



A Study on the Effect of Preschool Education on the Bilingual Learners' Social Compatibility and Academic Achievement

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ABSTRACT: The present study is intended to examine the impact of preschool training and education on educational achievement and social compatibility among bilingual (Turkish) students. This investigation is aimed at a comparative analysis on social compatibility and educational achievement in female and male bilingual students of first grade classrooms in primary schools who have passed preschool course with those students who have not. Method of conducting this survey is of causal- comparative research type and its statistical population includes bilingual first- grader students in Khodabandeh town (Zanjan Province) in academic year 2009-10 among of which 120 participants were chosen (60 girls and 60 boys), out of them 30 students had passed preschool course and the rest 30 had not, and they were chosen by means of multi- stage randomized cluster sampling technique with a sample group for this study. The extracted data were analyzed by descriptive and inferential statistical methods. The resultant findings from this study showed that: 1. there is a significant difference between the bilingual participant first graders in preschool training courses and students who lacked such an experience in variables of social compatibility and educational achievement. 2. Those male bilingual first graders who had passed preschool course were more benefitted from social compatibility and educational achievement than the female students with similar conditions. 3. The difference among mean scores in educational achievement is more significant in Persian language than other lessons and this is due to the relationship among language perception and lessons comprehension and achievement in literacy and thus the highly impact of preschool course on language learning skills.

Keywords: Preschool Education, Social Compatibility, Educational Achievement, Bilingualism

ORIGINAL ARTICLE

INTRODUCTION

In the world where principle of alleviation any discrimination and inequality is purposed as a paradigm for human's higher objectives and educational system play role as the main cornerstone for growth and thriving of the nations, this opportunity should be prepared equally for all individuals of the nation to reveal their latent valuable attributes of their own personality duly based on their talent and capability (Ehteshami et al., 2008). Among them, creation and expansion of a common language among nations is one of the tasks for educational system. Definitely, common language serves as the first step taken toward creation of national unity, religious and social identity, and protection from cultural heritage and ability to exchange thoughts, ideas, and experiences of various strata and classes of a nation or other nations. For this reason, all countries introduce a language as an official language in order to protect their national credit.

If children's language differs from training language then bilingualism effect may occur so that the person has to learn another language than his/ her mother's tongue (Seguin, translated by Vaghedi, 1990). Bilingual children are faced with several difficulties in their education but intensity and weakness of such complexities may vary based on difference between

their language and the official language, socio-cultural and economic level as well as passing or not passing preschool courses by children. The depth of disaster is further increased among students in rural areas who are unfamiliar with official language particularly those groups of students whose mother's tongue structure differs phonetically, lexically and syntactically from official language (Asaareh, 2004).

Entering of bilingual child into the school is like an unfortunate accident for him/ her and it may be followed by negative consequences for him/ her in educational achievement and social, emotional, and cognitive growth and since the child is exposed to an unfamiliar language that is not found in his/ her cultural content thus a communication distance is created among the child and school (Yamini Dozy Sorkhabi, 1992).

Inside the mind of such a child, what was learnt yesterday should be replaced by words and structures from other language this day. What were inscribed in his/ her mind from function of current applications and general language structure now should be transformed. It is because of this fact that the inscribed language structure in child's mind

extremely differs from language structure learned in school.

The conducted studies on the problems resulting from bilingualism among students indicate that bilingual children may complete their studies while their skills are so weak in both languages and they will have a little opportunity to join a greater community (Jafarian, 2003). Findings from study done by Dinarvand (1994) show that there is a significant difference statically between ordinary students and bilingual ones in terms of educational achievement and underachievement (Jafarian, 2003). Similarly, in his study, he concluded that mean scores of bilingual students are lower than of monolingual so this educational underachievement is greater and more evident in first grade of school due to lesser familiarity of bilingual students with official language (Jafarian, 2003).

On the other hand, Vygotsky argues that mental ability of individuals is stemmed from their early social relations during growth and quality of such relations. If these relations are established optimally then one could acknowledge that cognitive abilities and child's tongue to grow noticeably. If these relations encounter the problems then these abilities will be faced with the problems as well (Elliot, 1996). According to Vygotsky, employing language may increase children executive control than cognitive operation as means of thinking (Diaz et al., 2010).

