Education for All and for Each and Every One in the Israeli Education System

Applied Education Research

Education for All and for Each and Every One in the Israeli Education System

Status report and recommendations

Report of the Committee on
An Education System for All and for Each and Every One

Translated from the Hebrew original

Editors: Abraham Arcavi and Naomi Mandel-Levy

The Initiative for Applied Education Research
The Israel Academy of Sciences and Humanities

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Jerusalem, 2014
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The Israel Academy of Sciences and Humanities was founded in 1959. Its membership currently comprises close to 100 top Israeli scientists and scholars. The Israel Academy of Sciences and Humanities Law, 1961, declares that its principal objectives and tasks are to foster and promote scientific activity; to advise the Government on research activities and scientific planning of national importance; to maintain ties with foreign academies of science; to represent Israeli science at international institutes and conferences; and, to publish articles that can further science.

The Initiative for Applied Education Research (**the Initiative**) places up-to-date, scientific, critically-appraised knowledge and information at the disposal of decision-makers in the field of education. This kind of information is crucial for the intelligent formulation of policy and for optimal planning of interventions to improve educational achievements in Israel.

The Initiative's vision: Research knowledge is an essential component for planning public policy or comprehensive interventions. In the planning phase, critically-appraised research knowledge supports the formulation of policy whose chance of success is greater, and at a later point, enables rational public discourse to take place. The Initiative implements this vision in the field of education.

The Initiative's method of operation: The issues the Initiative addresses are those raised by decision-makers and it consults with senior Ministry of Education officials and other stakeholders. The Initiative's steering committee, appointed by the president of the Israel Academy, is responsible for the Initiative's work program and the peer-review processes of documents it creates.

The Initiative operates by means of expert committees and by convening joint symposia for researchers, professionals in the field and decision-makers. It publishes a variety of reports and makes them available to the public. Members of expert committees carry out their work on a voluntary basis.

History of the Initiative: The Initiative was established in late 2003 as a joint venture of the Israel Academy of Sciences and Humanities, the Ministry of Education, and the Rothschild Foundation (Yad Hanadiv). Since the beginning of 2010, the Initiative has been operating as a unit of the Israel Academy. In the summer of 2010, the Israeli Knesset amended the Israel Academy of Sciences and Humanities Law, regulating the Israel Academy's advisory role vis-a-vis government ministries seeking its consulting services. The Initiative directs the consulting activities on education related issues which the Israel Academy provides to the government and various authorities.

The Committee on "An Education System for All and for Each and Every One"

The Israel Academy of Sciences and Humanities, which was commissioned by the Ministry of Education, established an expert committee to address the challenges that stem from coping with differences among students in the education system.

During the course of its work, the committee reviewed research, position papers, models and policies in Israel and from around the world with the objective of proposing tools for thinking and for informed decision-making with respect to the mass of issues related to differences between students, with the aim of having as many students as possible derive benefit and enjoy their education system studies.

At the close of its deliberations, the committee compiled this report whose content and recommendations were agreed upon by all its members. The document presents summaries of theory and independent, up-to-date research knowledge, and directions for thinking and action. The report was subject to peer review and submitted to the Ministry of Education as well as to the public on the website of the Initiative for Applied Education Research: http://education.academy.ac.il. The scientific literature reviews, commissioned especially for the committee's work, as well as other accompanying material can also be found on the Initiative's website.

Committee members

Prof. Abraham Arcavi (Chair), Weizmann Institute of Science
Prof. Dorit Aram, Tel Aviv University
Dr. Yifat Ben-David Kolikant, Hebrew University of Jerusalem
Prof. Jonathan Cohen, Hebrew University of Jerusalem
Prof. Rivka Eisikovits, University of Haifa
Prof. Barbara Fresko, Beit Berl College
Dr. Ronnie Karsenty, Weizmann Institute of Science
Dr. Michael Katz, University of Haifa
Prof. Mona Khoury-Kassabri, Hebrew University of Jerusalem
Prof. Mario Mikulincer, Interdisciplinary Center Herzliya
Prof. David Mioduser, Tel Aviv University
Ms. Ruth Ottolenghi, Ministry of Education (retired)
Prof. Tali Tal, Technion, Israel Institute of Technology
Committee coordinator: Dr. Naomi Mandel-Levy

Acknowledgements

There were many who helped write this document. Throughout the course of its two years of work, the committee members met with many people who shared their knowledge and experience. Many others assisted "behind the scenes" – organizing, coordinating and sharing materials, and more.

Officials at the Ministry of Education headquarters

First and foremost, the committee would like to thank the Ministry of Education headquarters officials, who wholeheartedly responded to our requests to meet with them, shared their knowledge, data and wealth of experience with us, and told us about the routine of their work and the challenges they face.[1] We also express our thanks to the Ministry's administrative staff who helped us coordinate and hold the meetings – to Ms. Galit Alaioff of the Secondary Education Division office, Ms. Dasi Beeri, director of the Secondary Education Division (as of July 2013), Ms. Sima Hadad Ma-Yafit, director of the Preschool Education Division, Mr. Noah Greenfeld, director of the Teacher Training Division, Ms. Yaffa Machmali of the Gifted and Outstanding Students Division office, Prof. Ofra Mayseless, chair of the Pedagogic Administration, Mr. Yakov Tawil, director of the Education and Welfare Services Division, Ms. Malka Vidislavsky, Young Division inspector and in charge of the Schools and Learning Environments Administration in the Elementary Education Division, Ms. Monica Winokur, national coordinator of the *Maagan* Program (preschool intervention program) in the Elementary Education Division.

Thank you to Ms. Michal Cohen, senior deputy executive director and director of the Pedagogic Administration, for supporting the committee's work and for the time devoted to learning about its activities. The committee also thanks Mr. Shauli Cohen, financial-educational director, department of school based management; the pedagogical administration. Heartfelt thanks to Ms. Yaffa Pass, director, division of high school education, who was a full partner in formulating the questions presented to the committee, advised it and shared her abundant experience with it members and followed our work with good advice and constructive feedback until her retirement in May 2013. Thanks to Ms. Malka Keren, national instructor in the Elementary Education Division, to Dr. Ofer Rimon, head of the

[1] Names are listed by alphabetical order of the last name; position or affiliation listed is valid for the time the meetings took place.

Science and Technology Administration, and to Mr. Moti Rosner, director of Division A, Teacher Professional Development. Special thanks to Ms. Shlomit Rachmel, director of the Gifted and Outstanding Students Division, for raising the committee's awareness of the area for which she is responsible and for the feedback she gave to the committee on the scientific literature reviews. We also thank Ms. Sharon Shabat of the Pedagogic Administration Chairperson's office, Dr. Orna Schatz-Oppenheimer, inspector, Teacher Training Division, Ms. Hana Shadmi, director of Division A of the Psychological Counseling Service, and Ms. Maya Sharir, director of the Immigrant Student Absorption Division.

Researchers and practitioners

Thank you to the researchers and practitioners who conversed with committee members, contributing with their wide knowledge and experience and illuminating new directions of thought. We also convey our thanks to the administrative staff members who were involved in coordinating and organizing the meetings. Thank you to Prof. Michal Beller, executive director of RAMA – the National Authority for Measurement and Assessment in Education, Mr. Haim Buzaglo, screenwriter and film director who shared with us some of the pain he suffered in his childhood, Ms. Esther Chacham, for sharing her rich experience in developing personalized instruction curricula with the committee, Prof. Adam Gamoran, sociologist and education policy expert, head of the Education Research Center at the University of Wisconsin-Madison. Prof. Gamoran met with the committee at the start of its work and this meeting had great impact on the committee's direction of thinking, development and study. We also thank Prof. Haim Harari, a member of the Israel Academy of Sciences and a past president of the Weizmann Institute, Prof. Liora Linchevski of the Hebrew University of Jerusalem, Ms. Mariana Morgulies, secretary of the LENS project at the Weizmann Institute, Ms. Orit Notman-Karnovsky, Dr. Miriamm Panoyan, Mr. Eyal Ram, executive director of the Institute for Democratic Education, Ms. Yehudit Shalvi, executive director of the Avney Rosha Institute, the Israeli Institute for School Leadership, Ms. Osnat Yaron of the Avney Rosha Institute, the Israeli Institute for School Leadership, and to Ms. Haviva Zamir, secretary of the Tel Aviv University School of Education.

Speakers at the symposium

We convey our thanks to all those who spoke at the January 2013 symposium organized by the committee. Sincere thanks to the committee's guest lecturer, Dr. David Berliner of Arizona State University. Dr. Berliner gave the symposium's

keynote address. He shed light on the great importance and influence of life outside of school, at the family and neighborhood levels as well as the policy level and as such, contributed greatly to shaping the committee's agenda. Thank you to Prof. Jonathan Cohen of the Hebrew University of Jerusalem, Prof. Yehudit Dori, dean of Continuing Education and External Studies Unit at the Technion – the Israel Technical Institute, Mr. Muhana Fares, responsible for Druze and Circassian Education at the Ministry of Education, Prof. Moshe Israelashvili of Tel Aviv University, Ms. Rivka Mendel, principal of the Hatzav Middle School in Alfei Menashe, Prof. Ofra Mayseless, chair of the Ministry of Education's Pedagogic Administration, Ms. Yaffa Pass, director of the Secondary Education Division, Dr. Chava Shane-Sagiv, director of the Mandel IDF Educational Leadership Program at the Mandel Leadership Institute, Dr. Varda Shiffer, research associate at the Van Leer Institute, and Ms. Mira Yuval, principal of the Six-Year "Carmel-Zevulun" School at Kibbutz Yagur.

Educators from "the field"

The committee members learned much from their visits to schools. We thank the school principals, the staffs and students for their warm reception and willingness to share with us the routine of their school lives and their successes and to discuss difficulties and challenges as well. Following are the names of those who were of assistance to the committee in the institutions we visited: At the **"Dror" Experimental Education Campus**, Ms. Keren Edri, principal of the high school and Ms. Haya Rosenfeld, high school secretary; the **"Galil" High School**, Mr. Faisal Taha, school principal; the "**Leo Baeck" Education Center,** Ms. Osnat Ben-Hamou, general manager's office, Ms. Karen Shenhar, assistant to the general manager, Mr. Dani Fesler, general manager, Dr. Luli Stern, principal of the Elementary Division; the **Misgav Experimental Elementary School**, Ms. Hila Ben-Porat, principal; the **Ramot Hefer Six-Year Experimental School**, Ms. Bruria Sela, school principal and Ms. Nili Kaplan, in charge of the dissemination center.

Members of the public who responded to the committee's appeal

In December 2012, the committee turned to educators with an appeal for assistance in collecting information about pedagogic methods found to be appropriate for advancing different students, on emotional and social issues that are reflected in the differences between students or that impact them, and on optimal professional development for teachers working in heterogeneous environments. The committee

sincerely thanks all who responded and shared their fruitful and inspiring practice with us: Ms. Nilly Avinun, Ms. Avivit Bank, Ms. Liat Baron, Mr. Eyal Ben Ami, Ms. Yael Ben Zion Kohanovitch, Adv. Noa Bitan of the AKIM organization, Ms. Yaffa Cohen, Mr. William Farjoun, Dr. Carol Goldfus, Ms. Nini Gottesfeld, Ms. Maya Halevy of the Bloomfield Science Museum in Jerusalem, Dr. Chen Lifshitz of the Ashkelon Academic College, Mr. Ya'acov Jacques Memrmelstein, Mr. Eitan Paldi, Ms. Anat Peleg, director of Information Resources at the Branco Weiss Institute, Mr. Aviel Rabinovitch, Dr. Melodie Rosenfeld, Mr. Yaron Schwartz, Dr. Ornit Spektor-Levy of Bar Ilan University Mr. Itzhak Tordgman, Mr. Moshe Uziel, Prof. Igor Verner of the Department of Education in Science and Technology at the Technion, Prof. Ami Volansky, Dr. Dovi Weiss, chief scientist at the Time to Know program, Mr. Baruch Yacobi, principal of the Ein-Yam School, Mr. Amichai Yam, Ms. Miriam Yanovsky, Dr. Merav Yifrach, Ms. Ayala Yiftah, and Ms. Dafna Zilberman-Shemesh.

