindergartens and ECD centres included in the Programme were measured.

The degree of realization was measured by using one question for self-assessment about the level of application of the principles and approaches of the Programme. The question was given to all educators since even some educators in non-project kindergartens applied the principles and techniques of the Programme and the intention was to see the differences between the two groups.

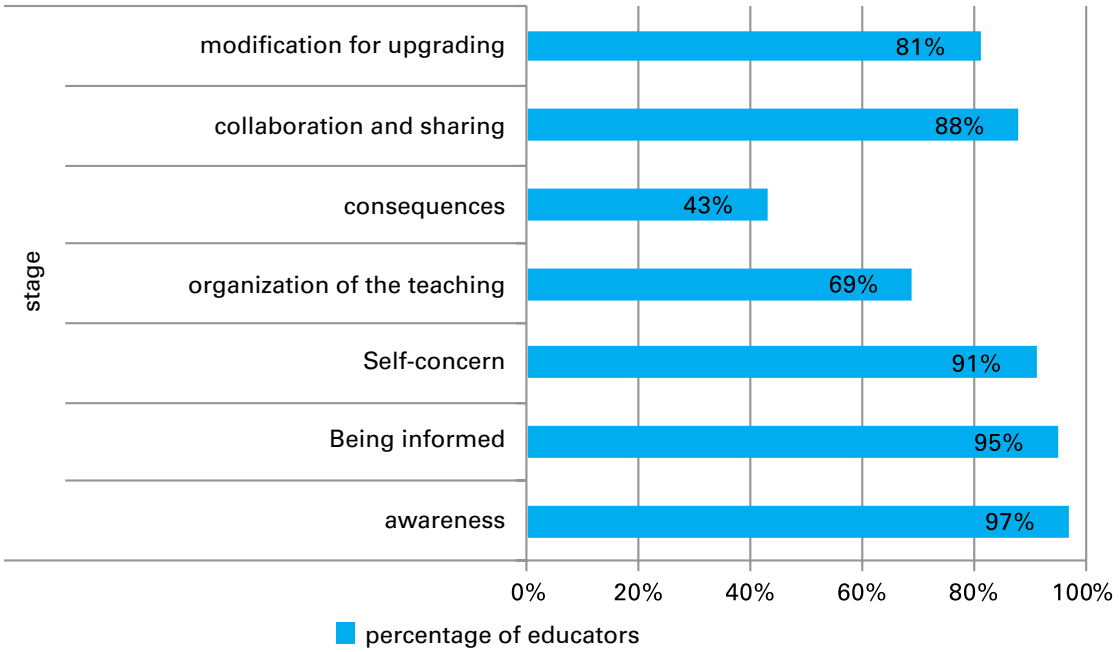
The need for support was measured by using one question about the needs of the educators with regards to several aspects of the application of the Programme. This question was also given to all educators to answer.

Acceptance of the Programme and the concerns of the educators in the project group for its realization

Chart 17 shows the percentage of educators from the project kindergartens and ECD centres who reported they have overcome some of the following seven stages of concern: awareness, being

informed, self-concern, organization of teaching, consequence, collaboration and sharing and modification for upgrading.

Chart 17: *Percentage of educators from the kindergartens and ECD centres who have overcome a certain stage of concern*



The seven stages are divided into the following three categories:

1. *Self-concern* is the first category that most commonly appears at the beginning during the introduction of the changes and refers to the need for additional information and answers. It includes the educators from the kindergartens and ECD centres that are in the stage of *awareness* about the application of the Programme and its use, *information* of the educators and the training they have acquired, as well as self-concern, i.e. personal handling of the realization of the principles and techniques of the Programme.

   According to the answers of the educators from the project kindergartens and ECD centres it can be concluded that:

   - 97% of them have overcome the first stage and are aware of the programme and the need for it ;
   - The stage of being informed in terms of the experiences of the educators that will apply the programme has been overcome by 95% of the educators;
   - The stage of self-concern refers to the concerns related to the professional status and career development of the educators, opportunity to make decisions about the application, as well as concern about the need for more time, effort and dedication. This stage of concern has been overcome by 91% of the educators.