Two major attitudes have been purposed to confront with this problem and each of them concerns with the related emerging discourses historically. According to first viewpoint, employing mother's tongue, particularly at early years of training, is not only the absolute right for any child but it's the requisite condition for education. For this reason, no justification might be reasonable for not using mother's tongue in education system for children in this attitude. If thinking orientation of UNESCO agrees with this viewpoint especially within recent decades then the second attitude will take a reformatory-adjusting approach by virtue of social, cultural, and political issues in multilingual countries and in this course employing compensatory curricula specific for bilingual students and administration of preschool programs at large scale will be introduced as two effective reformatory arms for this body (Asl Fatahi, 1994).

Since child enters already into primary school through preschool training so it requires that to be prepared for education and action in primary school. Preschool trainings may make child familiar with verbal and physical concepts and skills for learning reading, writing, and arithmetic in primary school classrooms and at the same time it may contribute to

growing of capabilities and competencies for child's adaptation in early years of school. This readiness may lead to reduced number of educational failure, underachievement and drop at primary school levels (Bay, 2010).

Also in Iran, according to the Constitution, policy of educational system emphasizes on Persian language as the official language. Nevertheless, the second attitude i.e. employing preschool trainings has drawn attention by the authorities in educational system (Asl Fatahi, 1994) since in many countries, including Iran, it is claimed that preschool trainings may appropriately affect on cognitive, lingual, and emotional attitudes and abilities in children. Their educational performance may improve their ability in training center and affect on their lingual growth and accelerate their cognitive growth and enhance previous structure content in primary school students with language rather than Persian language (Asgarinia, 1998). Today, positive and constructive impacts of preschool curricula and importance of and necessity of educational system are considered in preschool course more than past so that number of children who participated in this course has been constantly increased during two previous decades and employing techniques specified to support these course has been highly noticed (Taylor, 2010).

Studies done by Perri in US and Osborn in UK indicate that preschool training certainly affects on subsequent performance of children in school and their future attitude toward learning. These persons need to fewer educational services and greater number of them may enter high schools and graduate from there while fewer of these students will become criminal and delinquent (Reynolds, 2009). In her findings, Jafari (2003) expresses that preschool training may have useful effects on educational achievement but rate of such an impact will vary in different lessons.

Research findings by Eshagh Nyia (1994) show that rate of educational achievement and social compatibility is greater in one who passed preschool trainings than in other children.

Badore (2005), in her survey, came to the result that social compatibility of children, who experienced preschool trainings, is higher than children who lacked this experience. Similarly, the rate of impact of these trainings on social compatibility varies among girls and boys.

Pearls in his findings, states that there is high relationship among achievement in reading literacy and the related preschool educational activities in all countries (Mentioned by Karimi, 2005).

In their studies, Pickernik et al. concluded that rather than leading to greater social compatibility for

child with society, preschool training may minimize educational underachievement among such children (Mentioned by Eshagh Nyia, 1994).

Results of study conducted by Dinarvand (1994) show that there is a significant difference between normal students and bilingual students statically in terms of educational achievement, underachievement and truant from school (Dinarvand, 1994).

One could find this point with a little pondering that the above- said studies are not out of these two possibilities that bilingual students might be compared with Persian- spoken students based on several variables in these researches- it is obvious that the difference factor among home spoken language and language in school may signify difference among students of both groups- or Persian- spoken students with preschool training experience have been studied along with students without such an experience. Thus, the researcher of this study has not yet found a survey in which bilingual (Turkish) students with/ without preschool training experience was simultaneously compared in variables of social compatibility and educational achievement. Therefore, finding the answer to this question that " to what extent may preschool training play role without interference of other variable in educational achievement and social compatibility of bilingual students?" as a concern for the researcher made him to compare bilingual (Turkish) first graders at primary school with preschool training experience with bilingual students without such an experience in order to find that how much preschool training as an independent variable may affect solely and without any intervening factor on social compatibility and educational achievement in children?

Research Objectives

I) General goal of study

- To identify the impact of educational system in preschool course on social compatibility and educational achievement of female and male bilingual first graders in primary schools.

II) Minor goals:

- Conducting a comparative analysis on social compatibility of female and male bilingual first graders in primary schools that passed preschool course and or students who had not passed it;

- To carry out comparative analysis on educational achievement of female and male bilingual first graders in primary schools that passed preschool course and or students who had not passed it.

Research Hypotheses

- Research major hypothesis

The rate of social compatibility and educational achievement of female and male bilingual first graders

in primary schools that passed preschool training course is higher than students who lacked this experience.

