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AN EDUCATIONAL INTERVENTION PROGRAM DEVELOPING COGNITIVE SKILLS IN EARLY CHILDHOOD

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Abstract

Doctoral research undertaken by this author examined the contribution of an intervention program, for the development of cognitive and emotional competences towards the transition to first grade. Preschool teachers who had implemented the program for 10 months were interviewed. This article presents this only with regard to preschool children's cognitive competences while relying on ecological approach, as well as the change in preschool teachers' approach to early childhood intervention programs. The program was written in light of the author's 23 years' professional experience as a preschool teacher (in the Israeli education system and as a kindergarten teacher's instructor (9 years). Preschool teachers' need for a practical and applicable tool to promote preschool children's cognitive skills was apparent. The research developed in light of publication of the 'Infrastructure for Reading and Writing in Preschool' where compulsory cognitive contents and expected achievements were defined for preschool children. The initiative to develop the program was conceived in the early 2000s following the publication of data on low achievements in reading in Israel. The public and professional debate focused on methods of teaching reading at school, but the task of starting the process of learning how to read and write was assigned to the pre-primary education system. Furthermore, as part of the overall reform in the Israeli education system, it was decided to develop a preschool 'core curriculum' that would reflect expectations of knowledge and skills that children are meant to acquire before their transition to school.

1. Introduction

The program was written in light of the author's 23 years' professional experience as a preschool teacher (in the Israeli education system and as a kindergarten teacher's instructor (9 years). Preschool teachers' need for a practical and applicable tool to promote preschool children's cognitive skills was apparent. The research developed in light of publication of the 'Infrastructure for Reading and Writing in Preschool' Curriculum (2006), where compulsory cognitive contents and expected achievements were defined for preschool children. The initiative to develop the program was conceived in the early 2000s following the publication of data on low achievements in reading in Israel. The public and professional debate focused on methods of teaching reading at school, but the task of starting the process of learning how to read and write was assigned to the pre-primary education system. Furthermore, as part of the overall reform in the Israeli education system, which called for defining standards of achievement in all areas and stages of learning, it was decided to develop a preschool 'core curriculum' that would reflect expectations of knowledge and skills that children are meant to acquire before their transition to school.

In the qualitative part of this mixed-methods research, interviews were conducted with 2 preschool teachers before and after implementing the program in their schools. In the quantitative part, 140 preschool children aged 4.5 – 6: 70 children aged were assessed before and after implementation of the program and 70 children in two preschools who constituted a control group.

Information about the teachers' beliefs and activities to promote literacy in preschool was collected through semi-structured interviews before and after the program and helped to understand and interpret the quantitative research findings.

The results show that teachers in Israel constitute a 'professional community' sharing unique educational, language and cultural beliefs, difficulties and dilemmas. In their attitudes to the preschool goals, they are consistently loyal to the concept that emphasizes nurturing emotional and social aspects and the advancement of the children's general learning competences, and attribute lesser importance to the cognitive and academic domains. In the area of literacy, promoting children's general expression competence and their ability to interact effectively with others is perceived as more important than promoting specific competences. However, the findings indicate a lack of congruence between preschool teachers' educational attitudes and their perceptions of the attitudes of the children's parents and the education system. They believe that unlike them, parents regard advancing children in academic fields as the most important preschool goal. Furthermore, the education system also considers goals related to knowledge, thinking skills and learning habits to be very important. This lack of congruence reflects the conflict experienced by preschool teachers, which stems from the contradiction between the progressive educational philosophy underpinning their training, whereby an educator must allow each child to grow and develop according to his/her present tendencies and needs, and society's demands reflecting neo-liberal values that emphasize achievement and competitiveness.

Against this background, preschool teachers applied a pragmatic approach that enables them to uphold the key principles of their educational beliefs while at the same time making adjustments to the demands and values of parents and the community. They took upon themselves the role of preparing children for first grade, as required by the education system, but in their opinion, in order to bring children to success at school, it is important to first nurture self-esteem, self-confidence, communication

competences and learning habits. Furthermore, preschool teachers reiterated that any learning in the kindergarten, including learning in disciplinary fields, must be done only with strict observance of informal "preschool ways of teaching".

