# A MODEL OF EARLY INTERVENTION IN SOUTH-EAST TURKEY: A PILOT IMPLEMENTATION OF THE "SUMMER PRESCHOOL"

**RESEARCH REPORT**

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## Introduction

It is well known that the social and economic development of a country is directly related to the level of schooling achieved. Early childhood education is a very effective means of increasing the likelihood of the child's success in school and the level of education attained particularly for children of families of low socio-economic standing.

The building blocks of the child's physical, cognitive, social and emotional development are set in the early years of life in the context of the family and the community at large. Parents as the primary agents of non-formal care and education make the most important contribution to the child's development. In many communities this is supported by preschool institutions. In contexts that are disadvantageous for development, such formal care and education becomes most significant and functions as an intervention measure. There is ample research pointing to the positive effects of early childhood intervention on school readiness and success in primary school (Campbell & Ramey, 1994; Bekman, 2003; Kağıtçıbaşı, Sunar & Bekman, 2001). Intervention programs serve to compensate for socio-economic and gender related inequalities pervasive in most societies. Children subject to such unequal conditions and thus at risk, tend to lag far behind their peers and this developmental gap expands in later years (Berrueta-Clement, Schweinhart, Barnett, Epstein, & Weikart, 1986; Hess, 1970; Lazar & Darlington, 1982; Pehrson & Robinson, 1990). Effective programs that give children a fair start in the early years, not only help them catch up and lead to an increased rate of enrollment in later schooling, but also decrease the need for remedial programs for unsuccessful and repeating students (Myers, 1992). Early childhood intervention programs are thus more cost-effective as compared to those provided in later years.

School success or failure is related, to a great extent, to how ready the child is for school, particularly in terms of linguistic and cognitive skills. One of the defining aspects of

formal schooling is its use of both oral and written language as the medium of instruction and acquisition of knowledge. The first task of the child at the start of primary school is, then, to learn how to read and write, that is, to acquire an encoding /decoding system in print. It is therefore, essential that the child has achieved an adequate level of linguistic competence prior to entering school. Linguistic competence is very closely related to cognitive competence the further development of which constitutes one of the targets of formal education. Activities in programs of preschool education typically concentrate on developing children's cognitive and linguistic skills and prepare them for the acquisition of literate competence. Availability of early childhood education programs and particularly early enrichment programs is, therefore, extremely important for preparing children from environmentally disadvantaged homes for school.

Turkey has a centralized system of education and the language of instruction is Turkish. The early childhood education (ECE henceforth) or the primary school systems are not equipped with special programs aimed at bridging the language gap for children who come to school with insufficient knowledge of Turkish. Remedial instruction to teach Turkish is given, at best, in the first grade by the class teacher using informal self-devised methods. The main aim of first grade activities is the acquisition of encoding/decoding skills that rely on syntactic and narrative-discourse competence. Low levels of such competence will result in delays in the acquisition of literacy skills which will, in turn, hinder in later years of school the mastery of literate competence aimed at developing strategic skills for planning, monitoring, evaluating information, and at increasing register awareness and cultural background.

**State of Early Childhood Education in Turkey and the Southeastern Early Childhood Education Project**

The officially preferred model for early childhood education in Turkey is a center-based model that has the 5-6 year age bracket as its target. Even with this narrow definition and single model of ECE, the available facilities can reach only 14%, a very small percentage of the target population (Ministry of National Education, 2003). In the last decade, a number of non-governmental organizations have taken serious interest in contributing to the improvement of education in Turkey. The Mother Child Education Foundation (ACEV henceforth) as one such organization, has been actively engaged in training mothers to give support to the development of their pre-school children, using a home-based early childhood education program developed specifically for this purpose.

Recently, ACEV decided to adopt a center-based approach with particular emphasis on early language and cognitive skills in addressing the problems faced by children who are at risk because they come from under-resourced environments. To determine the structure, context and content of the program and the most appropriate model for its implementation, a large scale survey was carried out on the needs for early childhood education and on the levels of linguistic competence of preschool and primary school age children in three provinces of Turkey with multilingual populations (Koç, Taylan, Bekman, 2002).[1] The findings revealed a need for expanding ECE services in the form of support programs to promote the development of cognitive and language skills of children at the kindergarten level. Such programs aim to prepare the child socially, cognitively and physically to begin formal schooling at a level of cognitive and linguistic competence required by the first grade activities focused on literacy acquisition. They also aim to prepare the parents for collaboration with the school, believing in the positive impact of mutual support and harmony between these two significant environments on the child. These concerns led to the

[1] These provinces were Istanbul, Van and Diyarbakır, chosen according to the Human Development Index, representing different levels of development and different levels of multilingualism.

development of two interlinked programs, the Preschool Education Program and the Mother Support Program to cater to the specific needs of the Southeastern Anatolian region.