The Initiative staff

This report would not have seen the light of day were it not for the ongoing help and support of the Initiative staff. Special thanks to Dr. Avital Darmon, director of the Initiative for Applied Education Research for setting a high and uncompromising bar on the one hand, and for her willingness to discuss, listen and be convinced, on the other, to Ms. Ziva Dekel and Ms. Reut Issachar for their all-embracing and cheerful help in administrative, logistic and production matters, Ms. Ada Paldor for her uncompromising though considerate language editing, Mr. Yehoshua Rosenberg who coordinated the project as it started out and helped bring it into being, Mr. Itay Pollak and Ms. Ofra Brandes who willingly shared their wide experience in coordinating committees with me, Mr. Oded Busharian and Ms. Orit Sommer for their collaboration along the way.

Peer review

The draft of the committee's report summing up its work was sent to colleagues in Israel and abroad for review. Up to the time of this document's publication the identity of the reviewers remained unknown to the committee members. The peer review process is intended to ensure external professional, pertinent and impartial assessment that will help the authors of this report improve their work and transform it into a valuable document, used nationally and internationally. We would like to thank the reviewers for reading the report and writing their critiques.

Names of the judges (in alphabetical order)

1. Prof. Adam Gamoran, president, William T. Grant Foundation
2. Dr. Adam Lefstein, Ben-Gurion University
3. Prof. Gabi Solomon, University of Haifa
4. Prof. Anat Zohar, past chair, Pedagogic Secretariat, Hebrew University of Jerusalem, and the Mandel Leadership Institute

The above-mentioned reviewers provided constructive comments and suggested additions and corrections to the report draft they read. At the same time, the reviewers were not asked to adopt the conclusions and recommendations made by the expert committee and did not see the revised version of this document before it was printed. The expert committee takes full responsibility for the final content of this document.

Abraham Arcavi
Committee Chair

Naomi Mandel-Levy
Committee Coordinator

The committee as a whole is responsible for the entire report. Each one of the chapters was written by one or two committee members, as it related to their area of expertise. Committee members' provided comments and suggestions, the report was revised, and the wording herein was authorized by all.

The authors of the chapters in their order of appearance in the report are as follows:

Executive Summary: Abraham Arcavi, Michael Katz, Naomi Mandel-Levy

Introduction: David Mioduser, Naomi Mandel-Levy

Chapter 1: Conflicting Values and Choosing among Alternatives, Jonathan Cohen

Chapter 2: Diversities in Family Background and Socio-economic Status, Ruth Ottolenghi, Rivka Eisikovits

Chapter 3: The Implications of Socio-emotional Diversities and Their Link to Academic Achievement, Mona Khoury-Kassabri, Mario Mikulincer

Chapter 4: **Emotional and Academic Diversities in Early Childhood,** Dorit Aram

Chapter 5: **Cognitive Diversities and Realizing Academic Potential in School,** Yifat Ben-David Kolikant, Ronnie Karsenty

Chapter 6: **Coping with the Issue of Diversities in Teacher Training and Professional Development,** Tali Tal, Barbara Fresko

Conclusion: Michael Katz

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Executive Summary

The expert committee studying the topic of "Education for All and for Each and Every One in the Israeli Education System" was established by the Initiative for Applied Education Research, a unit of the Israel Academy of Sciences and Humanities. The committee was created in response to a request by the Ministry of Education and its objective was to examine the issue of diversity among students and the optimal organizational and pedagogic structure that would benefit the majority of students. This report summarizes the expert committee's work and its deliberations.

The Israeli education system is very heterogeneous from a number of perspectives: Its students span a wide range of ages (from 3 to 21), it serves diverse national and cultural communities of students, from a range of socio-economic statuses, and more particularly, the individual students – those with special and unique abilities, wishes and needs. As a result, there is great diversity between schools located in different parts of the country as well as diversity within the very same classroom.

As the committee approached the task of examining this complex issue, it learned about it from a range of sources: Meetings with Ministry of Education officials and with educators active in wider circles, from the research literature and meetings with academicians, visits to schools and meetings with people whose personal histories were relevant to the issues at hand. The committee also held a symposium open to the public which brought together researchers and practitioners as well as Ministry of Education decision-makers. The committee also commissioned scientific literature reviews that were submitted for its study, and issued a call to the public seeking to receive information about programs and research that address student diversities.

The committee's work and discussions took place against a backdrop of a reality that reflected the fact that public education systems were created during a period that was different in many ways from current times. Access to and availability of information, the technological revolution, changes in curricula and their objectives as well as changes in teacher status – all these are just some of the factors that can be cited when comparing the "21st century school" to the "20th century school." These changes are also manifest in the evolving needs of today's schools, and lead to the question of how to optimally organize schooling so that it benefits the majority of students.

Two years of work led the committee to the conclusion that there is a need to develop a complex system view of student diversities. The committee members believe that a complex understanding of this nature will expand the definition of diversity beyond academic achievement and will also relate to other types of diversity such as: Emotional and social diversity, differences in students' family backgrounds and families' socio-economic status (SES), age-related differences, diversity in students' personal wishes and needs, and more. A complex comprehension of student diversity in the school system would recognize that each student has a complex set of individual characteristics – cognitive and mental – that are relevant to learning. Consequently, each learner is unique and it is difficult, if not impossible, to follow a "typical learner" model which is a result of statistical averages. A complex approach to the topic of diversities will also be sensitive to the learner's family background and the environment in which he is growing up. For example, compared to native-born children or those from high SES families, children who grow up in poverty, children of immigrants and minority children need other conditions in order to succeed. Finally, there is no doubt that features of the educational environment also affect the ability to cope with student diversities. In this context, the reference is also to finding pedagogic solutions to be utilized daily within the school's routine and also to broader policy and a worldview the system would put into practice. Clearly, this worldview is also projected upon and reflected in teacher training and professional development processes. A systemic conception that relates to the entirety of these features will contribute toward establishing every learner's emotional welfare, his/her success in the education system and assimilation into society.

In considering methods appropriate for addressing the challenge of heterogeneity faced by the Israeli education system, on the basis of the above-mentioned assumptions, the committee adopted the concept of "diversities" in place of its parallel, "differences." In the committee's opinion, the concept of "differences" aligns with disparities between students that are reflected in the results obtained on standardized tests, which then generate groups of "poor" and "good" students, on the basis of their academic achievements. In contrast, the concept of "diversities" relates to every learner as possessing strong points and differential abilities expressed in learning style, focus of interest, special needs, etc. According to this approach, each learner has unique needs and thus, teaching and learning assessment must be adjusted to reflect this reality.

Clearly, the "diversities" approach presents the system with educational, social and value-based challenges as it seeks to create the conditions under which each learner has the opportunity to develop according to his/her individual needs.

These challenges are placed at the doorstep of all those involved in the practice of education – the "system," teachers, parents, community centers, etc. In the broadest sense, it is possible to conceive of unique learning tracks in diverse areas (theoretical, technological, professional) which all enjoy equal social standing and whose graduates all have equal chances to proceed to higher learning. At the school and classroom level, curricula and pedagogic and organizational solutions can be developed that would enable a wide range of learner types to develop and advance. The main principle of the "diversities" approach is a holistic view of each learner and creating the conditions for learning derived from his/her needs that also take into account the learner's living environment outside school. The committee members believe that equality of opportunity such as this will lead to the optimal realization of each learner's diverse abilities.

The report's foci

In light of the above, following are this report's main building blocks, as expressed in its six chapters:

1. **The transition from "differences" to "diversities"**: The word "difference" has a uni-dimensional connotation and focuses on deficits or weaknesses the individual may have. Acknowledging multiple "diversities" recognizes strengths students have in a range of domains and as such, enables diversities to not only be addressed but also to be respected and even built upon (see the Introduction).
2. **Deciding between conflicting values**: This report discusses at length the tension between conflicting values such as freedom and equality, and proposes a reasonable strategy for the resolution of dilemmas: in each value-based decision (between one important and worthy value and another important and worthy value) one must consider who may be able to better weather the possible harm of the decision and who has fewer resources to cope with it and therefore, a higher chance of being harmed (see Chapter 1).
3. **The effect of the family and socio-economic background**: There is a significant correlation between academic achievement and family background and socio-economic status (SES). Differences in background and SES are manifested not only in resources but also in values, expectations, norms, language, and behavior, which affect scholastic achievements. Thus, it is important that the education system create a supportive atmosphere for students from low SES and build relations of mutual trust with them and their families alongside setting suitable academic goals (see Chapter 2).

4. **The socio-emotional aspect**: Student wellbeing includes a good feeling, a sense of safety and protection, satisfaction with the school climate and positive relationships with teachers and friends. Wellbeing promotes scholastic achievement by increasing motivation and a sense of efficacy and as such, it should be taken into account in every educational practice (including, for example, dividing students into ability groupings). The education system has an obligation to take into account those aspects of emotional and social wellbeing that impact upon cognitive-academic aspects (see Chapter 3).

5. **Early childhood**: Emotional diversity and academic diversity are already apparent during early childhood. Self-control and self-expression in early childhood are factors that, at a later stage, have an effect on social adjustment and academic success. By preschool, children with a low level of self-expression, who are defined as introverted and shy, exhibit difficulty in adjusting and have fewer social interactions, which lead to linguistic deficiency and low achievement. SES has a significant influence on literacy and learning (among other things, in mediating parental inputs such as in the impoverished conversation of low SES mothers with their children). Preschool teachers' enriching behavior can support self-control and self-expression and alsocompensate for deficits in the home and improve intellectual development (see Chapter 4).

6. **Cognitive differences**: The conclusions from the research literature regarding implementation of models for organizing teaching and learning (homogeneous or heterogeneous classes) are not unequivocal. Each model has advantages and disadvantages and these are extensively discussed in the report. Also reviewed were the approaches employed by "effective" schools characterized by enterprising educational leadership that aids in advancing all students in academic areas, emotional well-being, independence and good citizenship (see Chapter 5).

7. **Teacher training and professional development**: The chapter reviews what is and is not being done with respect to the issue of diversities in the area of teacher training. In general, the topic of diversity does not occupy a central place in teacher training and professional development programs in Israel. These programs must be enriched for the purpose of creating and fostering an in-depth understanding of social structures and processes and exposing both new and veteran teachers to various approaches to dealing with diverse student populations (see Chapter 6).

Recommendations

Two types of recommendations appear in this report: a) general recommendations which summarize the spirit of the report as a whole and are presented below, and b) specific recommendations related to each one of the topics discussed in the different chapters. Reading the recommendations alone, without reference to the basis from which they derive, does not reflect the committee's work.

1. **Values and research as a basis for decisions on education policy**: It is recommended that fundamental decisions be based both on value-based criteria and on research findings. In the case of tension between equally deserving values, action should be taken that causes minimal harm to populations less able to bear the harm and that aspires to reduce the increasingly widening gaps between "good" and "poor" groups of students. Research findings can be enlightening and useful but it is important to remember that findings from different studies may be conflicting, as they are context-dependent and explicitly or implicitly influenced by the worldview of their authors.

2. **Differences versus diversities**: There are multiple and complex dimensions on which children and youth differ from one another. In coping with this complexity, diversities should be related to as a positive resource and opportunity for personal development, good citizenship and societal development as a whole.

3. **Holistic and "encompassing" approach**: It is recommended that the educational institution relate to diversities between students in a holistic manner. With respect to schools, it is recommended that the entire staff (principal, teachers and counselors), in cooperation with educational and social frameworks outside the school (such as community centers, youth movements, and the students' families), be involved in "enveloping" the students with a coherent framework that supports learning, wellbeing and a positive social climate of mutually respectful relationships (Evidence for this approach is described in the report.)

4. **The interconnected relationship between the education system and socio-economic issues**: The education system alone cannot cope with the societal problems that come about as a result of socio-economic and ethno-cultural differences. At the same time, the education system must be aware of the decisive influence of such factors on education, and must avoid adopting principles, programs or approaches that may perpetuate the wide gaps that

already exist between groups of students. The above is especially important for young children.

5. **Early childhood**: Emotional, social and academic abilities and attributes are formed during early childhood and influence the individual throughout his or her life. The committee members, therefore, welcome the decision of the Ministry of Education to grant free compulsory education starting at age three. However, it is imperative that the decision be reinforced through the provision of support mechanisms for preschool teachers, to help them meet the many challenges of implementation (as described in the report) and that are aimed at reducing disparities that already begin by this age.