2. *The concern about tasks/activities* and their realization appears during the introduction of the innovation in the daily work and the activities of the educators, and is related to the need for additional knowledge, skills and information for planning to effectively implement the activities. This is connected to the organization of the work of the children, involvement in the realization of the curriculum objectives and activities, as well as the time and necessary materials for realization of the same. It concerns the educators from the kindergartens and

ECD centres that are at the stage of self-concern and *concern about the organization of the teaching*, i.e. concern about how they will personally manage the realization of the principles and techniques of this Programme.

According to the answers of the educators from the project kindergartens and ECD centres, it can be concluded that

- 69% of them have overcome the first stage and were aware about the programme and the needs resulting from it.

3. *The concern about the effects* appears when the educators become more confident in the planning, organization and application of the principles and techniques in daily practice. The concern in this category is in terms of the application of the newly acquired knowledge and skills and their influence on the teaching and the children's achievements. It is for the purpose of improving the application of the Programme, compared to the previous practise, in terms of collaboration and comparison with the others, modifying the programme so that it can be further improved it and applied more extensively. It includes the educators from the kindergartens and ECD centres that are at the stage of *concern about the consequences, collaboration and sharing* and *the stage of modifying and upgrading* the Programme.

   According to the answers of the educators from the project kindergartens and ECD centres, the percentage of educators who have overcome the concerns that are part of this category was lower than the percentage for the other two categories as expected. More specifically:

   - 43% of them have overcome the stage of consequences, i.e. concern about the effects on the children and their achievements;
   - the stage of collaboration and sharing was overcome by 88% of educators, meaning that the educators collaborate and share experiences among each other for the most part;
   - 81% of the educators had overcome the stage of concern about modification and upgrading.

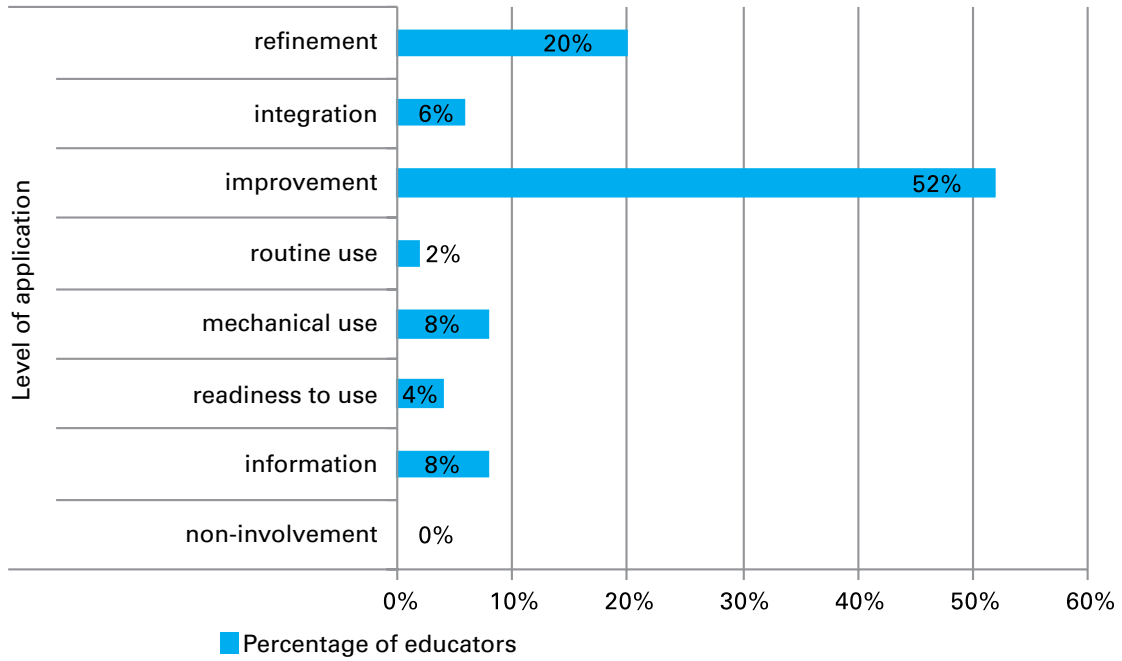
   It is obvious that the lowest percentage was that of educators who have overcome the stage of consequences, i.e. concern about the effects on the children and their achievements. This points to the fact that the focus of the national policies is more about what the educator performance than about the influence of educators' performance on the children's learning and development.