**The Pre-School Education Program**

The Pre-School Education Program for Southeastern Turkey aims to enhance the cognitive, linguistic, social, emotional and physical skills of children from mono- or multi-lingual environments to improve their readiness for school (Bekman, Aksu-Koç, Taylan, Uzuner, Şenocak, 2003). It targets 5- to 6-year old children who cannot benefit from ECE services because they live under disadvantaged socio-economic conditions. The emphasis of the program is placed on a structure that will promote creativity, self-expression and active/participatory learning for children. The program consists of physical, cognitive, language and social-emotional components. The physical component targets the development of self-care behaviors, such as physical exercise, cleanliness and healthy nourishment habits. The aim of the cognitive component is to prepare children for school by stimulating conceptual development (spatial and temporal concepts, size concepts, directions, colors and shapes, part-whole relations, classification, seriation, and the like), pre-literacy (listening comprehension, verbal expression, visual memory, attention and discrimination) and pre-numeracy skills (1:1 correspondance, naming and recognition of numbers and shapes, addition and subtraction). The language skills component aims to support vocabulary (nouns, adjectives, verbs, and adverbs), grammatical structure (inflectional and derivational morphology, simple, coordinate and subordinate clauses and discourse organization (conversational and narrative). Finally, the social-emotional component of the program aims to promote the ability to recognize emotions and communicate them in proper ways, set up positive relationships with peers and adults, and learn ways of social-interaction.

The above aims are distributed over the nine different parts of the daily routine, twenty-thirty minutes each. An activity of any part of the daily routine may address one or more aims of one or more program components. A day starts with *Gymnastic time* devised to support physical development, body awareness, and creativity through the bodily expression of the targeted concept. *Circle time* is planned to get children to think about a subject, exchange ideas, express themselves, and see the cause-effect relationships between events. *Outdoor time* enables children to exert energy and use their skills of speaking, observing and thinking through games. *Language time* is devised to expose children to the different morpho-syntactic structures of Turkish and enhance their use of verbal skills. In *Planning time* each child talks about what, where, and with whom s/he will play in play time. *Play time* gives the child the opportunity to work independently with different materials, to engage in problem solving, and to share experiences with friends and adults. Teachers contribute to play time by observing and actively participating in children's games with questions and comments directed at the development and use of the target concepts. *Recall time* is for sharing with their friends what they have done in play time. *Preparation for School time* is devoted to working on pre-literacy and pre-numeracy exercises (adapted from the Preschool Parent Child Education Program (Şenocak, Erdoğan, Özkök, Sucuka, & Bekman, 1999). The 30 books chosen for *Story time* aim to get the children to think about different issues, the cause-effect relations that pertain between events, to support the development of language and imaginative power and to promote positive feelings about reading and writing. During the *Story Time* children are asked to relate the story characters and events to their own lives, to project what would be an alternative unfolding of events, or to perform the story.

**The Mother Support Program**

The Mother Support Program (Bekman, Sucuka and Ozdemir, 2003) targets the mothers of children attending the preschool program and is designed to complement it. The mothers are not required to be literate or fluent in Turkish and the teachers running the program are bilingual. Topics such as nutrition, preventative health care, mother and child health, preparing the child for school and positive disciplinary methods are covered within the program that also aims to support the learning process of the children attending the Preschool Education Program.[2] At home, the mothers are expected to engage in practices such as story telling and creative activities with their children, as well as supervising self-help skills and creating opportunities for responsibility taking. The Mother Support Program teachers conduct home visits to provide feedback regarding these activities and what has been discussed in the groups. Home visits are also influential in encouraging class attendance. For mothers with many children, drop-in childcare facilities are provided during the period they attended classes.