6. **Choosing a model for organizing teaching**: Making an intelligent choice of a teaching organization model (homogeneous or heterogeneous groups) requires careful consideration of the target population in the specific context in which it will be implemented as well as of the advantages and disadvantages of each approach. In any event, it must take care to ensure that **all** students will be able to learn in an optimal and **challenging** setting that sets high standards and is guided by skilled teachers. It is recommended that ability groupings not be used in elementary school and that the decision regarding the organization of learning in middle school and secondary school be left to the judgment of the administration, takes into account the students' socio-cultural context and are made in coordination with the teachers and counselors.

7. **Principals**: Support frameworks for school principals (for example, "Avney Rosha" – the Israeli Institute for School Leadership) should continue to be maintained, and principals' autonomy in decisions regarding their schools should be expanded. Such autonomy can produce a range of successful models, such as those reviewed in this report, which successfully harness student diversities for the benefit of the individual and society.

8. **Teacher training**: It is recommended that teacher training at all levels (for student teachers, entry teachers, and expert teachers) be augmented with respect to topics related to academic, emotional and socio-cultural diversities. Such reinforcement can include familiarization with different theoretical approaches, and illuminating research (and its limitations), as well as providing a venue for coping with value-driven, social and cultural challenges. It is recommended that as a central component, teacher training include knowledge of models implemented in educational institutions, and

encourage and support communication among teachers working with the various models.

9. **An education system that learns and initiates**: In Israel there are schools which have designed creative and successful approaches that provide a response to student diversities. It is recommended that the education system thoroughly study their experiences with the goal of learning about their sustainability over time, the feasibility of their transferability to other contexts and their potential for scalability. It is recommended that a review of these initiatives be conducted systematically and consistently by allocating significant resources from the system's own research division, mainly the Chief Scientist's Office of the Ministry of Education. It is also recommended that the system create and examine alternative models (pedagogic, organizational, and curricular) based on value-driven and socially-based decisions different than those that are currently being implemented and that are adapted to the 21st century. These models should be accompanied with research in an effort to determine their worth, sustainability, and the possibility of widespread adoption.

Introduction

The committee – its establishment and objectives

The education system in Israel serves a particularly diverse population and is one of the most inclusive systems in the world: The rate of participation in the education system for early childhood is 80% for three year olds and approximately 90% for four and five year olds. In Grades 1 to 9 the rate is 97% and in 12th grade it stands at about 90%.[2] Diversity among students is expressed in collective categories (such as nationality, ethnic-cultural group, religion, and socio-economic status) and in categories that characterize the individual learner (such as age, gender, special needs, learning style, areas of interest, motivation, emotional regulation, self-image, and social competencies). The education system itself reflects structural diversity (for example, the administrative division into four types of education, operation of units for special needs students at the two ends of the curve, and units dealing with special populations). Clearly, diversity is also seen in the field: there are large differences in the needs of schools serving different populations, there are differences among the classes at the same grade level in the same school and there is also (or perhaps, mainly) great diversity within each classroom. Classrooms reflect the face of Israeli society and contain ethnic, cultural, linguistic, and socio-economic diversity in addition to the individual differences each student brings to the classroom, such as differences in family background, preferred learning style (theoretical, visual, auditory), areas of interest, motivation, self-image and self-confidence. This diversity is clearly apparent to the top officials in the education system and as well as to the school principals and teachers. The committee was faced with the decision as to which diversities would be reviewed and which not, insofar as the scope of the issue was too great to allow everything to be covered. Eventually, as will be explained below, the decision as to which diversities would be covered emerged from the knowledge accumulated during the committee's study of the subject.

[2] The information regarding early childhood refers to 3 and 4 year olds in 2014 and 5 year olds in 2013 and was received from the Information Center of the Ministry of Education's Computing and Information Systems Administration during a telephone conversation that took place on February 11, 2014. The information on the scope of learning in school is taken from the Israel Statistical Yearbook of 2010, Tables 8.10 and 8.20.

The committee's method of operation: information gathering from diverse sources

The committee's sources of information and learning were diverse and ranged from anecdotes of personal stories to inclusive meta-analyses with inference to large populations. The committee learned much from meetings it held with central Ministry of Education (MOE) officials, academic researchers, principals, teachers and students, as well as from the public's response to the request to describe existing programs and projects that relate to diversities among students. Other main sources were obviously the knowledge the committee members themselves accumulated from reading articles and books as wells their prior knowledge and experience that they brought to committee discussions, each one in his or her own area of expertise.

Meetings with Ministry of Education representatives, researchers and practitioners

In the course of their work, committee members met with officials from the MOE responsible for different aspects of handling diversity among students. The objective of these meetings was two-fold: to hear about activity being carried out in the MOE's various divisions and units with respect to diversity and to identify the main areas of difficulty Ministry officials face in their ongoing work. Committee members met with the director of the Pedagogic Administration office, division directors, and representatives of the units in the Teacher Training division. Committee representatives also spoke with the Chair of the Pedagogic Secretariat, with the director of the Science and Technology Administration office and with a representative of the MOE's Self-Management Administration office. In addition to MOE officials, committee members also met with the executive director of RAMA – the National Authority for Measurement and Assessment and with the executive director of Avney Rosha – the Israeli Institute for School Leadership.

In addition to education officials, the committee members met with many people who shed light on the topic of diversity from research, professional and personal angles. Three of these meetings greatly influenced the direction of the committee's work. The first, with Prof. Adam Gamoran, a sociologist of education and expert on education policy from the University of Wisconsin, refined the committee members' sense that there is no single or conclusive answer to the question of "ability groupings or heterogeneous classes" and instead shifted the focus of the discussion to the alternative question of how to address the disadvantages inherent

in each approach. How, for example, can we ensure that weaker students will not be harmed if studies are organized in homogeneous groups or guarantee that outstanding students will be sufficiently challenged in heterogeneous classes? The choice between alternatives, argues Gamoran, is a value-driven one, and support for just about any form of learning organization can be found in the research literature. Furthermore, research findings show that proper implementation of either of these approaches, while taking care to mitigate most of their disadvantages, will lead to good results for most students. In this respect, after the value-based choice has been made from among different alternatives, it is better to learn from research in order to optimally implement it. Research alone cannot decide the question of which approach is better. As with any area, research is inherently limited insofar as there are topics for which more knowledge exists (for example, math in secondary school, or literacy in early childhood) and areas where knowledge is scant (for example, learning in ability groups as opposed to learning in heterogeneous groups in humanities subjects). In this spirit, the report's first chapter is dedicated to clarifying the topic of choosing between values and proposes a kind of "rule of thumb" for choosing among alternatives with respect to providing a response to student diversities.

Another noteworthy meeting took place with Prof. David C. Berliner, the committee's guest lecturer at the symposium it organized (see below). Prof. Berliner contributed to opening an additional avenue for the committee's theoretical study after he put the issue of diversities in students' family background on the discussion table (family background in the broad sense – for example, differences in the nuclear family's cultural capital, economic ability, neighborhood characteristics, and the impact of youth groups). The wide disparities between children from low SES families and students from high SES families also translate to disparities in educational opportunities and inequality in scholastic achievements, which consequently demand, according to Berliner, systemic consideration on the part of the MOE. The chapter dealing with differences in family background and socio-economic status discusses the issues Berliner raised.

Finally, a third key meeting was held on a more personal note with a graduate of an experimental class run in the 1970s by Dr. Frankenstein at the Hebrew University Secondary School. The goal of the project was "rehabilitating battered thinking," namely, correcting errors of emotional and associative biased thinking. Through his personal story, the committee members learned of the emotional scars left by the experience of being identified and labeled as "disadvantaged" and studying in a class that was different in almost every aspect from the other classes at school. The graduate in question did not dispute the academic achievements he

and his peers attained and even fondly remembers the teaching staff who, he says, invested in him and his friends above and beyond the call of duty. There are other graduates from the same class who do not feel the same way he does. Despite this, he argues that the emotional and social price that studying in such a class extracted from him places a question mark on the value of his academic achievement. This meeting brought to the fore the importance of the socio-emotional aspect involved in dividing students into groups within class, ability groups across classes, and tracking streams, and it greatly affected the content of the entire report, especially the chapter addressing socio-emotional differences and their link to academic achievement.

Scientific literature reviews

For the purpose of constructing the research infrastructure upon which this report is built, the committee commissioned four scientific reviews. The reviews helped to identify research and intervention programs being conducted in Israel and abroad, as well as to familiarize the committee members with policies of other Ministries of Education regarding diversity. Below are the titles of these reviews and the names of their authors:

1. What is known about optimal educational models for systemic or local coping with student diversity? (Yehudit Dori and Zehavit Cohen)
2. What kinds of solutions do Ministries of Education in selected countries propose for the challenge of diversity among students? (Lilach Grunfeld-Yona)
3. Together or separately? Contradictory, different or simply complementary approaches? (Liora Linchevski)
4. The relationship between socio-emotional status and academic achievement among school students. (Dafna Hadar-Pecker)

The review abstracts appear in Appendix B of this report. The full reviews are available (in Hebrew) to the public on the Initiative for Applied Education Research's website, in the "Background Materials" tab.

The symposium

Several months after the committee began its work, it held a symposium for the public at large whose title was "Handling Student Heterogeneity in the Israeli

School System." The symposium brought together academicians, practitioners and MOE decision makers in order to address the wide range of differences between students and ways of coping with the challenges that diversities summon for all stakeholders involved in the system. The symposium sessions reflected the committee's belief that a multiplicity of differences among students exist, beginning with gender, making its way through culture, nationality and socio-economic status and ending up with learning styles and each learner's personal preferences.

The symposium report and videotaped lectures are available to the public on the Initiative's website.

Visits to schools

Routine encounter with student diversities takes place in schools on a daily basis. One of the most meaningful ways in which committee members learned about the attributes of diversity, their expression and different methods for addressing them was through the visits they made to schools and the face-to-face meetings they held with principals, teachers, counselors and students. Committee members visited five schools (two 3-year high schools, one 6-year secondary school, one elementary school and one school with grades 1 to 12), relatively large with respect to the size of the student body (750 to 1,200 students). Four of the five are also public schools, accepting all children living in their registration zone. The fifth school has a selection procedure on the basis of achievement and financial background, but it is nonetheless very heterogeneous. Three of the schools are experimental and serve as centers for the dissemination to other schools of their approaches. Nevertheless, the obvious must be stated – the schools that the committee visited are neither a representative sample nor a comprehensive look at practice in the education system. They are examples of schools that organize their method of instruction and learning in a manner that places diversities at the center of pedagogic practice. They do so with the help of unique programs and/or good organizational abilities that enable the administrative and teaching staff "to see" each student as an individual and relate to him/her.

One of the main lessons the committee learned from these visits was that the principal fills an important and central place in the educational practice in school and in creating a supportive climate in the school that affects staff and students alike. At the schools the committee visited, the teachers reported a sense of belonging, partnership and motivation, deriving from the backing they receive from the principal who has confidence in them and enables them to initiate and

express their individuality. These feelings can be attributed, in part, to the creation of tracks for professional development for the teachers within the school and even more so to their feeling of being part of a new way of doing things that intensifies the sense of purpose they have in their work. Similar impressions were obtained from conversations with students. Knowledge accumulated from these visits is found in the chapter discussing cognitive differences and the realization of academic potential.

A detailed description of the committee's school visits appears in Appendix A of this report.

An appeal to the public

The committee gathered additional relevant knowledge about practices in the field by issuing a call to the public at large. In this call, the committee asked to be informed of intervention programs or of any other attempts to address diversities among students. Following the appeal, approximately 30 responses were received which shed light on just some of the wide-ranging practices taking place around the country.

The need for a complex systemic view of student diversities

The public education system's organizational logic was formed during the two preceding centuries, as part of industrial society's development process and as part of the formation of modern nation-states. The association between increased industrialization and urbanization processes and mass education systems (between mass production and mass education) is manifest at the basis of the structure and methods of most education systems operating today (Collins & Halversont, 2010). The association between the nation-states' development process and that of public education strives to create shared lines (often uniform) that define the emerging political entity (Mayer, Ramirez & Soysal, 1992).

The education system's organizing principles, as devised, were based on the following characteristics: grouping students by age, subjects of study as an organizing principle of knowledge and teaching, curricular uniformity, maximum class size, duration of a typical lesson, and the definition of a "teacher."