Level of Programme application

The research shows that the level of application of a given innovation is in correlation with experience of the educators and the duration of the application (Hall, 1977; Loucks & Hall,1979; Roberts, 1993) and in most cases, when dealing with the introduction of comprehensive changes, higher levels of application is expected in the fourth year when measured with the instrument for self-assessment of the level of improvement.[8]

The questions about the degree of application of the Programme were answered by all educators (both from the project and control group) because of the understanding that the ELDS were being used by some of the educators in the other kindergartens.

Chart 18: *Percentage of educators from the project kindergartens and ECD centres who are in every level of application of the Programme*



As expected, after a four-year application of the Programme, more than half of the educators (52%) assessed themselves to be at the level of improvement. The educators are mostly focused on making variations in the application in order to increase the achievements, i.e. to ensure this programme has maximum effects on the children.

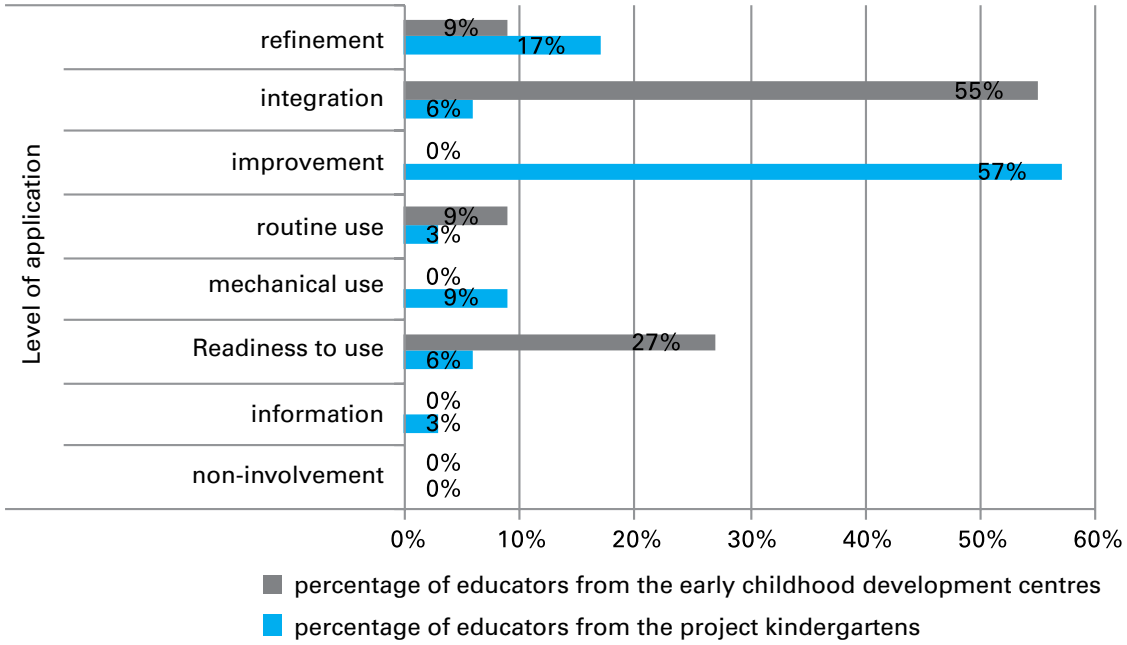
While all educator have participated in the Programme, i.e. participated in some form of training or activities, it is worth noting that 8% of educators continued to actively seek reading materials and gather information related to the Programme, while 4% of the educators were ready to use and had already planned and prepared the application.