**Implementation of the Programs**

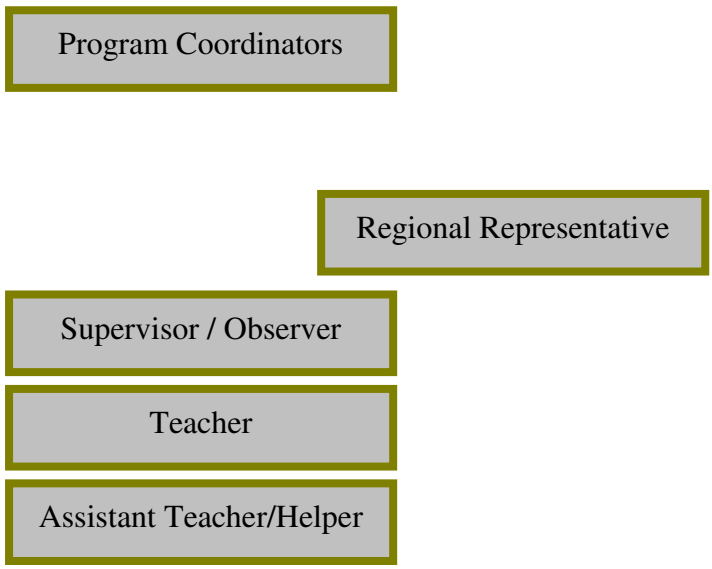
The program was implemented in Diyarbakır, a province in Souteastern Turkey, in four public schools and ACEV's experimental preschool (sites 1, 2, 3, 4 and 5). All four schools were in neighborhoods that had a high population of socio-economically disadvantaged families with high numbers of children and little or no access to preschool education facilities. Three hundred sixty children and three hundred twenty mothers attended the programs. The Preschool Education Program lasted ten weeks from 9 a.m. to 1 p.m. hours during every week day in classes of 20 children. The Mother Support Program lasted twelve

[2] During the implementation 227 mothers and over 320 children were given a medical check-up for respiratory, hearing and visual problems free of charge. The children were taken on a field trip to the airport; this was a novel experience for almost all of them.

weeks and mothers met once a week for two and a half hours. An attempt was made to include the fathers into the program; at the beginning of the implementation letters were sent to inform them about the purpose, the content and the benefits of the programs for the mothers and the children. Before the end of the implementation they were invited to a meeting and were presented with the most important aspects of the information given to the mothers. They were also asked to share their opinions about the program and the changes they observed in their children. A total of 64 fathers attended these meetings conducted by ACEV's Father Education Specialist.

***Staff***

The staffing models for the Preschool Education Program and the Mother Support Program are as presented below:




The program coordinators trained the teachers and observed and provided feedback to the teachers and the supervisors during the course of implementation. A regional representative conducted the administrative activities and was responsible for the coordination between the two programs. There were three supervisors for each program. They observed the teachers during different phases of the implementation and wrote reports to the coordinators. The teachers for the Preschool Education Program were local young women who were graduates of the Child Development and Education Department of a Vocational

High school. Teachers for the Mother Support Program were slightly older local graduates of the Child Development Department of a Vocational Higher Education Institute; all were bilingual. In each classroom of the Preschool Education Program there were two teachers, a main teacher and a teacher's aid. For each group of the Mother Support Program there was one teacher. In this paper only the evaluation study of the Preschool Education Program will be reported.

## Method

### *Design*

To study the short term impact of the program a pre - post control group quasi-experimental design was used. The time elapsed between the two assessments was ten weeks (See Table 1).

Table 1. Design of the Study

| | | **Pre-test** | **Post-test** |
|---|---|---|---|
| **Trained vs. Non-trained** | **Cognitive** | Pre-literacy and pre-numeracy skills | Pre-literacy and pre-numeracy skills |
| | **Linguistic** | Vocabulary | Vocabulary |
| | | Syntactic competence | Syntactic competence |
| | | Narrative Comprehension | Narrative Comprehension |

### *Sample*

The sample for the experimental group (trained, henceforth) was chosen from the five implementation sites. The children were 5 and 6-year olds who were going to enroll in school in that fall. The control group (non-trained, henceforth) was selected among children who lived in the same areas but did not attend the program. To ensure comparability between the two groups, similar criteria for levels of parental education and occupation and number of

children in the family were applied. There were 106 experimental and 104 control children in the study.

***Instruments***

*Instruments for the assessment of Pre-literacy and Pre-Numeracy Skills*

To assess the effects of the program in the cognitive domain, pre-literacy and pre-numeracy skills important for the acquisition of reading, writing and arithmetic were measured. A list of the sub-skills assessed by the pre-literacy and the pre-numeracy scales are shown in Table 2. The scores on the pre-literacy scale could range between 0-81, and on the pre-numeracy scale, between 0-58. Internal reliability coefficient for the pre-literacy scale was .74, and for the pre-numeracy scale, .69.