In recent decades, social, economic and cultural changes characteristic of our time have earned our era epithets such as post-industrial society, knowledge society, digital age, etc. These changes raise many questions about schools that were planned during the past 100 years. An entire universe of concepts is changing: the

essence of knowledge and information, the world of employment, paths for social mobility, the significance and importance of learning that takes place outside of school, changes in the perception of the teacher's role and their status as exclusive agents of knowledge, changes in the perception of the learning process itself in light of broad research knowledge on the essence of individuals' and groups' cognitive processes, thinking and learning, the emergence of technology-mediated friendships, tension between global and local trends (in economics, culture, and the world of knowledge), and many other aspects. In the backdrop of all these changes are many social, value-related and ethical questions.

At the same time these changes are occurring, education systems still preserve their early characteristics (Chen, 2014, in Hebrew) including elements such as standardization, over-assessment as a determining factor for planning, decision-making (both systemic and with reference to the individual), and a striving for uniformity in teaching and achievement.

According to the approach that prevailed with the start of public education, school had a narrow function: to prepare children to enter the labor market. School was therefore organized so as to serve the market's purposes: children were divided into grades according to age, they received identical instruction and were given identical tasks to execute. In parallel however, other approaches developed alongside this one, such as those that attempted to find a middle road between society's needs and the needs of the child (for example, the progressive education movement, John Dewey's approach and attempts to advance liberal education such as Summerhill or Waldorf). Today, at the beginning of the 21st century, the school's function, learning processes, and students are perceived as more complex and layered, and (occasionally) also include consideration of the learner's personal traits, his/her family background, living environment and various characteristics of the educational environment. We will briefly discuss the importance of these features in shaping a complex systemic view of the differences among learners.

The learner's personal attributes: Much research addresses individual attributes relevant to learning. For example Grabowsky & Jonassen (2012) present a long list of attributes, divided into the following general categories: general mental abilities, cognitive control (which includes cognitive flexibility, reflectivity, and degree of impulsivity), cognitive style (variables connected to the way in which the individual perceives, organizes and stores information and solves problems), learning style (the way in which the individual perceives and processes information in learning situations), personal attributes (such as coping with frustration and uncertainty, motivation, risk-taking, and previous knowledge) (see also Price,

2004). The complex tapestry of these attributes sheds light on the fact that each learner is unique, making it difficult to depict a "representative learner" on the basis of group membership with respect to ethnicity, socio-economic status, gender, or any other social trait.

Family background and living environment: A complex view of the learner and of learning processes also derives from factors present in the social and cultural environment (Flecha, 2010). Socio-cultural and socio-historical forces influence learning processes (Aguado, Ballesteros & Malik, 2012). Many factors related to these forces influence the individual's perception of learning: they include home and community values; personal, familial and group history; and ethnic, cultural and economic group membership. Moreover, some of these factors are a product of personal and social construction, and not permanent qualities that will characterize the individual throughout life. Processes such as immigration, social and economic mobility, and political change make these factors flexible, dynamic and variable (Faultish, Orellans & Bowman, 2003). Pedagogic approaches based on general correlations between background factors and environment and belonging to an ability or achievement group ignore the complex and dynamic nature of these factors as well as the diversity of individuals who share similar backgrounds or environments.

The educational environment: Many factors in the educational environment affect learning processes, and how the individual is treated in school. In the inner circle closest to the learners, the types of pedagogic solutions implemented in the educational setting and the ways of relating to individual needs of learners can be noted. In the more remote circles, these aspects are an outcome of an educational worldview comprised, in part, of educational philosophy and of the moral and social attitudes towards various educational issues (Paris, 2012). Worldviews and educational perspectives are also evident in curricula and in training the teaching force. Teachers are in immediate and ongoing interaction with students. They are an important formative factor in the educational environment. On the one hand, they can be seen as agents for the implementation of prevailing ideas. Teachers have clear demands which they must meet and they must shape the face of daily practice so it corresponds to defined policy and rules. On the other hand, since they come into direct daily contact with the students, they are likely to be a critical factor in producing change (see Mioduser et al. 2004 for programs whose source is in local initiatives of teachers and principals, and the contribution of these programs, and for the difficulties in implementing them on a large scale).

This entirety of features discussed above thus affects the educational process and the outputs expected from the education system. The literature discusses this wide

range of outputs, from those related to the acquisition of knowledge and skills that can be measured on achievement tests, to those that are related to personality, behavioral, functional and value-related outcomes over time (Fusarelli, 2004). A systemic perception that recognizes this entire complex of factors and takes them into account would contribute to establishing the wellbeing of each learner (Darling-Hammond, 2007). The systemic view, therefore, requires consideration of intellectual development, of learning in terms of "person-plus" (Perkins, 1993), and of the synergy of personal, interpersonal and social processes.

These three aspects – the learner's personal characteristics, his or her family background and the educational environment – led the committee to distinguish between a model that relates to student differences and a model that relates to student diversities. As will be clarified below, the first defines differences as a problem that must be addressed while the second recognizes a wide range of diversities and proposes viewing them as a resource to build upon and not a problem that must be solved.

Differences vs. diversities

In the committee's opinion, the concept of "differences" between students represents an approach that defines disparities between students on the basis of measurement on uniform tests, and defines the gaps in terms of deficits from which students in the "weak" group suffer. Treating this situation means giving support (generally, academic) to the "weak" students so that they can overcome the deficit. Looking at large groups using measurement tools and standardized tests enables assignment of learners to groups on the basis of various scales and the correlations between achievements and different background factors. Such information can be of help in making pedagogic decisions and developing teaching methods adapted to different population groups (Weiz, 2010). At the same time, there are those who argue that generalized conclusions regarding the relationship between ethnic, social or cultural group membership and scholastic outputs lead to generalized decision-making that does not relate to or take into account the learner's profile and his or her personal needs.

A whole set of questions arises around what is measured, how it is measured, and how measurement results are applied in the process of systemic decision making. This issue is loaded with social, value, and occasionally, even political considerations. Thus, for example, in the 21st century, especially in the Western world, the subjects of math, science and technology warrant special status. Acquiring knowledge and skills in these areas is perceived as important on the

individual level (in thinking about advanced studies, personal development and entering the labor market in the future) and on the societal level with respect to the economy, welfare and cooperation of its members in advancing human knowledge. In opposition to this perception is the reality of social life which is comprised of a rich tapestry of areas of knowledge and practice, functions and professions. It is superfluous to mention that among individuals in society, the most diverse areas of interest, preferences, professional aspirations and abilities exist. In addition, the fact that intra-group differences are likely to be greater than inter-group differences should be considered. Here too, the difference approach does not provide a suitable solution to meet the needs of every individual (Orellana & Bowman, 2003). In other words, if learners are placed on a uniform statistical scale and hypotheses are made on the basis of averages and correlations regarding individuals' functioning and performance, there is a chance that the individual learner and the tapestry of his or her abilities will not be noticed using standard measurements. Therefore, finding the balance between society's needs and individuals' preferences in striving to achieve personal and social wellbeing is not an easy task. A situation in which the population is classified according to measurable achievements in selected subjects can harm this balance and perpetuate disparities, leaving a large part of the population outside the "normative picture."

It is interesting to think in terms of the "No Child Left Behind" (NCLB) reform in comparison to the reforms in science teaching that was implemented in the United States. At the heart of the NCLB reform is the aspiration to reduce the achievement gaps between different groups in the population through a policy of conducting comparative tests, remunerating high achieving schools and imposing sanctions at different levels on under-achieving schools (Southerland, 2013). The NCLB reform was based on practice, assessment, remuneration and punishment, while the reform in science teaching focused on pedagogy, curriculum, teacher training, and giving support to teachers. In this context, Sherry Southerland (2013) labels NCLB as relatively mute on theories of learning and descriptions of useful teaching practices and focused on measurable external aspects of accountability. While NCLB did bring about an improvement in achievement among various population groups and in some age groups, the gaps between groups were not significantly reduced. This demonstrates that equitable education and equality of opportunity are not necessarily translatable into equal education based on equal goals for all students.

In contrast to the deficit approach, an alternative approach emphasizes diversities among students and focuses on learners' differential strengths and abilities as

expressed in learning style, areas of interest, needs and other additional aspects. This approach is based on an evaluation of learners' abilities, needs and unique attributes, an evaluation of complex learning outputs and emphasizes the design of learning so that each student's different abilities will be expressed. "Deficit" is replaced by learner's "capabilities space". This space includes different types of potential functions on different planes. On one plane if refers to skills and competencies in various content areas such as the world of the number, the word, artistic creation, sports, or technological activity, and on another plane, the concept relates to competencies that stem from personal qualities that affect the learner's preferences and interests in one area over another (Terzi, 2005).

Metaphorically, it can be said that according to the "difference" approach, there is a uniform axis (the measured achievements) upon which the distribution of learners is spread (placed in one percentile group or another), while in the diversities approach, for each learner, there are a large number of scales that correspond to the range of the learner's personal traits and abilities. Each trait and ability is expressed with a different intensity and the important educational (and social and value-based) challenge here is striving to enable equality of opportunity for learners with the goal of nurturing the development of each one according to his or her individual needs. The practical translation of this approach is inherent in the development of tools at different levels, from the systemic level to the daily level in the classroom. At the systemic level for example, it is possible to think about special learning paths and learning frameworks that are equivalent to the "regular" academic paths. At the classroom level, there are curricula, pedagogic and organizational solutions and methods of learning which combine theory and practice. At the center of the diversities approach is the holistic perception of the learner and an examination of the learning process, in addition to personal development as an outcome of the complex relationship between the individual's characteristics and the characteristics of the environment. True consideration of the whole complex picture and setting policy accordingly, can generate personal satisfaction and mental and social wellbeing (Darling-Hammond, 2007). For the individual, this means realizing abilities and personal preferences in the professional, occupational and economic arenas with no labels or signs of belonging attached to tracks, groupings or special programs that are not considered "prestigious." At the social level, this means recognizing the legitimacy of sound alternatives without distinguishing between solutions for the strong or the weak.

But, perhaps more important than this, "equality of opportunity" is a means for fulfilling a broader value-driven choice. It is possible to develop equality of opportunity (programs, pedagogic approaches, and "rehabilitating" tracks) so that

all students aim for a single goal (such as succeeding on international tests or reaching expected achievements in a specific subject). Alternatively, these means can be used for the optimal realization of the learners' range of abilities. The first approach focuses on the system and the second approach focuses on the learners and their welfare; the choice between these two goals is society's value judgment. The difference between these two approaches can also be articulated as follows: it is the difference between "coping with differences" and "honoring diversities." The difference in phrasing indicates the difference in the perception: seeing it as a problem that must be addressed as opposed to perceiving the situation as an opportunity upon which pedagogic processes that support the development of each individual can be built.

The committee based its work on the diversities approach.

Diversities not addressed in this report

The number of diversities is as great as the number of students. As already mentioned above, each student has different individual characteristics and these come into play differently in different life environments. Thus, not surprisingly, the committee did not cover in its discussions all the possible topics related to this issue. At the same time, there are some central areas where diversities among students are evident but were not covered in this report for the reasons presented below. It is important to emphasize that the fact that these topics were not included does not attest to the fact that the committee members did not attach importance to them. To a very great extent, the opposite was true. Their weightiness and expanse were too great to give them proper attention in the limited time at the disposal of the committee.

Thus, this report does not address special education. The diversity within this population is immense and the committee members felt that given the resources of time and knowledge at their disposal, they would not be able to relate in a thorough manner to the diversities both in this population and in the regular education tracks. The report, briefly and unsystematically, relates to special needs children mainstreamed in regular education frameworks. At the other end of the special needs continuum, consideration of gifted children appears in specific contexts in different chapters but a separate chapter is not devoted to this population.[3]

[3] In November 2005, the Initiative for Applied Education Research conducted a seminar on the topic of "Challenging the Top 20% of School Students." Background materials for the seminar and the presentations given at the seminar appear on the Initiative's website on the "News and Events" tab.

Another large population group not included in this report is the "Haredi" (ultra-Orthodox) sector. The main reason for its non-inclusion is the lack of research from which it would be possible to learn in-depth about this society. Another issue the committee decided not to address was the issue of gender. Although, unlike the case of Haredim, there is substantial academic research on the topic, the committee members felt that they would not be able to relate in a thorough manner to the topic due to research addressing every age on the continuum and is uniquely manifest in the different areas of knowledge. Finally, another broad topic that did not receive expression in this report is occupational education as a possible response to student diversities. The important question in this context is whether broad occupational and technological education should be ensured as an alternate channel for creating a sense of efficacy and success among students having difficulty with academic education. Due to this topic's great importance and its wide scope, the committee decided not to address it in this report and to recommend the establishment of an expert committee that will thoroughly examine different aspects of this issue.