Approximately 8% of the educators were at the level of mechanical use, and 2% were at the level of routine use. The educators at the level of mechanical use were mostly focused on acquiring greater skills for using the principles and techniques of the Programme and they did not dedicate much time to reflection. Those educators who are at the level of routine use felt confident and satisfied with the application of the Programme principles and techniques, applied the training and rarely thought about introducing changes in order to improve the application.

8 Griffin, D. and Christensen, R. (1999). Concerns-Based Adoption Model (CBAM) Levels of Use of Innovation (CBAM-LOU). Denton, Texas: Institute for Integration of Technology into Teaching and Learning.

The percentage of educators who were at the highest levels of application was not insignificant, i.e. 6% were at the level of integration, and 20% at the level of refinement. This means there are many educators who related their activities with the activities of their colleagues in order to achieve a greater effects, while reflecting about the quality of the application and the effects in order to improve their work.

Chart 19: *Comparison of the percentage of educators from the project kindergartens and ECD centres at each of the levels of application of the Programme*



Most of the educators from the ECD centres or 64% assessed themselves as being at the level of integration and refinement, while only 23% from the project kindergartens assessed themselves as being at this level.

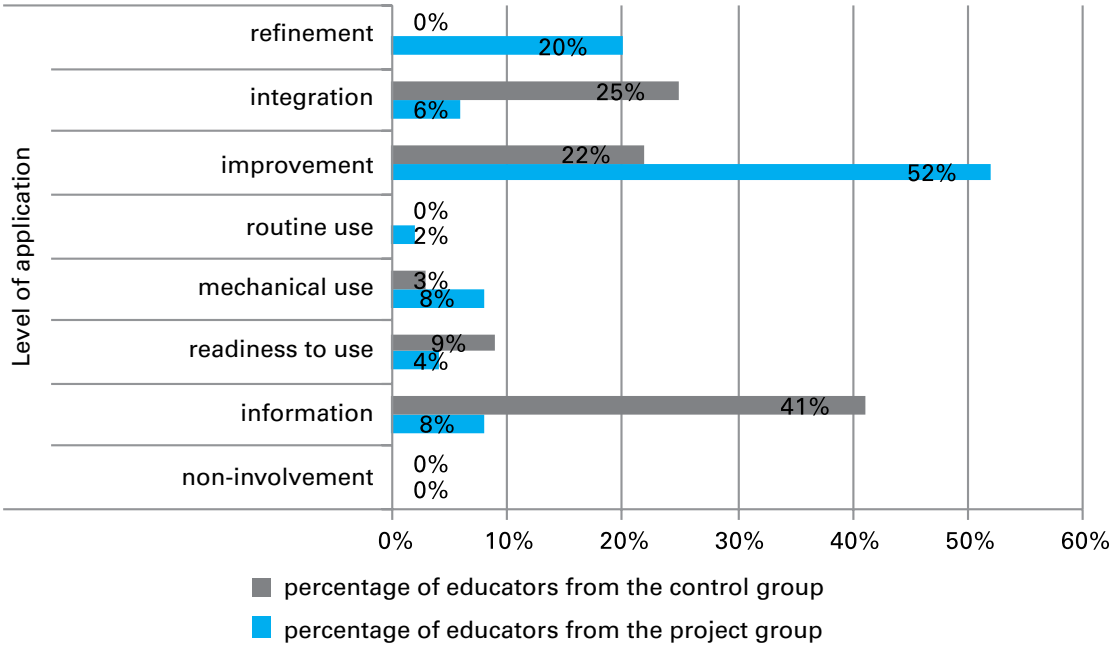
No educators from the ECD centres were at the level of improvement, while most educators from the project kindergartens assessed themselves as being at this level (57%).

The percentage of educators who assessed themselves as being at the level of routine and mechanical use was similar for the ECD centres and the kindergartens.

Approximately 27% of the educators in the ECD centres were prepared for use and had planned and prepared the application, while this was the case for only 6% of educators from the project kindergartens.

No educators from the ECD centres assessed themselves as being at the low levels of application, and only 3% from the project kindergartens were at the level of information.

