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THE PSYCHO-PEDAGOGICAL CONDITIONS FOR KINDERGARTEN CHILDREN'S ADJUSTMENT TO ELEMENTARY SCHOOL

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ABSTRACT

The present study examines kindergarten children's transition and adjustment to elementary school, by looking into the broad range of inter-related psycho-pedagogical conditions that determine children's social, emotional and educational maturity and preparedness. Specifically, this study focuses on the comparative level of maturity and adjustment among children in the same class, born in the last three or first three months of the year (October, November, December and January, February, March), so as to determine the extent to which children's chronological age upon beginning school influences their overall maturity and preparedness for learning. Research was conducted on an experimental group of younger children and a control group of older children from the same class. It analyzed psychological and pedagogical conditions such as children's social, emotional and intellectual development, in respect of the children's chronological age.

Keywords: Transition, School age, Preparedness, Personality, Preschool experience.

INTRODUCTION

The transition from kindergarten to elementary school is of relevance both in the educational arena and the political one. The educational arena aims to achieve academic success through the formulation of academic programs, by referring to the quality of teaching, the formation of relationships between staff, the environment, parents and children. The political arena deals with the development of educational policy and legislation, providing a support network for students, maintaining accountability and ensuring equal opportunities and resource allocation.

The transition from kindergarten and adjustment to elementary school is an extremely important event in a child's life, involving crucial physiological, psychological and social changes which have a direct effect on a child's personality and the formation of positive attitudes towards school. Moreover, this transition plays a part in the separation from gaming activity and the shift to learning activity. In this context, a child is required to attain a certain level of maturity and socio-emotional learning skills in preparation for school, while a lack of social and emotional capacities adversely impacts adjustment to school life.

Although, internationally, school age varies depending on the educational program and on school and environmental considerations, international research literature indicates that in 33 countries, including Israel, children are admitted to school at the age of six, based on the assumption that, at this age, children reach the physical, emotional, social and sensory-motor levels and the degree of cognitive maturity that should allow them to begin formal studies. In Israel, the rights to schooling apply to children born January 1st to December 31st 2015. However, in her observations at kindergartens of the Arab sectors in Israel, the author has noted differences between children born in the first three months of the year (January to March) and children born in the last three months of the year (October to December). These observations have further generated a series of questions, such as: Are there differences in the adjustment of children born in the first quarter of the year and those born in the last quarter of the year? Are children born in the last quarter indeed adequately prepared for formal education? Which are the optimal pedagogical conditions for adjustment to school? So far, these important questions

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have not been sufficiently addressed in the academic literature. Therefore, it is a necessary action to carry out studies which would provide answers to these questions. This study focuses on school age as important for success in school, following recent literature which has attempted to disentangle the effects of age at school entry from absolute age, finding that the small positive effects of starting school younger are dominated by larger positive effects of greater age (Black, Devereux, and Salvanes, 2011; Carlsson et al., 2015).

LITERATURE REVIEW AND STATEMENT OF PROBLEM

The transition from kindergarten to elementary school is often depicted as the first, critical, step in a continuous and dynamic process of adjustment that children experience throughout the course of their education (Rous, Myers and Stricklin, 2007; Oliver, 2008; Margetts, 2007; Smart et al. 2008). The consequential significance of the transition from kindergarten to elementary school, not only for children but for their families as well, and its long-term impact on children's progress throughout their schooling, has also been expressed in an international declaration that guides governments, policy makers, educators, schools and institutions across the world (ETCRG, 2011).

Unfortunately, overall empirical as well as theoretical research of the subject in Israel is lacking. Specifically, the consequences of children's age at the time of their transition from kindergarten to elementary school has received insufficient treatment in educational theory and practice in Israel and calls for further attention. As a result, this study's research problem aims primarily to identify how the psycho-pedagogical conditions of adjustment to formal education differ for children born in the first and last quarters of the year, and to discern whether younger children may experience more difficulties in adjustment. Delaying entry to school is one option for young children's parents. Over time, more and more parents have chosen to delay their child's entry to school to give him or her time to have more skills and readiness (Black, Devereux and Salvanes, 2011; Carlsson et al., 2015; Bassok and Reardon, 2013).