Chapter 1: Conflicting Values and Choosing Among Alternatives

A Basis for Formulating a Political Agenda Regarding the Question: "Education for All or for Each and Every One?"

In the Introduction to this report, it was stated that the research does not clearly support a particular alternative concerning how learning should be organized so that the potential of most students can be realized to the utmost possible. Since the research is not unequivocal, the choice among alternatives is of a value-conscience nature and can involve a conflict in values: on the one hand, there is the value of freedom or the individual's right to self-fulfillment, and on the other, the value of equality – the right of each individual to basic educational conditions that will enable him or her to achieve a dignified and meaningful life. Although the Introduction to this report states that the committee welcomes a holistic view of each learner – an approach that relates to all of his or her strong and weak points, limited resources require that difficult decisions be made. This chapter is a proposal to policymakers to consider the manner and method by which conflicting values (for example, peace and justice, justice and compassion, responsibility for the other versus responsibility to society) should be addressed – a proposed platform for informed discussion with respect to the conflict between freedom and equality and between "an education system for each and every one" and "an education system for all."

Much has been written on the tension between freedom and equality and in the current framework, we will not repeat all the opinions which have been voiced. We will pose only two theoretical questions that appear to be at the basis of every practical question relating to the topic at hand:

1. Can the value of freedom and the value of equality be resolved within the framework of a single worldview?
2. When relating to it on a deep level, is the value of freedom actually derived from an entire worldview that is incompatible with the value of equality? Perhaps the value of freedom is part and parcel of a worldview which sanctifies individual self-expression, while the value of equality stems from a worldview that, as opposed to self-expression, sees solidarity with the oppressed, the suffering and the weak as the pinnacle of humanity?

And perhaps both the value of freedom and that of equality result from the value of human dignity? Against the background of these ruminations, questions arise. Is it possible to develop a method that would, within a framework of given resources, evaluate optimal freedom and optimal equality in order to promote the value of human dignity in general? Is there a harmonious worldview within which all the positive values mesh and do not conflict? Perhaps we are fated to live in a world of conflicting ideologies that consecrate conflicting values so that the choice between them will in the end be made, not within any single framework, but through compromise, shared interests, give and take or reaching a consensus. And perhaps there is a third possibility: a worldview that is both theoretical and practical, committed to meta-values while leaving room both for true conflict between values as well as for individual values?

We will attempt to respond to these questions with the help of insights by two philosophers who deeply grappled with them– Isaiah Berlin (1909–1997) and Michael Rosenak (1932-2013). Berlin, a British Jewish philosopher, dealt a great deal with value pluralism and conflict between values, and articulated a worldview that deals with a plurality of values – even basic values – which inevitably come into conflict with one another. Rosenak, a philosopher of Jewish education, sought to clarify what appeared to him to be an existing dialectic in Jewish tradition, that between unambiguous commitment to what he referred to as "existential values" – basic values such as the dignity of Man, created in the Image and opposition to all types of idolatry – and values that necessarily come into conflict such as, peace and truth, justice and compassion – values, which in different situations there is no choice but to prefer one over the other. Rosenak also asks whether the Jewish tradition allows for the expression of personal values, not only social or cultural values.

Isaiah Berlin: Value pluralism

As a young philosopher, Isaiah Berlin discovered that the great Greek philosophers such as Plato and Aristotle believed that one can (and should) search for and uncover true answers to ethical and political questions – questions that concern the good life for the individual and society. The great monotheistic religions believed that answers to such questions are given through revelation and authorized interpretation, while the philosophers were of the opinion that they must be clarified by man, using his intelligence alone. The early modern philosophers (such as Descartes, Bacon and Locke) believed (each in his own way) that it is possible to overcome generations of superstition and arrive at the rational truth

in these matters, and apply it. In their opinion, one can (and should) use scientific method not only with respect to the natural world, but also in connection with society, in order to discover rules of human behavior and the major needs of man and society, and provide for them. Their shared assumption was that humanity is progressing toward uncovering the truth as well as towards the creation of harmony between the individual and society and between society and nature. They believed that the scientific approach would enable the eradication of superstition, prejudice and general ignorance. The assumptions underlying the Classical Greek conception and the early modern conception (as well as that of the monotheistic faiths) were:

1. All true questions have only one true answer and therefore all other answers are erroneous.
2. There is a known, rational and credible approach that can be relied upon when seeking out real answers.
3. When the true answers are discovered, they will be consistent with one another, since all truths must be compatible. As such, they will consolidate into one complete approach.

However, after delving into the thought of the early 16th century Italian philosopher, Niccolò Machiavelli (1469-1527), Berlin reconsidered everything he had believed until that point. In Machiavelli's writings, Berlin found two value systems of good merit, each one thorough, systematic and compelling in its own right: The values of the early Roman Republic on the one hand, and the fundamental values of the Christian tradition, on the other. Berlin discovered that these two value systems were incompatible and could not be consolidated into a harmonious approach:

Christian Tradition's Fundamental Values	Early Roman Republic Values
Humility	Personal courage against enemies
Loving acceptance of suffering	Practical resourcefulness and striving for advantage over others
Negation of the value of life in this world, longing for the Kingdom of Heaven	Calculated planning of action in the "real world"
Quest for salvation in the afterlife	Patriotism and love of the homeland
	Physical and mental vitality

Obviously, it is impossible to reconcile these two value systems, and this demonstrates that not all the supreme values that people strove for in the past are compatible with one another. Later on, Berlin also read Giambattista Vico (1668-1744) and from him learned things that reinforced what he learned from Machiavelli:

1. Every culture has its own view of reality, the world and self. It also has a definition of the worthy individual, the good society and the ideal relationship to nature.
2. These views are embodied in everything that expresses the culture: language, imagery, institutions, ways of thinking and patterns of feeling and action.
3. These views of reality differ from culture to culture. They cannot coexist and they do not form together a narrative of progress from primitive to developed society.
4. Nevertheless, great things can be learned from most of these cultures even if we cannot agree with their underlying assumptions. So, for example, Homer's *Iliad* and *Odyssey* were created against a background of very cruel societies and cultures as far as treatment of the weak is concerned. However, were it not for that cultural background, these masterpieces could not have been created.

Like every reflective philosopher, Berlin sought to account for the phenomenon he described. He eventually came to the conclusion that it should not be called cultural relativism, but what he referred to as pluralism. He articulated the difference between these two conceps as follows. The relativist approach holds that every value system is so rooted in the unique cultural and historical circumstances which generated it that it is impossible for genuine dialogue and mutual understanding to exist between cultures. In contrast, the pluralistic approach holds that even if I grew up under very unique circumstances and even if I cannot agree with the fundamental values of another culture, I can still "enter" their value world, experience it from within and understand how it is possible to live a full human life within that framework. Thus, there are a multiplicity of human value systems according to which one can live and be a complete human being. So, for example, modern Western people are able to be open to the human importance of values anchored in Plato's dialogues or in medieval Japanese literature without necessarily agreeing with them.

And yet, it appears that without actually admitting it, Berlin believed in a series of general human meta-values according to which we can evaluate and judge other cultures, and these are:

1. Rationality – that is, the provision of reasons for actions and opinions.
2. Allowing room for some degree of freedom of choice in a person's life and avoiding arbitrariness.
3. Providing place for human creativity.

It would thus appear that for Berlin pluralism is not infinite. Cultures deserving of admiration must exist "within the human horizon," namely, they must be rational, (even if it is a type of rationality that differs from ours) and enable freedom of choice and creativity.

With time, Berlin moved from a discussion of conflicting values between entire cultures to a discussion of contradictions in values that exist within a culture. As examples of such contradictions, Berlin cites the following:

- Telling the truth under all conditions in contrast with abandoning the truth when it is harmful or painful.
- Striving for justice at any cost as opposed to forgoing justice for the sake of compassion.
- Advocating freedom as a supreme value in contrast with advocating equality as a supreme value.
- Dedication to aesthetics as opposed to devotion to ethics

Berlin's assumption was that it is possible to understand and admire the human importance of multiple alternatives. With regard to diversity, one can identify a conflict between giving talented people complete freedom to express themselves using all their skills – thus enabling society to enjoy their creations, as opposed to giving the less endowed the right to a minimal education so that they can live in dignity. Berlin's conclusion was that conflicting values and life purposes are apparently unavoidable. There is no choice but to decide between them and each decision carries a heavy price. It is not reasonable to expect to achieve both alternatives and it is at times impossible to create a synthesis between conflicting values. Therefore, except in extreme situations, we must sometimes be satisfied with:

1. Decisions in which we sacrifice one value to gain another, when there is no other choice.
2. Utilitarian solutions in which we divide the maximum amount of resources to the maximum number of people under the conditions that exist.

In Berlin's opinion, solutions such as these are preferable over extreme ideological solutions or those that claim real victims. It is preferable to seek a delicate and fragile balance between values than to relinquish a value, although this is not always possible. Certainly, one should not presume to combine all values.

In conclusion, according to Isaiah Berlin, even if values and purposes are all deserving and worthy, they will somehow come into conflict. We cannot always attain all our objectives simultaneously, in a harmoniously all-inclusive manner. The conflict can be softened by striving for balance between demands and fair compromises. One can and should balance the demand for freedom with the demand for equality in the context of the situation at hand. Not every demand has similar weight in every situation and one must be attentive to the specificities of each instance. This is also the case with demands for justice as opposed to the value of peace, or claims for justice vis-a-vis the value of compassion or avoiding someone's embarrassment (preserving dignity). It is also important to consider all factors relevant to a decision. To the same degree, it is important for the decision to be an element of aworldview and way of life and that every ("balancing" or "compromising") decision corresponds to the worldview in question and does not contradict it.

Michael Rosenak: Deciding between values

In his philosophy, Michael Rosenak described a model of Jewish education which includes commitment to Jewish culture and the Jewish past as well as receptiveness to the best of human creation. On the one hand, he stressed that contemporary Jewish education cannot be dogmatic or doctrinaire. On the other hand, in his writings, he emphasized that it is impossible to educate for autonomy and critical thinking in a void. These qualities always arise in association with a specific society and a particular culture in which the person lives, works and creates. He begins his discussion on the issue of value-based education and the problem of conflicting values by presenting a one-sided and limited approach to which he is opposed. According to this approach, the single significant conflict in the area of values is between doing good (that is, living according to the Torah)

and following one's "inclination" (that is, giving in to weakness, laziness, and even a tendency to malevolence). According to this approach, the meaning of value-based education is getting the young accustomed to a culture of actions, the practice of which will inoculate them against the (evil) inclination. The assumption is that a person tends to self-gratification and rebelliousness. When values are perceived in this way, they are always conceived of in a dichotomous manner **as opposed to** the corresponding inclinations, as follows:

Inclinations	Values
Mendacity	Striving for truth
Aggressiveness	Pursuit of peace
Cruelty	Love of humanity
Committing injustice	Pursuit of justice
Cowardice	Courage
Selfishness	Consideration
Rebelliousness	Keeping the commandments
Idolatry	Serving God

The educational rationale for this model is based on a number of assumptions. First, in its essence, the moral life is a struggle and battle against the evil inclination that controls man's nature. Second, one cannot depend on the average person to make moral decisions since the evil inclination will most likely influence them. Third, those who must decide what is good and what is bad are the people who have already proven themselves in the struggle against the evil inclination through the strict discipline of studying the Torah and following its commandments. These figures of authority should be considered the "elevated of the nation" and be in possession of absolute authority that cannot be disputed. In certain circles, Rosenak believes, this model serves as the basis for understanding the entire Jewish tradition.

However, although it is not entirely baseless, according to Rosenak, this model is very partial and one-sided. Is it not well-known that: "There is not righteous man in the land who does only good and does not sin"? (Ecclesiastes 7:20). For this reason, behavior that appears to be "pure" often stems from motivation that is not pure, as modern psychology often shows. According to this approach, the

person who "has no inclination" is praised. However, blind obedience (without reflection and criticism) to "otherworldly" figures, actually raises the risk of covering up the inclination. And so, instead of overcoming the inclination, it is provided cover, under whose protection it can be uncritically expressed. Under the cloak of righteousness (or more precisely, self-righteousness) inclinations can run wild without limit. Thus, for example, a person who acts aggressively against his children, and in the name of higher values enforces a strict regime of discipline in the home, is perhaps covering up his personal tendency to aggressiveness.