Chart 20: *Comparison of the percentage of educators from the project kindergartens and ECD centres with the control group at each of the levels of application of the Programme*



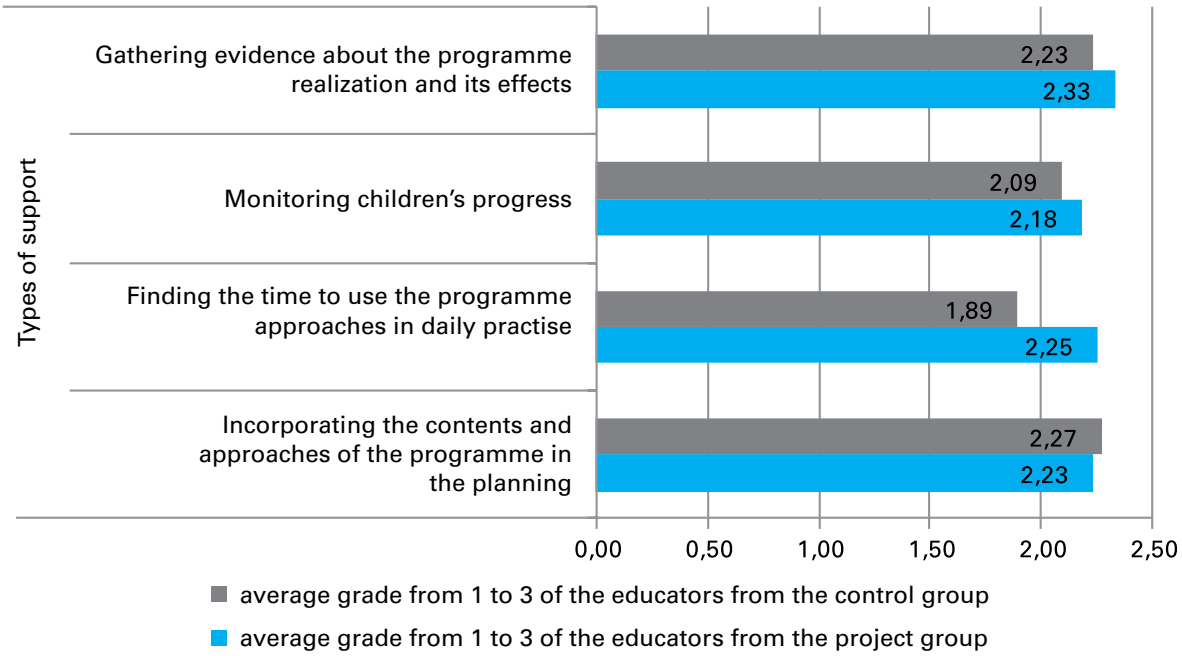
Based on these results, it can be concluded that:

- 50% of the educators from the control group were at the low level of application, while this was the case for only 12% from the project group;
- 3% of the educators from the control group and 10% from the project group were at the level of mechanical and routine use;
- 22% of the educators from the control group and 52% from the project group assessed themselves as being at the level of improvement;
- the percentage of educators who assessed themselves as being at the highest levels is similar for the two groups (around 25%), with the exception that there are no educators from the control group who are at the level of refinement, and 20% of the educators from the project group had achieved this highest level.

Need for support for the realization of the Programme

The educators were asked about their needs for support and application of the Programme. They expressed their opinion about the level of the support needed at a three-degree scale of the offered choices- they do not need support at all, or they need some support or they need extensive support.

Chart 21: *Average grades of the educators about the type of support they need in order to apply the Programme*