The picture that emerges from the data reveals that in recent years the practice of literacy and all its aspects in preschools has increased. The greatest change is in the areas of children's advancement towards mastery of written language - alphabetical competences and the beginning of reading and writing words. These areas were not previously perceived as an integral part of the preschool programs. The training and guidance teachers were provided in the process of assimilating the infrastructure for reading and writing in preschool program enriched their knowledge and raised their awareness of the importance of this area. The teachers testified that to making frequent use of the reading and writing infrastructure curriculum and that it helps them to respond to the demands directed at them, though sometimes they find it hard to translate the text into experiential activities in preschool.]

2. Problem Statement

The education system in Israel has begun to close the gaps in achievements between children from different socioeconomic backgrounds. Nurturing language mastery is perceived as the most important area for reaching this goal. Studies published in the 1960s and 1970s have emphasized the importance of early experiences and the need for early intervention for language development and the ability to conceptualize before the children begin their school studies (Deutsch, 1968; Stahl, 1977).

In this context, the preschool system adopted Fayans-Glick (1968) intensive method which established the goal of nurturing language, expanding vocabulary, improving syntax and sentence structure and stimulation of everyday speech as one of the main preschool goals (Reichel, 2008).

In the 1970s, a heated discussion began on the question of the beginning of reading instruction in preschool. Researchers who supported reading instruction saw this not only as a lever for school preparedness and success, but also as a tool for raising children's intelligence level (Smilansky & Shefatya, 1973). Those who were against it, warned against the danger of exerting pressure on children and suggested that they be satisfied with exposing the children to written language (Fayans-Glick, 1968).

The emotional harm to children will be more difficult than intellectual damage, and it is important to direct learning to deeper needs rather than to learn to read in preschool. The debate regarding reading instruction in preschool resurfaces occasionally, but in the end, because most early-age professionals have sided with the objection arguments, it was decided not to engage in teaching reading in preschool. However, as a response to the need to advance children's language mastery, teachers have undertaken structured and deliberate work for the development of language and literacy. The program engages in developing communication and expression skills such as: conversation, attention and listening, and the ability to describe and narrate, and nurtures thinking skills related to learning preparedness.

The progressive ideas underlying the approach, which emphasize respect for the needs of children and learning out of interest, and at their personal pace, suited the prevailing ideology among early childhood educators. The claim that the written language is acquired naturally while experiencing it in a rich written language environment has encouraged nurturing early literacy. The emphasis was placed on

the organization of a literate environment rich in written language and creating a variety of opportunities for children to experience it during the day-to-day preschool activities.

Reference to language and literacy was expressed in the Framework Program for Preschool" (Ministry of Education, 2000). Program authors did not determine specific contents that each preschool teacher must apply with preschool children, but rather left the decision regarding the contents and the extent of the integration of language in the preschool teaching program for the teachers to decide.

Literacy in Early Childhood

In recent decades researchers have agreed that knowledge of reading and writing develops in children long before formal schooling (Byrnes &Wasik, 2009; Scarborough, 2001), and its development depends on the extent to which children are exposed to experiences with written and spoken language and the quality of the mediation they receive in the process. Gaps in the level of language knowledge in early childhood carry implications for their future in the education system. Studies show that children who enter first grade when their level of spoken and written language is low compared to that of their classmates, continue to lag behind their peers with regard to reading acquisition (Aram, 2005; Bowey, 2005; Muter, Hulme, Snowling, & Stevenson, 2004).

Before their transition to school children in Israel spend at least 1-3 years in preschool and what happens within it has great implications for their development. A global study conducted in the world and in Israel testifies to the contribution of programs to promote early childhood literacy to the development of children during preschool years and their future achievements in school (Adams, 1990; Aram, 2006; Dickinson, McCabe, & Clark-Chiarelli, 2004).

Literary Skills to Be Nurtured in Preschool Age

As a result of the development of the insight that there is a continuum between preschool children's literacy level and their success in acquiring reading and writing in primary grades, the question arises: What literacy skills should be nurtured in preschool age? The discussion usually focuses on the relative importance of fostering alphabetic skills (knowledge of decoding skills, letter knowledge and phonological awareness) as opposed to developing vocabulary skills, grammatical knowledge, and conversational skills as the basis for reading acquisition.

Studies examining the relative contribution of different language skills to children's literacy and achievement in reading acquisition show that alphabetic skills contribute directly and centrally to acquiring the ability to decode a text and contribute less to reading comprehension. It is agreed that all these elements are important for promoting literacy. The dispute relates mainly to the dosage and timing of each element in preschool as part of the intervention programs.

Characteristics of Child and Environment according to Bronfenbrenner (1979)

When discussing a child's development, it is necessary to relate to a broad picture of circles of influence. In his model, Bronfenbrenner presented the circles as rings from the centre and out.