Rosenak did not believe that cultures don't have a dimension of absolute good and evil. But he believed that in many cultures, including the Jewish culture, there is another dimension of central importance for the moral life and the decision-making process in situations of conflict. This does not appear as a conflict between an inclination and a value, but as a conflict between two values, between two types of good that come into conflict in a particular situation. Frequently, the attempt to implement a certain value in real life creates conflict with another value, no less important, and then there is a need to decide between them. The story related in the text below, taken from "The Fathers According to Rabbi Nathan," (Rabbi Nathan, 1956: 64) which is an expanded commentary on "Ethics of the Fathers," is a clear reflection of this situation:

The Fathers According to Rabbi Nathan, Chapter XII, Tractate III:

> So, too when two men had quarreled with each other, Aaron would go and sit down with one of them and say to him: 'My son, mark what thy fellow is saying! He beats his breast and tears his clothing saying, "Woe unto me! How shall I lift my eyes and look upon my fellow! I am ashamed before him, for I it is who treated him foully." He would sit with him until he had removed all rancor from his heart, and then Aaron would go and sit with the other one and say to him: 'My son, mark what thy fellow is saying! He beats his breast and tears his clothing, saying "Woe unto me! How shall I lift my eyes and look upon my fellow! I am ashamed before him, for I it is who treated him foully". He would sit with him until he had removed all rancor from his heart. And when the two men met each other, they would embrace and kiss each other.

A simplistic and naive look at this story can lead to a one-dimensional conclusion, namely, that Aaron was a great righteous man who succeeded in making peace between people even when they were in the midst of a serious conflict. However,

a deeper look shows that Aaron decided in favor of the value of peace and as such, sacrificed the values of truth and justice. After all, he invented a story which was completely fictitious and he was not at all interested in which of the antagonists was right. Thus, within the tradition itself, there is room to ponder and to think about deciding between values. On the one hand, what is the cost of Aaron's decision, which clearly did not seek out justice and truth? On the other hand, what is the advantage of his decision in favor of peace, in light of the fact that he paid a price for it? It would be fitting if a debate over values and a legitimate argument were to develop about this case and other similar ones. It is very simple to preach, "pursue peace," like Aaron. But the test of the value of peace takes place precisely when it is in **conflict** with another value. On the one hand is the value of justice – a person should get what he deserves according to his deeds and rights and, on other hand, is the value of peace that enables shared life to proceed intact. Thus, we see that there are contradictions not only between values and inclinations but also between values and values.

Another example of a significant conflict between values is taken from a broad public domain and holds important implications for deciding public policy in general. In the period when the Romans ruled Israel they brought with them circuses where, among other things, there were duels between gladiators. In the eyes of Israel's wise men, the Roman circuses were perceived as violent performances and places of vacuous entertainment. As a result, they were of the opinion that a person of Israel, who is commanded regarding the sanctity of life and the sanctification of life, should distance himself from places that encourage coarseness and insensitivity. Rabbi Natan, however, was dissatisfied with the wise men's blanket prohibition. It is likely that he believed that the ban on being in the "company of jesters" can conflict with other values, which were no less important. As is well known, according to the gladiators' "rules of the game," when one side bested the other, the cries of the crowd at times determined whether the combatant would live or die. In light of this reality, Rabbi Natan argued that if Jews were present at the event, they would be able to shout at the appropriate moments and in this way, save lives. According to Rabbi Natan, the value of human life is greater than the prohibition against being exposed to violent spectacles. Moreover, he claimed, that merely by being present and observing the arena, even if he does not succeed in saving life, would enable him to testify as to the death of the fighter in battle and thus prevent the wife from becoming an *aguna*, a woman chained to her marriage and unable to remarry. In light of the above discussion, it is possible to present another table that juxtaposes values against values.

Values	Values
Truth	Peace
Justice	Compassion
Involvement in saving lives	Escape from violence
Sobriety and caution	Courage
Distance from dishonesty	Human dignity

As mentioned earlier, it is important to remember that even according to Rosenak's approach, every culture, including Jewish culture, has meta-values that are never rejected in favor of other values. The sanctity of life and the dignity of man created in God's image, or the prohibition against devoting oneself to idolatry are some examples. However, even values such as "service to God," which is dichotomously opposed to "idol worship," draw their meaning from situations of conflict and a consideration of alternatives. In such situations, the question of how meta-values can best be expressed is brought to light. How can we succeed, for example, in maintaining the value of human life, in the short run and in the long run, by decreeing the death sentence for pre-meditated murder or by striving to avoid imposing the death sentence? When the possibility of saving a human life conflicts with the value of keeping the Sabbath, to which value will we give preference? After all, we are not rejecting keeping the Sabbath when we choose to protect human life. We are simply saying that in a situation of conflict, the value of human life prevails. Why should saving a life be preferred precisely in this situation? Perhaps the reason is none other than a practical one: We will break one Sabbath so that the person we save will be able to keep many Sabbaths. Or, perhaps the reason is more fundamental: Judaism is a culture that sanctifies life and does not encourage sacrificing life except in very extreme situations. Even when meta-values are in question, there is still a need for deliberation and there is a lot of space for disagreement. From the above examples, we learn that Jewish culture is dialectic and dynamic and not dogmatic and dichotomous.

In summary, accoeding to Rosenak's approach, there are three levels of values, one above the other:

1. **The culture's meta-values** that are non-negotiable even if they create conflict as to how they should be applied.
2. **The culture's shared "pool of values"** wherein all of these values are perceived to be worthy and important, even if they are frequently in conflict (peace vs. truth, justice vs. compassion).

3. **Personal values**, or personal preferences based on loyalty to oneself (such as a personal commitment to living the life of an artist, the life of an athlete, or the life of a philosopher). According to Rosenak, every culture should leave room for these types of personal values and even foster them. He believes that most of the time, these values need not contradict those found on the first two levels. On the contrary, they can enrich, diversify and deepen every culture that supports them.

This last category of "personal values" holds significance for the topic of "Education for All and for Each and Every One." According to Rosenak, a great change has taken place in the modern world with respect to how young people relate to the society or culture in which they are raised. In the past, it was possible to "expect" young people to adopt accepted socio-cultural norms without anticipating fundamental opposition for reasons of "personal authenticity." In contrast, today (with the exception of traditional or fundamentalist societies) young people – even if at the end of the day they seek to **belong** to a certain culture or society – still wish to see themselves as one who autonomously **chooses** to belong. This trait holds true for both the "conflictual" values on the "second level" and the meta-values on the "first level." It is therefore important that young people sense that there is a real place (not only for appearance's sake) within the framework of their culture for personal decisions and for pluralistic models of self-formation. The young person must sense that he is not a mere exemplar or reflection of the culture but that the culture takes his opinions and determinations into consideration. Young people will not agree to adopt social roles or cultural ideals if they do not sense that ample space for their self-expression and personal creativity exists. In light of this, it appears that a **dichotomy** cannot be declared to exist between education for "social roles" and education for "autonomy" or personal "authenticity." These trends can be seen as related to one another in a **dialectical** sense. At times, a society or culture, if it wishes to continue existing, will need to re-interpret itself in order to adapt itself to content and trends it was not previously familiar with – without relinquishing its identity. It is likewise not unreasonable for young people to re-interpret some of their personal aspirations so that they might enrich themselves by accessing the resources that society and culture can offer them. The practical implications of such a dialectic are most interesting and complex – though this is not the place to go into detail. It would seem that in addressing contemporary education, the dialectical model is more fruitful than the dichotomous model, both from the theoretical and practical perspectives.

Who can pay the price?

In setting policy that demands the preference of a particular value over another, or, similarly, policy that requires investment of maximal resources in promoting one value over another, it would appear that we can propose a criterion that can help in deciding between them. This criterion emerges from the question of who is better able to pay the policy's **price.** Thus, for example, we ask ourselves, is it preferable to prefer a policy of "education for each and every one" that is subservient mainly to the value of the individual's self-realization and self-expression, or would we rather prefer a policy of "education for everyone" which reflects the values of equality and solidarity? What would the price be of one policy, and of the other? What would the individual lose and what would society lose by a decision made one way or the other? Every value-driven decision between one value and another, even if the two values are considered equal, will exact a price and cause some kind of damage. Should one who can bear the damage pay the price, or should it rather be one who will suffer more from the harm and has fewer resources to cope with it? Even if a policy is set that seemingly chooses both, meaning as much investment in "education for everyone" as in "education for each and every one", the price paid by each population would not be equal. There are those who would say: If that is the case, we propose another type of "meta-value," beyond Rosenak's concepts – namely: **maximal prevention of suffering for the maximum number of people**. According to our proposal, the value of preventing suffering functions as an acid test when deciding between conflicting values. This may indeed be true, and even if this is the case, we apparently are not far in spirit from either Berlin's or Rosenak's positions. As we have seen, Berlin cautioned against causing people harm while in the pursuit of utopian ideals, and one of the Jewish culture's "meta-values," stressed by Rosenak is the dignity of the human being who was created in God's image. Consequently, the principle of preventing as much as possible the suffering of people who stand to pay a high price for the implementation of a certain policy – appears to be a reasonable conclusion both from the perspective of Berlin's Liberal-Humanist ethos and from Rosenak's Jewish-Humanist ethos.

The following chapters summarize research evidence, existing models and much testimony. The nature of that information cannot help in making an unambiguous decision about which is the "high road," it only lays out possibilities, at times complementary, and at times contradictory. Thinking about conflicting values and applying the proposed "rule of thumb" can help decision makers to choose when presented with different alternatives.

Chapter 2: Diversities in Family Background and Socio-Economic Status

Each one of us knows the extent to which elements of his or her personality and abilities are related to his or her background, the "landscape of birth". Even if it is not always convenient to admit it, our family, the neighborhood we grew up in, our childhood experiences and peers, and for some people even the youth movement to which they belonged, greatly influenced our personality, our social and moral development and how we perceive the world. At times, the impact of these factors is even greater than that of school, as good as it may have been. The influence of family and environment, in general, and the dramatic influence of an environment characterized by economic and cultural poverty stands at the center of this chapter. These issues are outside the reach of the school system which is not responsible for life outside its walls. Today, however, there is ample evidence from diverse fields of knowledge, from neurology to social work, on the relationship between family background and socio-economic status and how one's educational path develops and one's chances of success (see Duncan & Murnane, 2011; Klein & Yablon, 2008, in Hebrew; Berliner, 2006). For example, the OECD study based on the PISA test results of 2009 determined that on a reading comprehension test ding ?, a student from an advantaged socio-economic background scored on average 88 points higher than his or her peer from a low SES background, a gap that equals two grades (OECD, 2010). The MEITZAV test results of 2013 also indicate that the gap between rich and poor in Israel is widening (RAMA, 2013, in Hebrew).

The table below published by RAMA, summarizes some of the results from the PISA 2012 tests and illustrates the range of disparities in achievement between groups of students from different socio-economic levels in Israel (which are among the widest in the world), as well as the prominent gaps between Hebrew-speakers and Arabic-speakers.

- Hebrew-speakers' achievements are 101 points higher (a full standard deviation) than achievements of Arabic-speakers.
- The gap between the OECD average and the average for Hebrew-speakers is just five points, whereas the parallel gap among Arabic-speakers is 106 points.

In this context it is interesting to also note the general increase in education that took place in Israel from 1995 to 2008 as a result of the matriculation exam reforms

Disparities in Achievement between Different Socio-Cultural-Economic Levels

Domain	Gap between high and low background – Hebrew speakers	Gap between high and low background – Arabic speakers
Mathematics	96 points	57 points
Reading	82 points	40 points
Sciences	95 points	49 points
Computerized Math	92 points	39 points
Digital Reading	84 points	41 points
	Approximately between a 0.8 standard deviation to one full standard deviation	Approximately between a 0.4 standard deviation to a 0.6 standard deviation

* The measure for analyzing socio-cultural-economic status in PISA 2012 data, called ESCS, was developed by PISA.