In academic literature, much focus has been placed on the identification of the right age to begin school. The issue has evoked hypotheses, evidence and disputes regarding the extent of influence the variable of age has on a child's preparedness for schooling at the beginning of formal education. Diverse findings have demonstrated the various levels of importance age exerts as one variable impacting children's first steps in school. The main dispute revolves around the varying relative weight internal variables such as a child's personality traits, heredity, and developmental stage, carry, versus external variables such as the extent of familial support a child receives. In most studies, the impact of age at the beginning of schooling is considered evident in learning measurements and achievements (Black, Devereux and Salvanes, 2011; Cascio and Schanzenbach, 2015; Datar, 2006; Fredriksson and Ockert, 2005; Leuven et al., 2010; McEwan and Shapiro, 2007; Hámori and Köllö, 2011).

THEORETICAL APPROACHES TO KINDERGARTEN-TO-PRIMARY SCHOOL TRANSITION IN CONTEMPORARY PSYCHO-PEDAGOGY

In this study, a comprehensive analysis of the subject of adjustment to school in several countries, including Israel, was conducted, looking into individual, familial, organisational and policy factors, and the various constrictions involved in the process. The examination of these factors has revealed the nature of a psychological, educational and sociological phenomenon that calls for the engagement of all its stakeholders: educators, teachers and parents. Scientific literature agrees that transition is influenced by multiple players: children, families, parents and educators, the community, professional staff in school and kindergarten and the educational system, and that ongoing coordination, collaboration and partnership among the

relevant parties is essential for ensuring a positive, successful process of adjustment (Dockett and Perry, 2009; Fabian and Dunlop, 2006).

Different approaches to transition are presented in several analytical frameworks: the *natural development approach* emphasises the interconnectedness between the stages of child development and transition. The *environmental approach* focuses on followers of the learning process that is influenced by organisational factors, and the structural, institutional, and individual differences between children. The *constructivist approach* represented by the theory of Vygotsky's zone of proximal development, refers to the distance between the level of development action; and in the *rationalist approach*, significance is given to the child's interaction, environment, society and community.

Children's mental and physical development must attain a certain degree of maturity for them to benefit from school learning. Otherwise, the learning process becomes ineffective or, in cases of overloading immature children, even harmful. This does not mean, of course, that the mental development of children - the rhythm of this development - cannot be accelerated or checked.

RESEARCH GOALS AND OBJECTIVES

This study seeks to establish and valorise the pedagogical conditions for kindergarten children's adjustment to primary school. It sets out to:

1. Analyse the conceptual approaches to transition and adjustment to school.
2. Identify the pedagogical conditions for adjustment to school.
3. Investigate the conditions for children's adjustment to primary school according to age, preparedness, gender and parental education.
4. Establish the pedagogical peculiarities of children's adjustment to primary school.
5. Raise awareness to the importance of pedagogical assessment of children, at the beginning of their schooling.

RESEARCH DESIGN AND STRUCTURE

This research adopts a quantitative and qualitative methodology. In order to expose as many aspects of the learning process as possible, the main method of collecting data was through teacher questionnaires and parent interviews. The experiment conducted involved two groups: the experimental group comprised the younger children in class, born in the last quarter of the year; the control group comprised the older children in class, born in the first quarter of the year. The study compares the experimental and control groups and presented empirical evidence regarding the impact of age on children's adjustment to school.

Research tools

A questionnaire was distributed to preschool kindergarten teachers. They completed a general questionnaire for each child. The questionnaire contained six items checking three adjustment indexes: academic, social and emotional. The six items contained three dimensions:

1. Academic maturity index: language skills, arithmetic skills, overall success in learning in school.
2. Indexes of social integration in school.
3. Indexes of emotional maturity and self-control appropriate to this period of childhood.

Research Questions

The research questions of this study are as follows:

1. Does the age of entering school have a significant and relevant influence on a child's readiness and adjustment to elementary school?

2. Is there a functional gap between the younger children and the older children in the same class?
3. Is there a gender-based difference in readiness for learning?
4. Are differences in the level of preparedness for elementary school related to familial status?

The scientific novelty and originality of the research

Based on the theoretical foundations of the psycho-pedagogical conditions for children's adjustment to primary school, this study comprises a unique empirical research of the conditions for children's adjustment to primary school according to age (children born in the first quarter of the year versus children born in the last quarter of the year); degree of preparedness for school (emotional, social, academic) and parents' education level (low, medium, high). It establishes the influence of chronological age on children's preparedness for school and it identifies and measures the psycho-pedagogical peculiarities of children's adjustment to primary school. Seeking to establish the effective psycho-pedagogical conditions and methods that support kindergarten children's adjustment to primary school, and which may be implemented in the Israeli educational system, the study also provides foundations for the development, implementation and evaluation of an "optimisation program" which would support this transition process, thereby determining the role of teachers, parents and educational institutions in children's adjustment to primary school.