- Research minor hypotheses

Hypothesis I- Male bilingual first graders at primary schools who passed preschool training course possess greater social compatibility than students who did not passed it.

Hypothesis II- Male bilingual first graders at primary schools who passed preschool training course are high- achiever than students who did not passed it.

Hypothesis III- Female bilingual first graders at primary schools who passed preschool training course possess greater social compatibility than students who did not passed it.

Hypothesis IV- Female bilingual first graders at primary schools who passed preschool training course are high- achiever than students who did not passed it.

MATERIALS AND METHODS

The present study is of applied type and technique of its implementation is of post- event (causal-comparative) study. Since causal- comparative study is a type of research in which independent variable has already occurred so researcher tries to look for the relations and the reasons for occurrence of phenomena by means of a retrospective study (Khoieinejad, 2001). Similarly, in this kind of research, through study on attributes of a group and comparing it with other group which lacked such traits it discovers the reason for the studied phenomenon (Hassanzadeh, 2002).

Population, sample and sampling method

Statistical population in this study includes first grade students from primary schools in Khodabandeh town (Zanjan Province), who studied in these schools during academic year 2009-10 and among of them 600 students had participated in preschool training courses. In this study statistical sample space comprises of 120 seven- years old students, who entered first grade classroom on October 2009 among of them 60 (30 boys and 30 girls) were students that passed preschool training course before entering into primary school while the rest 60 (30 boys and 30 girls) were also those students that did not experience preschool training course and they entered directly from home environment into primary school. In this study, children were chosen from students in Khodabandeh town and with respect to Raven's Intelligence Test before entering into first grade of primary school and they were normal and homogeneous in terms of intelligence and possessed identical cultural texture and no cultural difference existed among them.

Data Collection Tools:

I) *Social Compatibility Questionnaire*

To measure the rate of social compatibility among students with/ without preschool trainings, Social Compatibility Questionnaire for primary school students prepared by Eshagh Nyia (1994) was adopted. This inventory includes 22 questions about measurement of social compatibility which were ranked based on LIKERT 5 scale criterion and drawn up and ranged from very high (score 5) to very low (score 1). This questionnaire was derived from Vineland Social Maturity Scale (Edgar A. Dale, 1965) and AAMD Adaptive Behavior Scale Test Questionnaire (Lambert et al, 1974) and content and face validity of this questionnaire was determined by inventory maker where its reliability was also confirmed as ($\alpha=0.83$). In this study reliability of the questionnaire was obtained as 0.79 by means of Cronbach's Alpha Coefficient.

II) *Educational Achievement Questionnaire*

To measure rate of educational achievement for bilingual first graders in primary schools the mean scores in this study were derived from the standardized tests of educational achievement that employed for lessons of math, Persian, and natural sciences.

The method of standardized test of educational achievement (lessons of math, Persian, and natural sciences): To formulate questions in this test, initially table of measurement specifications (goal- content table) was prepared to determine goals and content of the above- said lessons in primary schools and then more the needed questions were prepared for this test by means of information from measurement specification table and the existing resources (especially manual for primary school teachers in descriptive evaluation) for the primary exam. These questions were revised and evaluated again by means of expert comments from teachers in primary school (Grade I) and teachers in the related group of authors. At the next step, the ambiguous questions were identified. After early reviews, a group of 30 first graders from primary schools in primary schools of Robat Karim town Region 2, answered to the prepared questions. At the same time, after collection and correction of the given questions, they were review question- by- question and some of questions were selected and prepared for its final administration.

Reliability of standard tests of educational achievement

In this study, in order to measure reliability of test, achievement questions were administered for a group of 30 students in lessons of math, Persian language, and natural sciences and reliability values of them were obtained by Cronbach's Alpha Coefficient as

79%, 85%, and 88% respectively. Test questions were also administered for main sample group, alpha values were obtained as 79%, 85%, and 88% respectively. The given coefficient indicates that the aforesaid tests are adequately reliable.

RESULTS

Hypothesis I: Male bilingual first graders in primary schools who passed preschool training course possess greater social compatibility than students who did not pass it.

To test this hypothesis, t- test for independent groups was adopted where test results as well as descriptive statistics of the sample are given in the table 1.

As it observed in the table 1, mean scores of male students with preschool trainings and students without preschool trainings in terms of variable social compatibility are respectively 82.76 and 68.06. t- Value that is derived with degree of freedom of 58 is ($t=5.504$). Since the given value is greater the t- value in this table then Null Hypothesis is rejected; namely, it can be concluded at 95% level of confidence that male bilingual first graders of primary schools, who passed preschool training, possess more attribute of social compatibility than students who had not passed these trainings.