(which was mainly a reduction in the scope of material on which students were tested) and the structure of higher education (that also included the establishment of public and private colleges and the opening of branches of foreign universities). The number of Bachelor's degree students doubled while significantly widening the inequality in education between different social strata. That is, the growth in the numbers of those with higher education mainly took place for high, not low, SES (Bar-Haim et al, 2013, in Hebrew). In 2008 UNESCO published a special report on the reciprocal link between poverty and education (Van der Berg, 2008). The report opens with the authors' stressing that poverty does not refer only to a lack of financial resources; its significance is, rather, the absence of the ability to efficiently function in society. It determines that students' home background is the single most influential variable on academic achievement.

In recent years, the public and academic discussion in Israel regarding the relationship between poverty and education has centered on the inequality in the policy of allocating public funds to groups and individuals of different socio-economic characteristics. Even if we assume that there is greater investment in students from low socio-economic backgrounds (and this assumption is not necessarily realized), the belief that the education system can prepare students from exceedingly different backgrounds to achieve the same goals is today almost inconceivable. As a result, the committee sees great importance in bringing this issue to the awareness and agenda of policymakers at the Ministry of Education

(MOE). The decision to address these topics within the framework of this report written for the MOE, which officially is not responsible for what occurs outside schools, stems from the committee's decision to relate to each learner in a holistic manner and from the dramatic influence that infancy (birth to three years) has on the rest of life.

Thus, this chapter focuses on the influence of the home and the near surroundings as well as the effect of socio-economic status on differences between students. This focus is intended to delve into the depths of the impact of factors outside school on the different socio-economic status groups and to find a way to reduce them. This is particularly important in light of the fact that, in general, schools draw from the local population and in this way, contribute to perpetuating the disparities among students that come from different socio-economic backgrounds.

Two models describing the effect of factors outside of school on learning

In the anthropological approach to education, learning is conceptualized in a broad sense and is conceived as taking place simultaneously on three planes (concentric circles) The outermost circle is "enculturation," within which there is the "learning outside of school" circle, while "schooling" is the innermost circle (Wallace, 1961).

In the illustration of the Concentric Circles model, formal learning in school is just one limited part of all human learning and is influenced by the learning that takes place in the two circles that surround it. Learning outside school occurs in a range of informal settings (youth movements, enrichment courses, and after school settings) where both instructors and learners are aware that they are involved in an activity whose purpose is educational. The outer circle, the enculturation circle, relates to culture transmission and acquisition. This circle relates to the unconscious and natural learning that occurs when young people are exposed to their social, human and material environments, to socializing agents or cultural structures, to organizations where they learn, whether through imitation of existing models, by passive or not-event-focused participation (for example, in the supermarket, the bank, the doctor's office, the synagogue or through digital social media). In all these frameworks, and in many others, the young person learns, at various ages, acceptable ways of social participation (Pitman, Eisikovits & Dobbert, 1989; Spindler, 1976; Wallace, 1961).

This conceptualization provides us with a convenient framework for thinking about the role of social status, cultural diversity and the influence of factors such as

family, peer groups and the use of means of communication on children and youth. The model illustrates the fact that youth from different SES groups are exposed to environments with different characteristics that transmit different value-based messages in many areas, among others, in things related to the importance of schooling, achievements, and social mobility. Naturally, this is where the different approaches to everything that takes place in the innermost circle of schooling come from. The two outer circles that surround it can have an empowering or an undermining influence on the efforts of the schooling circle. That is, the two circles that surround the schooling circle (learning outside school and enculturation) equip young people differently with resources for social coping. They grant them or prevent them from attaining the required social capital for reaching leadership roles in society. Since the middle-upper class (the socially dominant group) is usually the class that decides on how the school's operating principles, norms and values are defined (Zhou, 2003), it makes for a good fit between the school culture and the home culture and increases the chances of academic success for their children. This is not the case for young people who belong to ethnic or SES groups not counted among the dominant group in society. For these young people, the distance between the home culture and the school culture will be great and this will impede their chances of success (Ogbu & Simons, 1998).

Another way of looking at all the worlds in which young people live and function is according to the Multiple Worlds model (Phelan, et al, 1993). In this model too, the learner is located in the center but his or her connections with his or her main relational worlds (family, school, peer group) are nourished by both transitions and connections between these worlds. In contrast to the previous model in which the circle of family had a larger influence on the individual's perceptions, feelings and ability to adapt, in this model, the circles that influence the individual are identical in size and represent influences of equal weight. The image of transition between worlds with more permeable or less permeable boundaries which the young person must cross illustrates the different existential conditions of young people from a range of socio-demographic and ethnic backgrounds. In their article, Phelan et al. (1993) also describe the interactions of the individual with the three main worlds of his or her life (family, school and peers) and outline four types of boundary crossing:

1. Congruent worlds / Smooth transitions (flexible)
2. Different worlds / Border crossings managed
3. Different worlds / Border crossings difficult
4. Different worlds / Border crossings impossible

In the first category, congruent worlds, language, values, culture, behavioral norms, aspirations and expectations "are on the same wavelength" and the individual has no difficulty in crossing the borders between school and family, and between these and the peer group. In such situations, even students who have difficulty with learning are accepted by representatives of all the worlds, a situation that is likely to increase their motivation and improve their chances for success. In category two, where the worlds are not congruent, for example youngsters belonging to a weak group attend a school where there are students from a higher SES, the weak students' motivation is likely to be very high and they will make every effort to succeed. Their mission is difficult but possible. However, they may pay a high price for the transition between the different worlds, especially in the social arena. They moderate the difficulty by avoiding meetings between representatives of the different worlds due to their embarrassment resulting from, for example, their family's reaction to their friends who do not come from the same background, or due to the shame felt in exposing their families to their new friends who come from more established SES groups. At the same time, they succeed in attaining their goal and reaching significant achievements. In the third category, the learner experiences difficulties in the relationship with his or her family and in different areas of learning. S/he succeeds in those subjects where the teachers show personal interest and fails in subjects or classes in which the atmosphere is more formal. Finally, in the fourth category, the difference in values, beliefs, lifestyle and expectations between the worlds is so great that students from disadvantaged backgrounds withdraw into themselves and refuse to try and cross the borders. In the end, they fail and drop out. Some of them claim that school has no significance in their lives. Regarding the borders between ethnic peers and the dominant groups, the research of Baysu and Phalet (2012) describes the situation of students from a Turkish minority group in Belgium and shows that for these minority group students, making cross-cultural friends significantly raised their chances of staying in school and reduced the gap in their achievements. This is an example of successful border crossing.

The two models help us to understand the essence of the interdependence between factors that influence life outside school and success in school. The first model illustrates the types of learning entities outside of school can equip, or fail to equip, young persons with and prepare them for efficient learning in school. The second model helps to conceptualize the dynamics of what young people from a different SES group go through in crossing between worlds and in understanding the influence of this on academic achievement.

The family culture

In his book, *The Forms of Capital* (1986), Bourdieu argues that social superiority is created through control of cultural capital acquired in the family and, among other things, includes customs, language, ways of thinking, and behavior patterns. The concepts Bourdieu employs are taken mainly from the world of economics. He defines cultural capital as the person's ability to control society's significant cultural resources (for example, education, art, or food). Cultural capital is based on the individual's social connections; symbolic assets are measured in social prestige, economic capital relates to the level of material resources at the person's disposal. He argues that a high correlation exists between the level of economic capital and cultural capital. At the same time, cultural capital tends to conceal the sources of economic capital from which it emerged. Bourdieu uses the word *alchemy* in order to explain the transformation of economic capital to cultural capital. The processes are mysterious and vague but the connection between them is undeniable and the family is the main agent of action responsible for this alchemy. With respect to the younger generation's striving for achievement, different values prevail in middle class families than in those from less advantaged families. This is a consequence of the parents' education and the family's experience of social mobility based on formal education. In the more advantaged social classes, there is greater exposure to what the Concentric Circles model defines as learning outside school: extracurricular classes to develop special interests and hobbies, enrichment activities, private tutoring, music lessons, chess clubs, sports, etc.

When discussing the family culture, special attention should be paid to immigrant families and their children. Immigrant children and their families are defined as a special needs population and have hardships in crossing inter-cultural borders, as shown in the Affinities and Transitions model. This difficulty is reflected, for example, in the RAMA report that analyzes the 2010 PISA test results (RAMA, 2010, in Hebrew). The report notes that the widest gaps measured in eighth grade are between Ethiopian students and the rest of the students, although about 60% of the students the system defines as "Ethiopian" are actually Israeli-born. The educational anthropologists, Ogbu & Simons (1998), claim that the time needed to transform from an immigrant to a native resident of the country of immigration is three generations, and this is without taking into account the country of origin's characteristics. This is even more the case when the cultural distance that the child and family of the group in question must traverse is so great, as in the case of the immigrants from Ethiopia. The attitudes toward the new school, and as a result, toward the society that it reflects, are affected by the school experiences of the immigrant children in their country of origin (Eisikovits, 2003). In Israel,

this fact is true both with respect to children from Ethiopia and from the former Soviet Union. Hence, the heavy burden of responsibility lies on the shoulders of the education system in Israeli society that absorbs the newcomers. Moreover, the process of adjustment to the new education system does not begin when the immigrant children enter the new school's gates. The degree to which Israeli society succeeds in creating continuity and does not encourage absolute disconnection from the culture of origin – both in terms of education services and in terms of services provided to the family – will be reflected in the greater chances for smooth transition, adjustment and establishment. Thus, it is the education system's responsibility to get acquainted with the habits, values and heritage that the immigrant children bring with them from their countries to their new educational environment.

Immigration is a trauma in the lives of children who are forced to separate from friends and familiar surroundings. Many times families are exposed to extreme upheavals. With some it is related to their parents' careers in which there is a change that upsets the familial balance. At times, in patriarchal families, the father experiences loss of authority. Since the young are those that are first to gain mastery over the new language, it is not unusual for them to be called upon to mediate between the family and the authorities. This role leads to a change in the family's internal power relations and the status of the young within them. The young may suffer from the burden involved in taking on responsibility before they are ready. Additionally, the family loses much of its advantage since it is not fulfilling its main social obligation – providing a safe haven to its offspring – and as a result, these offspring are exposed and vulnerable. In light of the fact that the encounter with the education system in general, and with the school, in particular, is among the first encounters between the immigrant and a normative institution in the new society, the events in school are perceived as arbitrary activities (Eisikovits, 2008). At this stage, for the immigrant, the broader societal context is still lacking and as such, he or she gauges events with the standards imported from the country of origin. In order to avoid misunderstandings that may cause mistrust and dissatisfaction, the education system and the school must build efficient intercultural channels of communication with immigrant families.

Peer culture

Peer culture can positively or negatively affect the values conveyed by the school, family and adult world. For example, according to Ogbu & Simons (1998), an accumulation of negative experiences and multi-generational narratives of

economic failure, despite attempts to obtain formal education, have led groups in the United States that feel discriminated against (such as blacks and First Nations peoples) to relate with mistrust toward the dominant systems in society, of which school is perceived as a main agent. For these groups, the message the home conveys and that peer groups reinforce is that there is no sense in formal education and it is preferable to turn to alternative channels that are based on "natural competencies," that characterize the group such as sports or music. The prevailing view among such groups is that the establishment will, in any case, block their advancement and prevent their participation in socially prestigious activities and so there is no use in trying.

Ladd and Ryan (2012) argue that there is a broad range of ways in which peer group members influence the beliefs and behaviors of adolescents in school. Influence is in the academic realm as well as in the social, and these are intertwined. Research indicates different types of close friendships and different group dynamics (from popularity to abuse) that take place in school. The research also relates to the way in which the school staff influences the relationships in the peer group and their significance for academic achievement. Research has showed that relationships with peers have positive and negative effects on adjustment, feelings of belonging and the academic achievements of 12 to 15 year old students. Ladd and Ryan also quote longitudinal studiesthat show that students who experienced unstable relationships with their peers had difficulty with learning at later stages in their studies and even dropped out of the education system. In contrast, students who experienced good friendships were motivated and had positive feelings toward school.

One of the things that has characterized peer group culture during the last decade is the use of mass media, digital communication (social media) and various information systems. This is, ostensibly, an equalizing element among young people from different backgrounds. And indeed, these means have abundant potential for advancing groups from weak socio-economic backgrounds. The question is whether the ways these tools are used enrich the different population groups in a similar manner. To date, there is no systematic study that answers this question but logic dictates that the parents' lack of ability to use sophisticated communications media (and it is reasonable to assume that this lack of ability does indeed exist in disadvantaged populations) as well as the presence or absence of parental supervision of free time leisure habits and of the content consumed through digital media, significantly contribute to the chance these tools have, or do not have, of constituting an equalizing factor.