The theoretical significance of this study lies in an approach which views the psycho-pedagogical conditions for adjustment to formal education as an integrated, multi-dimensional complex that comprises variables such as age, gender and parental education. By seeking to attain a more complete understanding of the conditions of children's adjustment to the educational system and to concretise the prediction for children's success in school at the initial stages of formal education, this study forms the basis for future studies on school adjustment.

The applied value of the study lies in the elaboration and implementation of an "optimisation program" that supports the transition between kindergarten and school within the Israeli educational system through: the identification and measurement of the psycho-pedagogical peculiarities of children's adjustment to primary school; and the development and implementation of practical recommendations for educators, teachers and parents, which would contribute to the promotion of positive experiences among children transitioning from kindergarten to school.

The "optimisation program" should therefore be made available to kindergarten and primary teachers, psychologists and other school staff who are directly engaged with this stage of children's schooling. The results of the study may also be of use to parents experiencing difficulties in preparing their children for schooling. The experimental data is appropriate for use as teaching material for professional training.

Identifying the conditions for kindergarten children's adjustment to primary school

Figure 1: Psychological and pedagogical conditions for children's adjustment to primary school

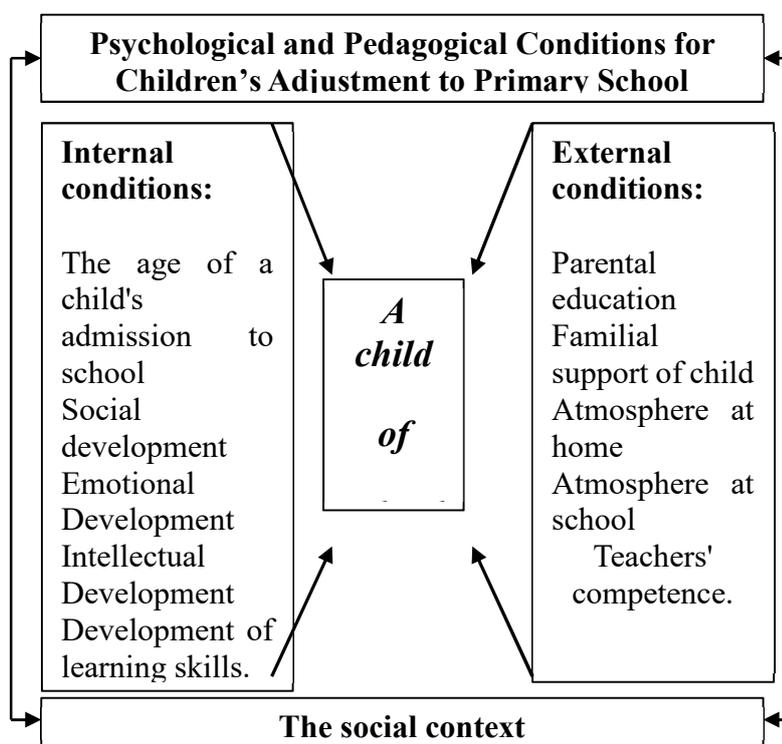


Figure 1 illustrates the dimensions that ensure optimal pedagogical conditions for children's adjustment to primary school, on which our research focuses. "The age of children's admission to school" refers to older children who were born in the first quarter of the year (January, February, March) and younger children who were born the last quarter of the year (October, November, December). "Emotional development" refers to emotional stability, mood, external appearance, honesty, and acceptance of the child by the teacher. "Social development" reflects sociability, aggressiveness, leadership qualities, activism, energy and independence of the child. "Intellectual development" refers to the degree to which cognitive and psychological processes have been developed. "Learning skills" reflect the perseverance, concentration, perception, ambition, interest and self-confidence of the child. "Parental education" is classified as "high", "middle" or "low" levels of education. "Family and school atmosphere" refers to the psycho-emotional and moral atmosphere which the child experiences among family and in the school. "The teacher's competence" refers to the communication skills and relationship between the teacher and child and teacher and family.

RESEARCH FINDINGS AND DISCUSSION

The findings of this research were as follows:

1. The psycho-pedagogical conditions of transition function as a complex system that integrates internal conditions (the child's age of admission to school, social development, emotional development, learning skills development) with external conditions (parental education, the family and school climate, and the child's familial support) which can together result in the effective adjustment of children to primary school.