Table 2. Pre-literacy and pre-numeracy sub-skills included in the training program and assessed in the evaluation study

| **Pre-Literacy skills** | **Pre-Numeracy skills** |
|---|---|
| Visual recognition | Recognition of shapes |
| Visual discrimination | Counting |
| Visual attention | Visual matching |
| Pencil control | 1:1 Correspondence |
| Visual memory | Visual Counting |
| Classification | Visual recognition and discrimination of numbers |
| Seriation | Grouping |
| Concepts (small, big, long, short, etc.) | Addition |
| Capacity to copy | Subtraction |
| Ability to follow verbal direction | Auditory attention |
| Listening Comprehension | |

*Instruments for assessment of linguistic skills*

*Peabody Picture Vocabulary Test*

Children's level of receptive vocabulary was determined by using the Peabody Picture Vocabulary Test that consists of 100 words ordered in terms of least to most difficult. For each word the child was asked to point to the picture that represented the meaning of the word

among four pictures. A total score was computed on the basis of the number of correct responses.

*Syntactic Competence Test*

The structures included in the syntactic moduleof the language skills component of the program are presented in Table 3.

Table 3. Syntactic structures included in the training program and assessed in the evaluation study

| **Lexical Categories** | **Morphology** | **Clausal Structures** |
|---|---|---|
| Nouns, verbs,adjectives, adverbs<br><br>Spatial and temporal adverbs | Noun inflection (singular, plural, possessive and case)<br>Verb inflection (tense-aspect-modality, past, present, future, evidential, habitual, optative, conditional, necessitative, potential), agreement marking | Nominal sentences, affirmative and negative<br>Imperative and optative sentences<br>Question word-questions and yes-no questions<br>Comparative structures<br>Sentence conjunction<br>Adverbial Clauses<br>Complement Clauses<br>Causative and passive structures<br>Relative Clauses |

To assess the level of syntactic knowledge the method of elicited imitation was used. This technique rests on the assumption that speakers who have fully internalized a given structure will be able to repeat it verbatim or with minor modifications not affecting the meaning. Sixteen model sentences incorporating specific morpho-syntactic structures of Turkish (tense-aspect-modality and voice morphology; simple, coordinate, and subordinate clauses with adverbial, relative and complement constructions and the like) constituted the instrument. Sentence length in words (5-6) and morphemes (10-14) was controlled for memory constraints. Each child was asked to repeat the model sentence right after the experimenter read it out loud. The repeated sentences were recorded and later transcribed. The

data were coded in terms of three types of repetition: (i) correct (verbatim or with minor modification), (ii) modified (resulting in structural and semantic change), and (iii) no/ungrammatical repetition.

*Narrative Comprehension*

In order to assess narrative comprehension a short story represented by pictures on five cards was used. The experimenter put the picture cards successively and in mixed order in front of the child, describing the characters and events on each card. After five cards were lined up in front of him, the child was told to listen carefully to the story. Then the story was read for a second time, and after each sentence the child was asked to hand to the experimenter from the display in front of him the correct picture representing the event just read. A correct sequencing of the five cards received a score of two, a correct sequencing of three cards received a score of one, and any other sequence received a score of zero.

***Procedure***

The data were collected during the week between the registration and the beginning of the program and in the week after its termination. The subjects from the trained group were tested in the school they were attending the program, the subjects from the non-trained group were tested in their homes. Each child was tested individually, in an empty room or quiet corner.

***Analysis***

In order to assess the effects of the program, analyses of Covariance (ANCOVA) were carried out for all of the dependent measures (pre-literacy, pre-numeracy, vocabulary, narrative comprehension and syntactic competence scores). To understand what other variables had determining effects on the capacities displayed by the children at the end of the program a path analysis with multiple predictors was conducted.

**Results**

***Demographic Characteristics***

Almost all the children (88.33%) were 6-years old (born in 1997). The education levels of the mothers and the fathers were quite low, as can be expected from a low socioeconomic status population. As can be observed from Table 4, majority of the mothers were illiterate and only 22 % from the trained and 18% from the non-trained group had attended primary school. Majority of fathers in both groups were primary school graduates.