Hypothesis II: Male bilingual first graders in primary schools who passed preschool training course are educationally higher achiever than students who did not pass it.

To test this hypothesis, t- test was adopted for independent groups so that test results as well as descriptive statistics of samples are given in the table 2.

As it seen in the table 2, mean scores for male students with experience in preschool trainings and students without experience in preschool trainings in variable of educational achievement are respectively 16.83 and 15.14. t- Test value that is derived with degree of freedom 58 is ($t=3.96$). Since the given t- value is greater than t- value in this table; thus, Null Hypothesis is rejected. In other words, it may be implied in this study at 95% level of confidence that male bilingual first graders of primary schools, who passed preschool training, possess attribute of educational achievement higher than students who had not passed these trainings.

Hypothesis III: Female bilingual first graders in primary schools who passed preschool training course possess greater social compatibility than students who did not pass it.

In order to test this hypothesis, t-test was utilized for independent groups so that test results as well as descriptive statistics of the samples are given the table 3.

As it observed in the table 3, mean scores of female students with preschool trainings and students without preschool trainings in terms of variable social compatibility are respectively 79.63 and 70.63. t- Value was obtained with degree of freedom 58 as (t= 3.69). Since the given t- value is greater than t- value in this table so that Null Hypothesis is rejected. Namely, it may be concluded at 95% level of confidence that female bilingual first graders of primary schools, who passed preschool training, possess more attribute of social compatibility than students who had not passed these trainings.

Hypothesis IV: Female bilingual first graders in primary schools who passed preschool training course are educationally higher achiever than students who did not pass it.

t- Test for independent groups was adopted to test the above hypothesis therefore test results as well as descriptive statistics of the given samples are presented in the table 4.

As it indicated in the table 4, mean scores of variable of educational achievement for female bilingual students with preschool training experience and primary school students without preschool training experience are 16.70 and 15.80 respectively. t- Value that obtained with degree of freedom (58) is (t= 2.32). Since the given t- value is greater than t- value in this table; therefore Null Hypothesis is rejected and it

could be concluded at 95% level of confidence that female bilingual first graders of primary schools, who passed preschool training, possess attribute of educational achievement higher than students who had not passed these trainings.

By looking at data included in Table- 5 we clearly find that mean difference that was derived from scores of educational achievement in natural sciences lesson for both students with/ without preschool training experience is equally 1.43 and this figure indicates a significant difference. Mean difference between two groups in mathematic lesson is also score of 1.82 so there is a significant difference among scores.

Despite of significant nature of mean difference values of lessons of math and natural sciences among both groups with/ without preschool training experience and with respect to the resultant data from Table 5, it is inferred that mean difference value is 3.01 among both groups with/without preschool training experience in Persian lesson so that such a remarkable value reflects more significant nature of mean difference among both groups with/ without preschool training experience in Persian lesson than lessons of natural sciences and math and this signifies the great impact of preschool training course on language learning skills and relationship among language and comprehension of concepts.

Table 1. T- test of independent among scores of male bilingual primary school students with/ without preschool trainings in variable of social compatibility

Group	N	Mean	SD	SD Err.
Male students with preschool training experience	30	82.76	9.257	1.69
Male students without preschool training experience	30	68.06	11.325	2.06

$\alpha = 0.05$; $p \leq 0.0001$; $DF = 58$; $t = 5.504$

Table 2. T- test of independent among scores of male bilingual primary school students with/ without preschool trainings in variable of educational achievement

Group	N	Mean	SD	SD Err.
Male students with preschool training experience	30	16.83	1.51	0.276
Male students without preschool training experience	30	15.14	1.76	0.322

$\alpha = 0.05$; $p \leq 0.0001$; $DF = 58$; $t = 3.96$

Table 3. T- test of independent among scores of female bilingual primary school students with/ without preschool trainings in variable of social compatibility

Group	N	Mean	SD	SD Err.
Female students with preschool training experience	30	79.63	7.92	1.44
Female students without preschool training experience	30	70.63	10.72	1.95

$\alpha = 0.05$; $p \leq 0.0001$; $DF = 58$; $t = 3.69$

Table 4. T-test of independent among scores of female bilingual primary school students with/ without preschool trainings in variable of educational achievement