2. Age differences between pre-schoolers generate differences in their socio-emotional functioning: children born in the first quarter of the year demonstrate a higher degree of preparedness for school than children born in the last quarter of the year.
3. Gender differences are marked both at class level and at age-group level within the class. At class level boys exhibit a higher degree of emotional development and learning skills than girls. Within the class, last-quarter boys are more emotionally developed than last-quarter girls, and boast more developed learning skills; first-quarter boys are more developed than first-quarter girls in all the investigated components.
4. The social and emotional adjustment of children born in the last quarter of the year calls for further intervention strategies and pedagogical assistance in order to: promote collaboration between key stakeholders (teachers, parents and children); provide support for children in carrying out their activities; provide support and stimulation for communication and friendly relations between children; and to promote the supervision of children at an earlier stage of schooling.
5. Pedagogical assistance programs involving all stakeholders (educators, teachers and parents) ensure the efficiency of the adjustment process. Therefore, the implementation of this study's scientific results should be conducted at the institutional level within the Israeli education system.

The experiment took place in mainstream kindergartens in Israel's Arab sector. The sample included 276 children from 31 preschool classes, distributed as described in Table 1.

Table 1: Distribution of experimental subjects

<i>Variables</i>	<i>Values</i>	<i>N=276</i>	<i>%</i>
Age	Young	170	61.6%
	Old	106	38.4%
Gender	Boys	166	60.1%
	Girls	110	39.9%
Parental education	Low	68	24.6%
	Middle	143	51.8%
	High	65	23.6%

The quantitative research examined three hypotheses. These results are presented in turn.

Hypothesis 1: Age differences

This study assumed that there are statistically significant differences between older children and younger children of the same class in terms of emotional, social and learning skills. The results are presented in Table 2.

Table 2: The impact of age on differences in emotional and social development and learning skills

Variables	Age				Values
	Younger children (n=170)		Older children (n=106)		
	M	AS	M	AS	
					t (274)

Emotional development	1.87	0.482	4.64	0.226	-55.30**
Social development	2.55	0.654	4.66	0.275	-31.65**
Learning abilities	4.78	0.318	4.84	0.275	-1.500

* $p < .05$, ** $p < 0.01$.

Significant differences were found between a child's age and degree of emotional development, social development and learning skills. Older children demonstrated higher levels of development than infants of the same class: [$t(274) = -55.30, p < 0.01$ **]. Namely, older children ($M = 4.64, SD = 0.226$) were found to be more emotionally developed than younger children ($M = 1.87, SD = 0.482$) in the same class. At the same time, the data show insignificant differences between age and learning skills [$t(274) = -1.500, n.s.$].

Hypothesis 2: Gender differences

This study assumed that there are statistically significant differences between girls and boys in their emotional development, social development and learning abilities regardless of age. The data obtained are shown in Table 3.

Table 3: Gender differences in emotional development

Variables	Gender				t(274)
	Boys (n=166)		Girls (n=110)		
	M	SD	M	SD	
Emotional development	3.17	1.385	2.57	1.364	3.553**
Social development	3.41	1.235	3.28	1.050	0.892
Learning abilities	4.75	0.325	4.88	0.248	-3.573**

* $p < .05$, ** $p < 0.01$

The data shows significant statistical gender differences in emotional development: [$t(104) = 4.886, p < 0.01$ **] so boys ($M = 4.70, SD = 0.220$) are more developed emotionally compared to girls ($M = 4.50, SD = 0.169$). Similarly, the data shows significant statistical gender differences in social development [$t(104) = -2.372, p < 0.05$ *]. Boys ($M = 4.62, SD = 0.325$) are more socially developed than girls ($M = 4.75, SD = 0.085$). Moreover, the data show significant statistical gender differences in learning ability: [$t(104) = 3.730, p < 0.01$ **], so girls ($M = 4.97, SD = 0.125$) are more developed in their learning ability compared to boys ($M = 4.77, SD = 0.306$).

Hypothesis 3: The relation between children's preparedness and parents' education level

This study examined the hypothesis that the differences between of children's degrees of adjustment are related to the education level of parents. The results shown in the Table 3.