Table 4. Distribution of fathers and mothers in terms of level of education and group

| **Education** | **Mother (%)** | | **Father (%)** | |
|---|---|---|---|---|
| | Trained | Non-Trained | Trained | Non-Trained |
| Illiterate | 67 | 65 | 24 | 10 |
| Literate (didn't go to school) | 10 | 12 | 8 | 17 |
| Left primary school | 1 | 3 | 1 | 9 |
| Primary school | 22 | 18 | 53 | 51 |
| Left secondary School | 0 | 1 | 3 | 3 |
| Secondary school | 0 | 0 | 5 | 4 |
| High school | 0 | 0 | 7 | 5 |

All of the mothers were housewives. Thirty three percent of the fathers from the trained group and 24 % from the non-trained group were unemployed. Majority of the fathers with jobs were either unskilled or skilled workers. Only 10% of the fathers of the non- trained group and 1 % of the trained group were small business owners (See Table 5).

Table 5. The distribution of fathers in terms of level of occupation and group

| | **Trained (%)** | **Non-trained(%)** |
|---|---|---|
| Unemployed | 33 | 24 |
| Unskilled workers | 34 | 44 |
| Skilled workers | 27 | 19 |
| Small business Owners | 1 | 10 |
| Civil servant | 4 | 2 |
| Farmers | 0 | 2 |

Tables 4 and 5 thus indicate that parents of the non-trained group have a slightly higher level of education and occupational status.

The number of children in the families ranged between one and thirteen. The percentage of the families from the two groups were equally distributed with respect to the number of children. Majority of the families ( 48 % in both groups) had between four to six children (See Table 6).

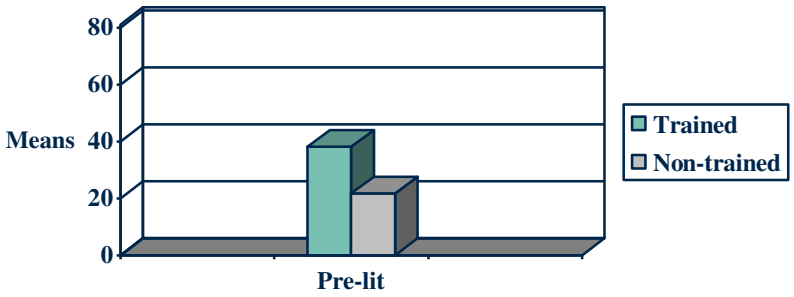
Table 6. The distribution of number of children in the family by group

| **Number of Children** | **Trained (%)** | **Non-Trained (%)** |
|---|---|---|
| 1-3 children | 23 | 27 |
| 4-6 children | 48 | 48 |
| 7-9 children | 25 | 20 |
| 10-13 children | 4 | 4 |

*Pre-Literacy & Pre- Numeracy Skills*

In the ANCOVA for pre-literacy skills, the independent variable was the program, the dependendent variable was the post-test scores on pre-literacy, and the covariate was the pre-litercay scores obtained before the the programme.

**Figure 1. Mean Pre-Literacy scores**

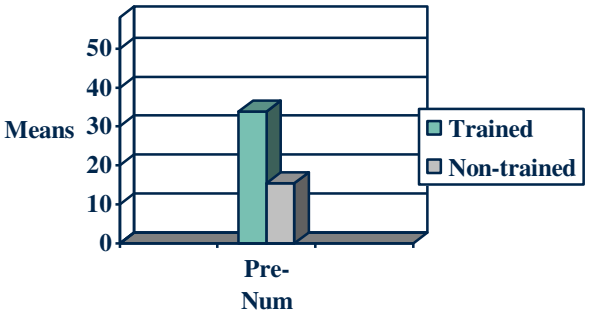



A preliminary analysis evaluating the homogeneity-of-slopes assumption indicated that the relationship between the covariate and the post-test scores did not differ significantly as a function of the independent variable ( F<1). The result of the ANCOVA was significant (F( 1,182 ) = 119,23, MSE=85.09, p=0.000); the relationship between the training program and post-test literacy scores was very strong, partial eta squared indicating that the training accounted for 40% of the variance. The trained group had a higher mean (M= 38.02) than the non-trained group (M= 21.62) (See Figure 1).