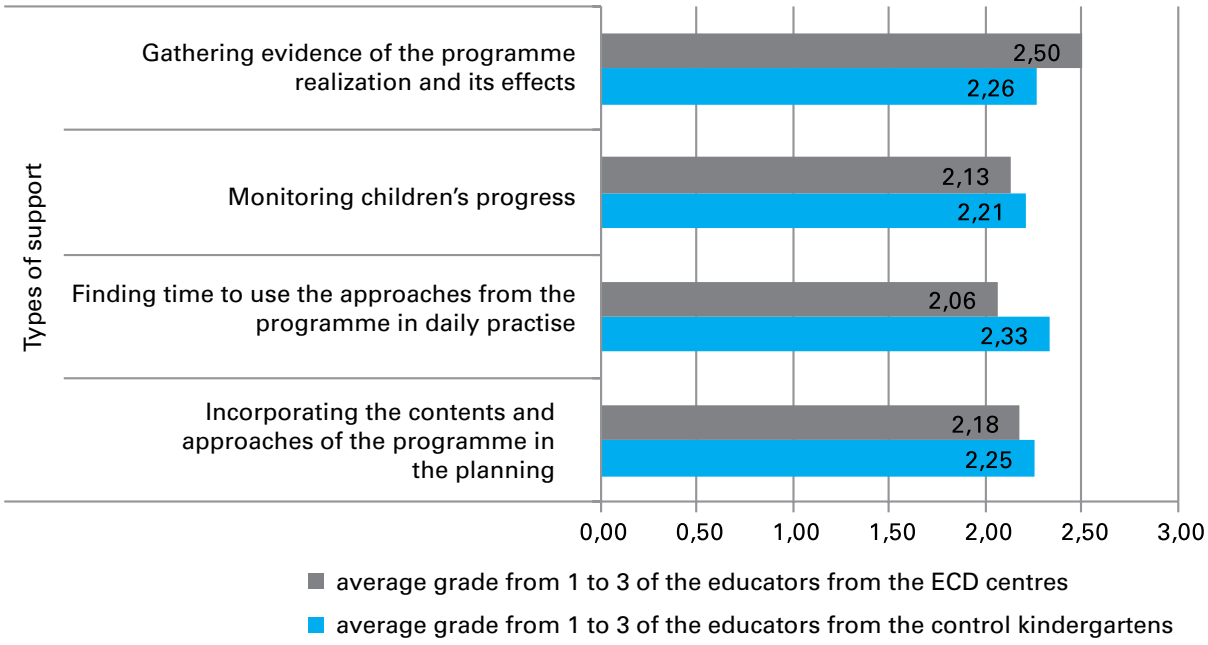


Almost all educators, from both the project and the control group, stated that they needed additional support.

Awareness about the need for support was higher among the educators in the project group. Most of them need support to incorporate the contents and approaches of the programme in the planning of instruction, followed by the need for support in gathering evidence about the realization of the programme and its effects. The percentage of educators who need support in finding sufficient time to use the approaches of this programme in daily practise was the lowest.

The need for support of the educators from control group was greatest for gathering evidence from the realization of the programme and its effects, followed by the incorporation of contents in the planning. The percentage of educators from the control group who need support in monitoring the children's progress was lowest.

Chart 22: *Average grades of the educators from the project kindergartens and the ECD centres about the type of support they need in order to apply the Programme*



The comparison of educators' opinions for the needed support for the application of the Programme, based on where they work- kindergartens or ECD centres, shows that both groups need support.

The highest percentage of educators stating they need support in gathering evidence from the realization and its effects are those from the ECD centres. The area where educators expressed the least need for support was in finding sufficient time to use the approaches of the programme during daily work.

The educators from the control kindergartens need most support in finding sufficient time to use the approaches of the programme, followed by gathering evidence from the realization of the programme and its effects. Although the educators from the project kindergartens expressed the least need for support in this area, though the percentage expressed for such support is still high.

6. FINAL OBSERVATIONS AND RECOMMENDATIONS

This part of the Report presents conclusions and recommendations based on the findings of the assessment of the situation following the four-year application of the Programme. These conclusions and recommendations should inform the policy makers and the institutions in planning future activities for implementation of the Programme, especially in the context of its adoption as part of the new Law on Child Protection and the obligation for its implementation at national level for all kindergartens and ECD centres.

6.1 Final observations

The National Plan for Development 2008–2013 includes early childhood development as part of its priority to provide quality education for all. Since 2009, UNICEF has been supporting its governmental partners and the non-governmental sector to improve the provision and quality of early childhood development. The overall political environment was changed in order to promote a holistic approach towards improving early childhood development. This approach has been initially introduced in five kindergartens and 14 ECD centres.