A child's biological characteristics (the ventral ring) - the characteristics with which the child comes into being. For example, genetics - eye color, weight (babies born with very low weight are also more at risk for cognitive impairment), temperament - personality traits and more.

Microsystem – Bronfenbrenner considered this system to be the most important, which mediates all other contexts to a child - The nuclear family, and later care providers in various frameworks, an

extended family, and preschool friends. The first system representatives are the parents and they mediate the child all the other connections.

Mesosystem – the ties between all the child's microsystems. If parents make sure to connect one microsystem to another, this creates stability and consistency.

Exosystem – the system of the environment with which a child does not interact directly. For example, the parent's place of work affects a child indirectly - if the mother is stressed out at work, it can affect her, and the same is true for the family's income and socioeconomic status.

Macrosystem (the cultural context) - all other contexts are rooted in it. Culture dictates the values we cherish and live by. Parents' values will influence how they raise their children. Culture dictates the values we cherish according to which we live our lives. Culture influences the concept of education, socialization and all spheres of life.

Chronosystem (timeline) - alongside the rings (where each ring is embedded in a broader ring), Bronfannbrner added the timeline - the chronological axis. For example, historical changes such as war can affect development: anxiety, worry about father, trauma; Changes in values such as the status of women; Perception of the child in the centre; One's location in the family. The time component can also include a child that develops over time. We need to take into account all these circles, where a child is in the process of development and at what time he lives.

Further in this article, I will relate the above model to the intervention program implemented in this research and the connection between the program and preschool teachers' attitudes regarding intervention programs in early childhood.

So far, I have referred to the systems that influence children, but they themselves are active agents that influence their environment and lead to a certain reaction and vice versa. For example, a mother of twins where one is calm, and one is not. She cannot have two interactions with them. She will have good interaction with the calm baby, but not with his brother, so the calm baby will react in a regulated manner while his brother will suffer from difficulties in emotional regulation and thus the cycle continues until pathology develops. The importance of the ecological model for the advancement children in preschool is in acknowledging that each child can develop differently according to the influences he or she has experienced, and as caregivers it is important that we examine the different circles that influence children. It should also be remembered that there is reciprocity and that the arrows will move in both directions. Each child is personally influenced by his or her environment; some children are more mentally sensitive, whereas others are physically or emotionally sensitive t and so on, so their behavior will differ from that of another family member.

3. Research Questions

What is the contribution of the first-grade preparation program to the development of emotional and cognitive competencies in preschool children?

What is the contribution of the first-grade preparation program to preschool teachers?

What is the contribution of the first-grade preparation program to the success of children in school?

4. Purpose of the Study

To examine the contribution of an intervention program, for the development of cognitive and emotional competences towards the transition to first grade

5. Research Methods

5.1. Research Stages

The research lasted 8 months and included 70 preschool children who were about to enter first grade and participated in the intervention program. At the same time, there were 2 control groups of 70 children of the same age who did not start the program.

The research employed the mixed methods approach, combining quantitative and qualitative methods.

Stage 1 - Tests were given to the children participating in the program to examine the intervention program's contribution to and influence on the children's level of cognitive skills by comparing their results before and after the intervention. Mentoring sessions were held with preschool teachers participating in the program to explain the activities and their suitability to the preschool. Preschool teachers were interviews.

Stage 2 - Implementation of the program in two preschools in October. After, three months, an additional training and mentoring meeting was held, and feedback was received from the teachers on program's points of preservation and improvement.

Stage 3 - At the end of the program, the children were re-examined to assess the program's influence, and the teachers were interviewed again at the end of the program.

6. Findings

Data obtained from the tests before and after the program were weighted quantitatively and showed clearly that in all areas, there was an increase in cognitive level of the children who underwent the program, compared with an significant change in the children who did not participate in the program.

Analysis of the qualitative findings revealed that the teachers' attitude towards intervention programs changed between the beginning of the program and its end. Positive attitude changes were found among preschool teachers before and after the program – from skepticism about the program's contribution to children's cognitive skills to a sense of confidence in the program's ability to advance children in the cognitive field.

At the beginning of the program, preschool teachers raised the burden on their shoulders in their interviews, and some attributed the sense of overload to the many and varied requirements of the system: "Every year I suddenly have a new program, which falls upon us without examining what we managed to do before" (A). This was the reason for skepticism about the researched program as well. The interviews showed that the program did help preschool teachers to rethink key educational and didactic concepts regarding the transition to school.