Group	N	Mean	SD	SD Err.
Female students with preschool training experience	30	16.70	1.70	0.31
Female students without preschool training experience	30	15.80	1.27	0.23

$\alpha = 0.05$; $p \leq 0.024$; $DF = 58$; $t = 2.32$

Table5. Comparison among mean values and t- test in primary school students with/ without preschool trainings in variable of educational achievement separately based on lessons

Group	N	Mean Dif.	Mean	SD	SD Err.	Title of Lesson
Students with preschool training experience	60	1.43	17.05	2.13	0.27	Lesson: natural sciences (t=3.506)
Students without preschool training experience	60		15.91	2.33	0.30	
Students with preschool training experience	60	1.82	17.05	2.34	0.30	Lesson: math (t=3.47)
Students without preschool training experience	60		15.23	3.32	0.42	
Students with preschool training experience	60	3.01	17.07	1.78	0.22	Lesson: Persian language (t=7.06)
Students without preschool training experience	60		14.06	1.91	0.24	
$\alpha = 0.05$		$p \leq 0.001$		$Df = 118$		

DISCUSSION

The research findings show that there is a significant difference among students with preschool training experience and students without preschool training in terms of social compatibility. Finding the present researches are complied with findings of studies conducted by Pickernik et al., and Anderson et al. (Mentioned by Eshagh Nyia, 1994).

Similarly, findings from this study indicated that there is also a significant difference between students with preschool training experience and students without preschool training in terms of educational achievement. Findings of the current study are in line with research findings of Eshagh Nyia (1994), Jafari (2003), and Jafarian (2003). At the same time, with respect to the resultant findings from this study, there is a significant difference among female and male bilingual students who passed preschool trainings in variables of social compatibility and educational achievement so that difference in mean scores of these boy and girl groups indicates that despite of the impact of preschool training course on readiness of both genders but this impact was greater on boys. Additionally, the results indicate that the impact of this training course has been greater than on lessons of natural sciences and mathematics.

Thus, with respect to the extreme effect of preschool training on lingual skills and those lessons which are further linked to the language so it might be claimed that if passing preschool training course could affect on lingual preparedness among children then employing language in classrooms might influence in language achievement.

This finding corresponds to research findings from Karimi (2005) that concerns with the impact of passing preschool training course on language learning and Persian language lesson among bilingual first graders from primary schools as well as findings of Pearls Mentioned by Karimi (2005) regarding the existing high relationship among literacy and reading progress in students and educational activities for reading literacy before primary school.

II) Conclusion:

In our public educational system, it is assumed that all children have acquired verbal skills of Persian language during preschool years and they have well known how to reproduce and comprehend language orally as a result at age of primary school it is a high time for learning reading and writing of this language but ignoring that learners in at this age are ones whose lingual ability varies for official language thus any group needs to special planning and specific technique for learning; moreover, with entering into the school, environment and its governing rules will completely vary. Entering into school is followed by spiritual and emotional changes so occasionally it may cause anxiety and worry in child and for non- Persian spoken children, we should add unfamiliarity of the given language to this trend. Since language skills are mutually interrelated to reading and writing skills and acquiring such skills serves as an important factor in educational achievement for child; thus, preschool trainings will play crucial role in children's future progresses particularly for non- Persian spoken students. The results of educational studies on bilingual students indicate that by increasing general knowledge in children, training and improving language skills, preschool educational system could make child for stages of primary schools and formal education. It may reduce under- achievement and failure at the next steps. Therefore, non- Persian spoken children' need passing preschool training courses become even more evident than ever. Probably, results of this study and the similar research may serve as a strong reason for compulsory preschool training as a basis to creation of the needed readiness in children, particularly bilinguals for entering them into the higher grades successfully.

Suggestions:

1. With respect to results of hypotheses in this study regarding the impact of preschool trainings on educational achievement and social compatibility in bilingual students and any oppression in right of those children who have entered into primary schools without passing this course and they may be faced

with several problems in higher grades, it is duly recommended to Ministry of Education to accelerate in generalizing preschool training course as an official grade in primary schools.

2. In those areas where it is not possible to hold one- year preschool training classes, it is suggested to employ preschool mentors for holding one- month preschool readiness course instead of teachers from primary schools.

3. Given these results from the present study regarding the impact of preschool training courses on learning of lessons like Persian that is more greatly linked to the language and the extreme effect of learning Persian language on learning other lessons, it is expedient to allocate higher priority to establishment of preschool training centers in bilingual regions.

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