A similar analysis was carried out for the impact of the program on pre-numeracy skills. In this case, the covariate was the the pre-test scores on pre-numeracy. A preliminary analysis evaluating the homogeneity-of -slopes assumption indicated that the relationship between the covariate and the dependent variable did not differ significantly as a function of the independent variable ( F(1, 181 )= 2.718, MSE=58.82, p=0.101, partial eta square was .02). The result of the ANCOVA was significant (F(1,182 ) = 186.37, MSE=59.37, p=0.000). The strength of relationship between the program and post-test scores on pre-numeracy was

very strong as assessed by partial eta square, with training accounting for 51% of the variance. As Figure 2 illustrates, the trained group had a higher mean (M=33.92), than the non-trained group (M= 15.41).

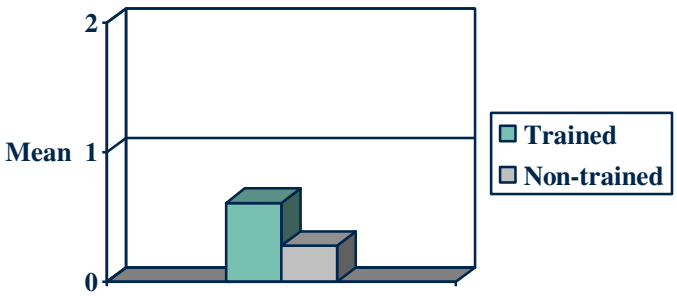
**Figure 2. Mean Pre-Numeracy scores**




*Narrative Comprehension*

The ANCOVA applied on the narrative comprehension scores also revealed a significant effect. When the pre-test scores of narrative comprehension were taken as a

**Figure 3. Mean Narrative Comprehension Scores**



covariate the test of homogeneity-of-slopes assumption indicated that the relationship between the covariate and the dependent variable was not significant (F(1,173 )= 1.280, MSE=0.549, p=0.259, partial eta square was .01). The effect of the program was significant (F(1,174) = 7.805, MSE=0.550, p=0.006). Attendance to the program accounted for 4 % of the variance in narrative comprehension, as assessed by a partial eta square. The trained group had a higher mean (M=0.61) than the non-trained group (M=0.28) ( See Figure 3).

*Peabody Picture Vocabulary*

In the ANCOVA carried out on the post-test scores of the Peabody Picture Vocabulary Test as the dependent variable with the pre-test scores as the covariate, a preliminary analysis evaluating the homogeneity-of –slopes assumption indicated a non-significant relationship F(<1). The results of the ANCOVA yielded an effect approaching significance (F(1 ,177 )= 3.205, MSE=74.164, p=0.075). The trend which is in the expected direction is reflected with a higher mean (M= 35.13) score for the trained group than for the non-trained group (M= 31.35).

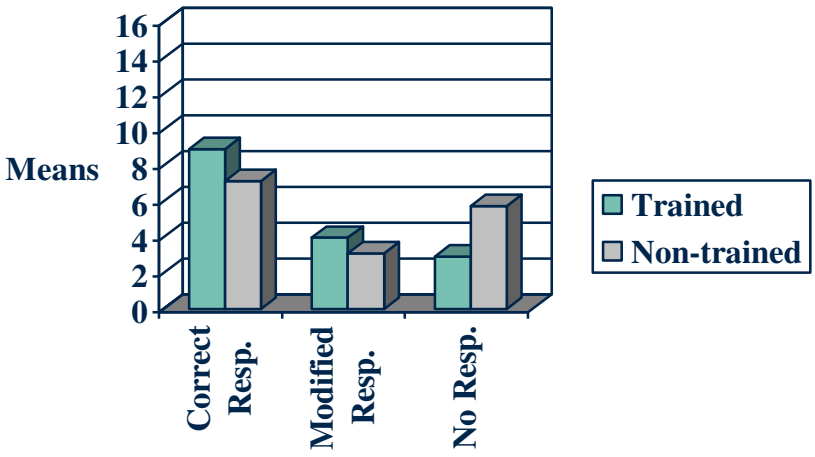
*Syntactic Competence*

An ANCOVA was carried out on the post-test correct response scores of the Syntactic Competence Test with the pre-test correct response scores as the covariate. The analysis for the homogeneity-of-slopes assumption indicated that the relationship between the covariate and the dependent variable was not significant ( F(1,181) = 1.427, MSE= 7.418, p=.234, partial eta square=.008). The effect of the program was significant at p=0.001 level (F(1,182)= 10.587, MSE=7.435). The means for the trained and the non-trained groups were (M= 8.93) and ( M= 7.15) respectively. The amount of variance explained by the training program was 6%, as indicated by the partial eta squared.