In particular, the teachers emphasized that the program helped them enhance preschool children's self-image as well as their ability to perform various cognitive tasks. In addition, the teachers explained that they understood the main points they should emphasize when they initiate various activities and

assign tasks, understand the points of difficulty and how to overcome them. Furthermore, the teachers emphasized that they had learned a great deal about didactic processes in preschool age, and how mistakes can be used to improve learning and stabilize it over time. The findings emerging from teachers' interviews showed a positive change in their approach to the contribution of the program and that their level of motivation has risen. The teachers also felt that the educational intervention program adapted to preschools is essential for the advancement of the children's cognitive and emotional aspects. This was also reflected in the literature that emphasized that these programs are primarily intended to help teachers to plan and implement appropriate programs, and help children adjust to the various domains of day-to-day life (Klingman & Eisen, 1990).

According to the preschool teachers, when the program is clear and explained in advance, it has a greater chance of succeeding. This was also evident in Eisen and Klingman's statement (1990), claiming that interventions often emphasize a preventive approach, referring to interventions in early stages of a problem's development in an educational framework, and attempts to minimize or prevent it. Hence, the existence of a program that offers cognitive advancement in preschool contributes to both teachers and children's sense of confidence

This important finding can be explained by Bronfenbrenner's theory (1979) of the social environment's influence on the shaping of an individual's identity within the framework the socialization process. This theory differs from others, in that it expresses the influences of all social environments as well as the individual's influence on his/her surroundings.

An early intervention program focusing on young children has a significant contribution to enhancing their development in various areas: motor, social, emotional and cognitive and language (Betz, 1998; Carr, 1995; Guralnick, 1998). The overall aim of such intervention programs is to reach a state of individuals communicating with their environment (in this research, preschool and the preschool teacher). This communication can be accomplished by improving skills such as the use of a correct sentence structure and the development of language comprehension, all through play and movement and by appropriate mediation on the part of adults.

The uniqueness of the "Ready, Play Ready" (Kadusi, 2016) intervention program was that it was different from others in that the activities were multidisciplinary. Each activity was integrated into a variety of developmental areas, such as cognitive, social, emotional and motor, so that the teacher experienced professional satisfaction by succeeding in advancing the children simultaneously in all areas that are important for their development. Moreover, the teachers felt the program was adapted to each child according to his or her development. The children did not feel frustration, did not resist, and the teachers felt the cooperation and their desire to continue engaging in these activities.

The change in the preschool teachers' attitudes stems from the fact that this program was different from previous ones for several reasons. The first was guidance and accompaniment throughout the program. The preschool teachers became acquainted with the program prior to its implementation in their preschools. They received a variety of cards and a disk explaining the principles of activities and examples of how to integrate them into preschool activities. Furthermore, it was emphasized that each teacher naturally can adjust the level of activities to that of the children's level of development. The second reason for preschool teachers' positive attitudes towards the program was that the activities

simultaneously integrated a number of areas of development so that children were able to advance simultaneously in a number of areas. During the activities, the teachers that since they were able to address several areas and not focus only on one development field, they could better plan their daily and weekly activities. The third reason was that the children's cooperation was immediate. The preschool teachers reported the children had kept asking to repeat the activities because the program included music and movement, so that the children felt that they were playing and at the same time advanced in areas of linguistic literacy. The fourth reason was the feedback from the parents, which was highly positive. The children told about the nature of the activities at home, and parents witnessed their progress.

In light of all this, the teachers felt that the program was a tool for them to advance the children in a proper and meaningful manner, and as a result, their professional confidence increased and so did their change of attitude.

7. Conclusion

This article explained how an educational literacy development intervention program influenced preschool teachers' attitudes as found in this relevant research. This change influenced the ways in which the preschool teachers work 'with the children, their relationship with parents and partners in the education system. Furthermore, the program allowed them to identify the relevant topics to deal with and identify sources of tension in preschool teachers' work that need to be addressed.

The article described a process of introducing a fundamental change in the preschool education system from the teachers' perspective. The change presented in the article occurred against the background of introducing reforms into the education system as a whole. Perhaps the examples provided in this article can teach about the experiences of teachers in the education system in general – searching for a way to reconcile teachers' their beliefs about that which is desired in education and their perceptions of what takes place in practice. All this is against the background of a changing social reality, which is reflected in the demands of the parents and the educational system..

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