Table 4: The relation between adjustment level and parental education

Variables	Level of parents' education	
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	Without education (n=68)		Secondary education (n=143)		Higher education (n=65)		F(2,273)
	M	AS	M	AS	M	AS	
Emotional development	2.75	1.238	2.78	1.456	3.36	1.392	4.060*
Social development	3.25	1.225	3.38	1.201	3.44	1.019	0.491
Learning skills	4.80	0.306	4.83	0.307	4.85	0.287	1.333

*p<.05, **p<0.01

Significant differences were noted between the children's emotional development, depending on the education level of their parents: Children of parents with higher levels of education demonstrated higher degrees of emotional development ($F(2, 273) = 4.060, p < 0.05$ *). However, the case was not such for the social development and learning abilities of children ($F(2, 273) = 0.491, n.s$) ($F(2, 273) = 1.333, n.s$).

The results of the qualitative research

Interviews with parents focused on the analysis of various aspects of adjustment to school principles: the experience of parents whose children were born in last quarter of the year; the role of age as a component of school preparedness; prolonging, if necessary, the children's time in kindergarten by another year; and offering recommendations for parents. The obtained results revealed some unexpected and interesting findings. These findings clearly demonstrate the importance of age in the transition from kindergarten to primary school. When we regard the key elements (psychological, social and educational) in the process of preparing a child for formal education, we can say that the transition carries considerable significance for children's development and the formation of their personality, and that age is a crucially important component of preparedness for school.

Many parents interviewed described their experience regarding their children's primary school experience as difficult and frustrating. Most parent indicated that several special age-related needs of young children were ignored in school. Parents commented that the curriculum was more complicated than in previous years, and that their children needed constant guidance in their learning tasks. Parents highlighted individual differences between children and as a result the need for a flexible curriculum suitable for each child. Parents increasingly considered the possibility of extending their children's time in kindergarten as a solution to these issues. The results revealed the limited capacity of small children to take responsibility for their learning experience and communication skills in their new, different, environment. Among other things, parents noted their concerns and interest in the changes that took place in both institutional networks, kindergartens and schools.

The valorisation of psycho-pedagogical conditions and methods for kindergarten children's adjustment to primary school

The results of the research were found to be in agreement with the results of other studies on the same subject, which stressed the importance of pre-schooling diagnosis in making this transition easier and more successful for children and their families (ETCRG, 2011; Fabian

and Dunlop, 2006; Margetts, 2007). The relation between children's age and their school performance and learning process throughout their school years is attested to in many studies, including Hámori and Köllö (2011).

An experimental program for optimising the conditions for children's adjustment to primary school was formulated, including practical implications and recommendations. As only a joint effort of parents and educational staff at both the kindergarten and school may ensure the success of a child's emotional and social development, this program also comprised guidance and advice to parents of young children. The program comprised diverse guided educational activities and training, to be implemented in the course of ten meetings, 2.5 hours each. The intervention program is aimed at reducing the socio-emotional gap between the two age groups of children.

CONCLUSIONS AND RECOMMENDATIONS

This research concerns one of the most relevant and complex problems challenging the educational system: the pedagogical adjustment of children to educational process. For the first time, this issue is examined from another perspective, one that seeks to identify the particularities and specificities of two preschool age categories: children born in the first quarter of the year and children born in the last quarter of the year. In this context, the obtained results led us to formulate the following conclusions:

1. The study has demonstrated that the psycho-pedagogical conditions for children's adjustment to primary school act as a coherent system comprising *internal conditions*: age of admission to school, social development, emotional development and development of learning skills; and *external conditions*: parents' education level, a familial support, family and school climate and the teacher's competence.
2. It has been determined that age significantly influences children's readiness for school. Children born in the first quarter of the year show a significantly higher degree of socio-emotional development in comparison to children born in the last quarter of the year.
3. The research results have confirmed the presence of gender differences at both the class level and in relation to age group.
4. It has been demonstrated that the level of parents' education affects children's adjustment to school. With the ascendance of parental education grows a child's degree of emotional development. However, the level of parental education does not have a significant impact on the social development and learning abilities of children.
5. Another year in kindergarten: the study's results attest to the value of examining the possibility of extending a child's time in kindergarten by another year, which may, in certain cases, improve many of the aspects that impact a child's transition to school and overall school experience.
6. It was established that preparatory programs designed to assist children in the transition to school may promote a positive experience that may assist children in successfully overcoming the difficulties associated with the transition period. The present study did not ascertain whether a child underwent such a program before transitioning between institutions. Taking such a variable into consideration may comparatively influence the data of any further study.
7. At this stage, teachers, parents and the educational climate in the institution, share a crucial and decisive role in supporting and supervising children during their first lessons in elementary school.

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