Analyses of covariance were also carried out on the post-test scores of the modified response and no/ungrammatical response categories with the pre-test scores of these variables

held as the covariate. For the post-test modified response category the analysis for the homogeneity-of-slopes assumption revealed a nonsignificant relation between the covariate and the dependent variable ( F<1). The program, however, had a significant effect at the p=0.03 level (F(1,182)= 4.763, MSE=9.225) and the amount of variance explained was 3% as shown by the eta squared value. The means for the trained and the non-trained groups are (M= 3.98) and ( M= 3.09) respectively . The means for the two groups are presented in Figure 4.

**Figure 4. Mean Scores for Syntactic Competence**



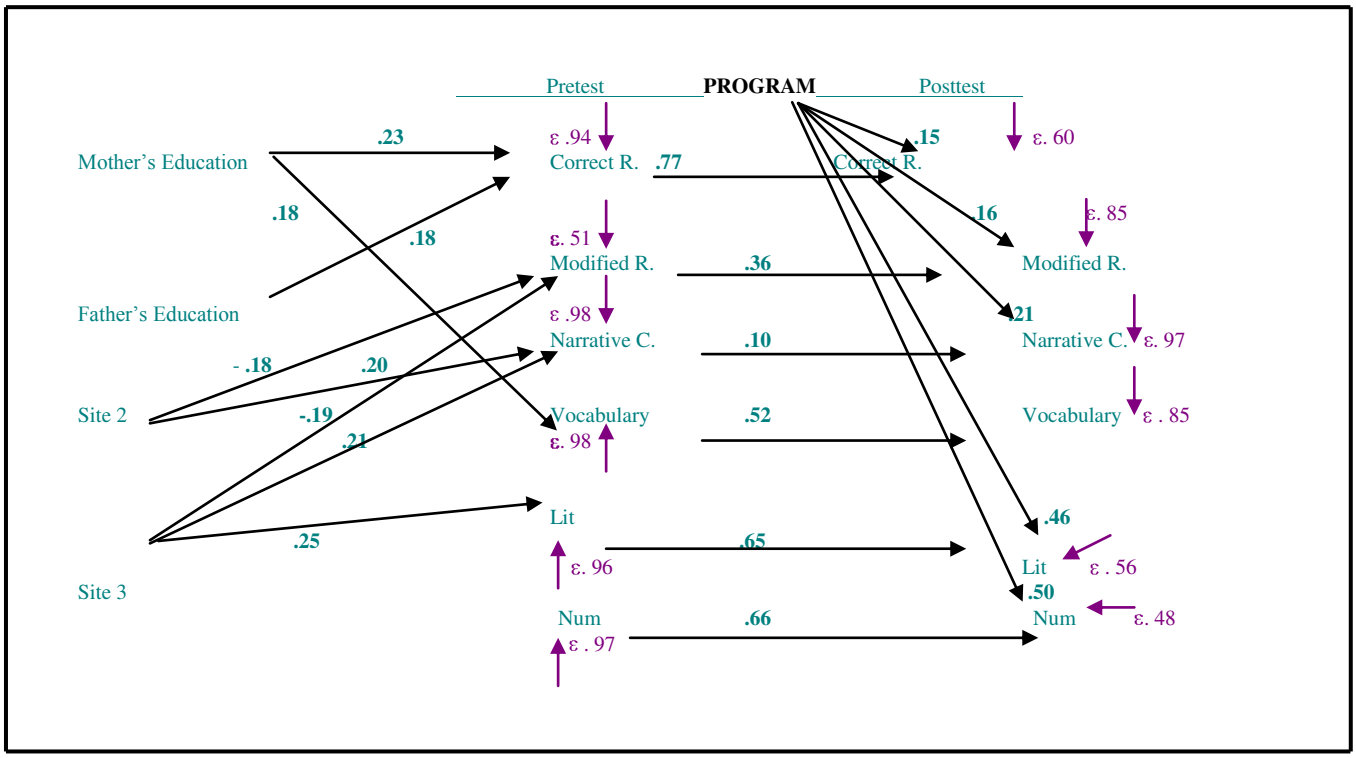

For the post-test no/ungrammatical response category, the analysis evaluating the homogeneity-of-slopes assumption yielded nonsignificant results (F(1,181)= 2.562, MSE= 10.627, p=.111, partial eta squared=.014). The effect of the program on this response category was highly significant ( F(1,181)= 30.00, MSE= 10.718, p= .000), and the eta squared value indicated that this variable accounted for 14% of the variance. The means for the trained and the non-trained groups are (M= 2.93) and ( M= 5.75) respectively. The higher means for the modified response category for the trained group also indicates a positive gain since this means a decrease in the no/ungrammatical response category.