The National Programme for Education Development 2005–2015, places particular emphasis on ensuring quality control in the educational process. The measurement of the quality of preschool education in the country has been facilitated with the adoption of *Early Learning and Development Standards*. These standards were developed and adopted by the Ministry of Labour and Social Policy with UNICEF support. The *Early Learning and Development Standards articulate* the expectations about the achievements of the preschool aged children in the different developmental domains- what young children should know and are able to do.

This study is the first measurement of the outcomes of children aged 4 to 6 years to have been conducted in the country.

It can be generally concluded that the UNICEF-supported ECD Programme based on the *Early Learning and Development Standards*, has a positive effect on children's learning in kindergartens and early childhood development centres.

The following conclusion can be also made:

- Internationally, preschool education is recognized as one of the most significant investment that contributes not only to preparing children for the transition from preschool to formal educational system, but also as a foundation for lifelong learning and development.[9]
- School readiness refers to the specific knowledge and skills that children acquire throughout early childhood that help them in strengthening their social competences, which in turn contribute to more efficient acquisition of language and mathematical skills. According to the *Education for all, Global Monitoring Report,*[10] there is a scientific consensus, based on research, that school readiness encompasses child development in five interconnected developmental domains and these are reflected in the national ELDS, with concrete measurable indicators for assessing learning and developmental outcomes.
- The new innovative approach to preschool education implemented in the UNICEF-supported project kindergartens and the ECD centres has enabled, for the first time in this country,

9 UNESCO. 2010. WCECCE Early Childhood Care and Education Action Framework, Building the Wealth of Nations. pp. 6-7.

10 UNESCO, 2007, Education for all, Global Monitring Report

the outcomes of preschool children to be measured, and the work of the kindergartens and ECD centres in terms of their effectiveness in improving child learning and development outcomes to be assessed.

- The study recorded the differences between the learning and development outcomes of children who were exposed to practices based on ELDS and those who were not.
- The children from the project group achieved better learning and developmental outcomes than the children from the control group, although the differences between the project and control kindergartens were not very big.
- The children who attended ECD centres showed better learning and developmental outcomes than the children from the project kindergartens. This could be explained by the fact that the ECD centres have greater flexibility in planning and realization of the educational programme in line with children's needs. In the period 2009–2013, the ECD centres worked exclusively according to the ELDS, by using an individualised approach to address children's needs and interests. Although the educators in the project kindergartens were trained in the use of ELDS, they still follow the old programme that is not based on standards and is thus a limitation in terms of allowing for a higher level of ELDS application.
- The data from the study shows significant differences between the learning and developmental outcomes of the children who attended preschool institutions that applied the ELDS in a more comprehensive manner and the outcomes of children who attended preschool where these Standards were applied on a more voluntary basis without appropriate training and support to the educational personnel.
- The number of years that preschool children participate in the programme for early learning and development is a determinant for children's learning and development outcomes. The results show that the duration of exposure to appropriate preschool preparation is in direct correlation with the level of the average percentage of completion of the IALDO by the children. Those children who have attended the Programme for three years showed significantly higher outcomes than children who attended the programme for only one year.
- The effectiveness of the preschool education focused on the children's' learning and development outcomes depends in part on the level of initial teacher education, but even more on their specific training as part of the professional development in early learning and development. Such training provides valuable opportunities for educators for encouraging language and cognitive development, while at the same time strengthening their skills in using sensitive interactions with young children in the early learning process.
- Educators are more effective in promoting early learning and development when there is a higher degree of emotional interaction between children and educators, leading to improved developmental outcomes (Burchinal et al. 2010). The educators in the ECD centres had additional training focusing on encouraging interaction with children as a foundation for quality early childhood development services.
- The learning and developmental outcome of the children who attended early childhood development centres were higher in all three domains than the outcomes of the children who attended the project kindergartens. The didactic approach of the kindergartens, i.e., the activities realized by the educators in the kindergartens, are taken from the old educational programme that does not leave much space for higher levels of interaction between the children and the educators.
- For all children, but especially for children from social-economically deprived and other marginalized groups, the quality of educational services is the main determinant of their progress in early learning and development. The quality of these services depends on the communication competences of educators to establish emotionally stimulating interactions with the children they teach. These competencies should be acquired through undergraduate studies as well as additional training (Howes & Smith, 1995; NICHD ECCN, 2002; Phillips et al., 2000).