***Path Analysis***

A path analysis was used to further examine the relations between predictor and outcome variables. The aim was to find out the extent to which the educational levels of the mothers and fathers, and the implementation sites of the program predicted the pre-test measures of the dependent variables, and the extent to which the training program and the pre-test measures predicted the post-test measures of the dependent variables. Figure 5 shows the resulting model where the significant paths are shown with beta-coefficients and error terms. [3] As illustrated in the figure, the preschool training program is one of the main predictors of the outcome variables except for knowledge of vocabulary. In addition, the pre-test score of each outcome variable was also a significant predictor. Furthermore, it is observed that the pre-test scores on pre-literacy, narrative comprehension, syntactic competence (correct and modified responses) and vocabulary measures are predicted by the education levels of the father and/or the mother and program implementation sites, either positively or negatively.

[3] The following causation coefficients were not significant; however, since the beta values were >.1, they were included in the model. The effects of the predictors site 2, site 3, education level of the mother on the pre-test syntactic competence scores; the effect of the education level of the mother on vocabulary scores.

Figure 5. Path Analysis




## Discussion

The results of the evaluation study have shown that the implementation of the Preschool Education Program was effective on children's cognitive and language skills. In the cognitive domain the targeted competencies were pre-literacy and pre-numeracy. The training program contributed to the development of these skills and enhanced them beyond the level that could be reached if they had not attended the program. The program was also effective on children's linguistic skills, both on their level of syntactic competence and on their level of narrative comprehension. Such effects were not obtained for knowledge of vocabulary, a finding that is not fully surprising since the program did not incorporate a special module targeting this particular skill. Vocabulary was emphasised in the context of teaching concepts targeted in the program; the present findings suggest that it will be beneficial to develop a special vocabulary module within the language component of the program.

When children's gains on cognitive versus linguistic skills are compared it is observed that a higher percentage of the variance in cognitive skills was explained by attendance to the program than in linguistic skills. One explanation for this finding is that about two thirds of the daily program was directed at developing the cognitive skills; furthermore simpler but similar pre-literacy and pre-numeracy activities were carried out by the mothers at home as a requirement of the Mother Support Program. Language skills, however, could not be so uniformly reinforced at home since a majority of the mothers were not native speakers of Turkish.[4] Finally, it should be noted that the language component of Preschool Education Program was tried out for the first time.

As has been observed, parental level of education was determinative of children's level of syntactic and lexical competence at the beginning of the program. No such predictive relations between parental education and cognitive skills have been detected. These findings suggest that parental level of education is an indicator of the language practices that are prevalent at home. Children of more educated parents start the program with a higher level of knowledge in Turkish. Furthermore, coming from the neighbourhoods of sites 2 and 3 was also found to be related to higher levels of syntactic competence, narrative comprehension and pre-literacy skills at the beginning of the program. In fact, the level of eduction of both fathers and mothers in these two districts is relatively higher than in the other districts.

Finally, the demographic characteristics of the sample as reflected by the level of education and occupation of the parents and family size show that the program has indeed reached its targeted population, that is children from under-resourced backgrounds. These are important findings in a country where the existing early education system scarcely reaches the "at risk" population. The present program with its contextually sensitive approach and

[4] Next to Turkish, the most widely spoken home language was Kurdish, and the third was Arabic.

effective outcomes can be considered to be an important means for meeting the needs of this particular target group.

It is believed that the level of formal schooling completed is closely related to the level of readiness of the students entering the system. If children are well prepared for school they are more likely to remain at school, be successful, and positively effect the functioning of the school system itself by reducing the number of dropouts and those who need remedial education. Programs like the Preschool Education Program and the Mother Support Program contribute to development by compensating for unfavourable environmental conditions and increasing children's level of school readiness as much as possible. Their role is particularly important during the early years when development is most influenced by environmental conditions. A program that empowers both the child and the mother is not only important for child development but also for community development at large.

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