- Preschool age is a sensitive period in children's development. Numerous socio-economic factors can have negative influences on a child's development and school success later in life. The following issues have negative influence on children's development: poverty, low educational levels of parents and close family members combined with a functional illiteracy that comes as a result of not attributing sufficient importance to education in the family. Even though belonging to socially vulnerable and certain ethnic groups does not represent a crucial risk factor to the child's development in itself, combinations of certain factors may have a significant negative influence on children's development.
- In the study, the parents of the children who did not attend any type of preschool institution had the lowest level of education: some 47.7% are without education or completed only primary school. The findings of the study have shown that 34.86% of the parents of children attending ECD centres have low levels of education, although their children showed a high level of completion of the IALDO. Thus, the ECD centres prove that they are an effective compensatory intervention that encourage the learning and the development of children from families of lower socio-economic status, socially disadvantaged families and families with low levels of education.
- Numerous studies have emphasized the importance of involving parents in the early learning process. However, such involvement is often lacking in practice. The application of ELDS in the project kindergartens and ECD centres has established a basis for strengthening cooperation with parents: 44% of the parents stated that they had received guidance and materials from the personnel in the kindergartens and ECD centres about working with children at home, which has an additional influence on the children's developmental achievements.

6.2 Recommendations

The findings and conclusions of the Study have provided a basis for several key recommendations aimed at raising the public awareness about the importance of early learning based on ELDS as a foundation for learning and developmental competences and preparing children to enter the formal educational system, as well as a basis for developing preschool educational policies focused on the children's outcomes.

1. **Increase inclusion** – Preschool education in the country should be reformed in order to provide equal opportunities for all preschool children to acquire early learning experiences that allow full realization of their developmental potentials. Equal opportunities are created through the more effective use and more even distribution of public funds with a focus on children in the rural municipalities. Distribution in this direction is a proven strategy for decreasing the gap between the developmental outcomes and school readiness of children in rural areas and children who did not have the opportunity to attend preschool institution.
2. **Focus on the most marginalized children** – The ECD centres introduced with UNICEF support have shown an important compensatory role in encouraging the development of children in marginalized areas and children from socially vulnerable families. The ECD centres are now included in the legal framework for preschool education, but this is insufficient. It is also necessary to build the capacities of local authorities in order to recognize the significance of this initiative not only in terms of improving social services in communities but above all in terms of investing in human capital from a very early age.
3. **Improve the quality of early learning** – Preschool institutions, particularly public kindergartens, should modify their practices in order to balance the educational component with the care component. Early learning and development programmes lead to improved learning and developmental outcomes of preschool children, and building an encouraging learning environment by building motivation and adopting a positive approach to learning helps children develop skills, knowledge, competences, self-confidence and a sense of social

responsibility.Therefore, every child, particularly children from socio-economically vulnerable families, need to have access to preschool programmes of the highest possible quality.

4. **Increase the capacities of educational personnel** – The implementation of this type of programme imposes the need to define a new profile of educator- what educators need to know and are able to do in order to successfully support young children in learning and development.Therefore, the perception of this profession should change and lifelong learning should be established as the basis of their professional development. Undergraduate training programmes should be modified, though it is important to note that numerous studies show that continuous professional development is more effective than merely increasing the duration and the quality of initial education or undergraduate training.
5. **Build institutional capacities** – The capacities of educational personnel who work with preschool children should be strengthened in parallel with building the institutional capacities involved in programme development. For the realization of programmes for early learning and development that are oriented towards the learning and developmental outcomes of young children, institutions must provide structure and directions for educators for supporting child development and providing a working environment in which these skills and competences will be promoted.

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