Socio-economic differences

Status defines the individual's familial capital and relates not only to economic resources but also to educational and cultural resources as well as to socio-communal resources. In part, status is related to the environment in which children live, to the parenting they experience, to the health system that treats them, to the frameworks in which they are educated and to the stimulation they receive. Status is a major variable that can, already in early childhood, explain developmental differences, as it affects every aspect of human development – from nutrition to health, through socio-emotional experiences and up to the academic sphere (Hackman & Farah, 2009). The differences in the level of stimulation experienced by children in infancy and the differences in how adults relate to children influence every aspect of their development.

The importance of turning attention to socio-economic differences is valid in light of the poverty rates and inequality in Israel, which are one of the highest among developed countries. In 2011, 32.8% of all households were defined as below poverty level (Ben-David & Bleich, 2013, in Hebrew). In Israel, the poverty line is defined as half of the median disposable income per capita, adjusted. That is, the calculation is not based on the number of family members, but assigns decreasing weight to each additional person (Ben-David & Bleich, 2013: 22, in Hebrew), According to the Gini coefficient, in 2011, the dimensions of inequality stood at approximately 0.49 of economic income (that is, before taxes and transfer payments) and at 0.37 of disposable income (after taxes and transfer payments)[4]. The poverty rate among the entire population of children in Israel is increasing steadily: from 31.2% in 1992 to 41.9% of economic income in 2011 and from 20.7% to 35.6% of disposable income. The measure of economic income inequality in Israel stands at approximately 0.52 and places Israel close to the top of the list; the disposable income measure is 0.37 and places Israel in second place, following the United States. In addition, the income disparities between the percentiles are very large: thus, the per capita income in the 90th percentile is the highest among 22 other developed OECD countries. The income gap between the median income and the 10th percentile is the highest of these 22 countries (Ben-David, 2013: 18-36, in Hebrew). A recently conducted study (Steier & Levin, 2013) sought to characterize the types of material hardships from which poor families in Israel suffer. The research was based on the data from a social survey conducted by the Central Bureau of Statistics in 2007 and included more than 7,000 respondents. The study found that the material hardships of poverty are manifested in cooling

[4] The Gini coefficient is a statistical measure that ranges from 0 to 1 and reflects the level of a country's inequality; 0 represents conditions of equality.

or heating the home (35%), buying food (21%), waiving medical services (17%), and electric and telephone disconnections (13%). The study found that material hardship due to poverty is not the province of the bottom quartile alone; 29% of quartile members avoided buying food and about half did not heat or cool their homes. According to the research, Arabs in Israel experience the greatest material hardship (even when compared to the ultra-Orthodox population).

As was mentioned at the beginning of the chapter, there are implications to brain development for children growing up under conditions of poverty. Significant characteristics in the brain's structure are determined early in life, whether by genetics or through early experiences. The daily interactions of children with sights, sounds and a supportive environment are important for the proper development of the brain. Today, there is evidence that the brains of children who grow up in an environment of severe poverty and distress develop differently than those of children who grow up in a supportive environment (Duncan & Murnane, 2011). A child's trauma that results from inappropriate treatment, for example, impacts brain structures and increases the chances of mental and health damage throughout life. Very early intervention can correct the damage to a degree but the extent of their impact decreases as the child gets older. While it is hard to generalize from extreme conditions of poverty and distress to less extreme conditions of poverty, the research literature does show that stress produced by socio-economic hardship can affect children's cognitive control and influence their behavior and academic achievement (ibid). It is on this basis that Hackman (2011) calls for starting to correct inequality even before birth, through educating parents. He argues that enriching the familial environment of children from disadvantaged backgrounds is an economically effective and justifiable method to provide opportunities for success that will also ensure economic advancement, as poor families' lack of economic security causes harm to the parents' emotional resilience; depression and other types of emotional distress greatly affect the interaction between them and their children.

The growing income gaps between families from different SES groups also affect the amount of resources invested in children and these influence, later on, dimensions such as children's readiness for school and the amount and type of their prior knowledge (Duncan & Magnuson, 2011). Clearly, higher SES families have more resources to invest in education-related efforts: better day care in early childhood, books, private education, summer camps and other enrichment activities. Parents of different SES also spend different amounts of time with their children, and the quality of time spent together differs as well. Data from the United States show that children of high SES spend 1,300 more hours annually

than children from low SES in places that are not the home or the educational institution. Such exposure also contributes to the enrichment of children from high SES and to widening the gap between children of different strata (Phillips, 2011). The growing disparities in the resources invested in children's wellbeing and education also contribute to people from low SES remaining in their own separate neighborhoods, since it is obvious that families with means can afford to live in better neighborhoods. In the US, there is evidence that discrimination on the basis of socio-economic status has become more pronounced in the past decade. Such discrimination leads to there being less contact between children of high and low SES in every sphere of life – school, early childhood day care, the library, the food mart, etc. (Duncan & Murnane, 2011).

Lack of human, cultural and economic capital in poor neighborhoods can result in a decrease in the quality of the schools in these neighborhoods, a decrease that again leads to worsening the chances of children from poor families to advance. This is in part because the schools in poor neighborhoods have a hard time attracting good teachers. Data from the US show that in contrast with a child from a high SES family, a child from a low SES family has twice to four times the chance of learning in a classroom in which there are children with behavioral problems and low skills (Altonji & Mansfield, 2011). In another study, it was found that the achievements of children studying in a class with multiple discipline disorders were lower than those of children learning in more disciplined classes, unrelated to the behavior of the child or his/her previous academic achievements. The study also found that the level of discipline was higher in classes of students of higher SES (Blank & Shavit, 2013, in Hebrew). The following example demonstrates the positive influence of integrating students from different SES background on their academic achievement: Throughout more than a decade, the Wake County Board of Education in North Carolina (US), implemented an economic diversification program in schools according to which no school would have more than 40% of its student body from low SES background. The program requires bussing children from neighborhood to neighborhood, a step that initially angered parents, but led to significant improvement in all the schools in the city. Implementing the program created a situation in which the district no longer had failing schools (Cehn, 2012).

The significance of socio-economic status for differences in language development, for example (comprehension and expression) are well-documented and is very clear and stable (Hoff, 2013; Noble, McCandliss & Farah, 2007; Noble, Wolmetz, Ochs, Farah & McCandliss, 2006). Children from low SES families have meager language skills when compared to their middle class peers and this disparity

begins with the production of the first words (Fish & Pinkerman, 2003; Nelson, Welsh, Trup & Greenberg, 2011). Among measures of language, the richness of vocabulary represents the most sensitive measure of language as related to SES (Hoff, 2013). Fernald, Marchman & Weisleder (2013) for example, followed the vocabulary development (comprehension and expression) of English-speaking infants from low and high socio-economic strata from 18 months to two years of age. The researchers found differences between children from different SES groups already at 18 months, and these differences became more pronounced closer to two years of age. At two years old, there was an approximately six month gap between the two groups. By two, the vocabulary of high SES children was richer. Gaps in the level of language between young children of different SES exist on additional measures of language such as the length of utterances and grammatical complexity (Snow, 1999) or phonological awareness (McDowell, Lonigan, & Goldstein, 2007). La Normand, Parisse & Cohen (2008) studied language development of French-speaking children between the ages of two to four. They found that the language level of high SES children was higher and the rate of language acquisition was quicker. At ages three to four, the high SES children improved their vocabulary while that of the low SES remained fixed. The researchers explain the difference in vocabulary between the classes by differential exposure to richer language and experiences.

Economic differences also have emotional implications. Research shows that socio-economic status is related to a wide range of health problems, cognitive difficulties and emotional problems in children. Some of these influences are present even before birth and continue into adulthood. From the perspective of children, SES influences their sense of wellbeing on different levels that includes both the family and the environment in which they live. The influences are at times moderated due to the children's character, the family's character and the support they receive from external sources. The effect of socio-economic status on socio-emotional development is less significant than its effect on academic achievement, although as Bradley & Corwyn (2002: 377-378) show and as also demonstrated by a series of other studies, children from low SES have more psychiatric disorder symptoms and adjustment difficulties as compared to children from higher SES. Likewise, children from low SES are more likely to suffer from developmental problems than children from high SES. The results of a program for children's health and development in the United States show that 40% of children who were prematurely born and grew up in conditions of chronic poverty had deficiencies in at least two areas of functioning at age three. Another study showed that children whose parents are poor or whose parents experienced

significant economic injury have a higher chance of suffering from depression, anxiety and anti-social behavior (Samaan, 2002).

The concept of emotional resilience in children links socio-economic status to academic achievement, as explicated by Moshe Israelashvili (2005) who discusses the importance of establishing this trait already during the early stages of life. The chances for academic success are far better for children endowed with emotional resilience and for those with the resources required for cultivating resilience than for those who do not. Emotional resilience is highly dependent on the emotional wherewithal children receive at home, which is expressed in the quality of the time devoted by the parents to conversation, play or reading together. In order to achieve these goals, a change in the education system's approach is needed in how it defines its roles, and accordingly a fundamental change in teacher training processes is in order.

At the end of the day, income inequality creates a vicious cycle. Unequal investment in education widens social and economic disparities between different classes. These gaps exacerbate the inequality in education and limit low SES children's ability to attain academic achievements. Socio-economic inequality is growing deeper and harming social mobility such that fewer and fewer children from low socio-economic backgrounds can ascend the social ladder and break the cycle of poverty. In other words, the inheritance of poverty is passed down from one generation to the next. In this context, it is appropriate to pay attention to David Berliner's argument that poverty places severe limitations on what can be achieved through educational reforms and one of the keys to the success of these reforms is improvement in the economic circumstances of poor families (Berliner, 2006).

Conclusions and recommendations

The issues mentioned in this chapter lead to a number of conclusions and recommendations as listed below.

1. Work should be continued on enacting legislation to allocate differential public resources dedicated to the wellbeing of children, and to ensure fulfillment of the regulations and their implementation in the relevant systems.

2. A range of extra-curricular enrichment activities should be in force – in order to equip children from lower social classes with non-formal cultural resources not supplied by the systems operating outside of school.

3. The original decision underlying the establishment of middle schools, ensuring that the proportion of students from low SES backgrounds does not exceed 40 percent, should be revived.

4. Meaningful and ongoing relationships between the school, its staff and parents should be created, especially with families from low SES backgrounds. The school must understand the parents' language and their wishes and encourage them to turn to the school to receive assistance when needed.

5. Young, disadvantaged parents should be provided with enrichment services in order to enable them to support their children in achieving optimal development from as early an age as possible.

Chapter 3: Emotional and Academic Diversities in Early Childhood

As was already mentioned in the chapter on "Diversities in Family Background and Socio-economic Status," the first years of children's lives are sensitive ones and the quality of their experiences significantly influences their future development. During these years, patterns and behavioral characteristics that will accompany them throughout life are imprinted and to a great extent, shape their perceptions of the world and the way they cope within it. The development of basic competencies appropriate for early childhood creates the infrastructure for proper learning, effective adjustment to society and proper functioning for the rest of their lives. The committee thus saw it as appropriate to devote a chapter to discussion of diversities in early childhood.[5]

From infancy, children are different from one another in their individual characteristics, temperament, learning ability, and the nature of their communication with the environment. Obviously, they also develop in diverse social and cultural environments. The nature of young children's learning, the ways in which they react to events and people in their environment, their expectations of themselves and others – all these are influenced by significant others in their lives (parents, grandparents, caretakers, preschool teachers) and by the cultural environment in which they live (Collins & Laursen, 1999; Reis, Collins & Berscheid, 2000). Every developmental achievement in early childhood, such as the development of language, mathematical understanding, social ability or self-control, occurs within a context of, and together with, significant others. The way in which adults in the child's environment respond to his unique traits from the time s/he is young impact his development and functioning because it builds the groundwork for the way in which the child will "encounter" the physical and human world (Shonkoff & Phillips, 2000).

This chapter describes socio-emotional diversities and academic diversities among children in early childhood, examining their significance for children's functioning and development and evaluating adults' differential treatment of these diversities. We will review research that examined predictors of differences in

[5] The Initiative for Applied Education Research's Committee to Examine Methods of Education in Early Childhood, chaired by Pnina S. Klein, published a report of its work in 2008 on areas very close to the topics covered in this chapter. The report – "From Research to Practice in Early Childhood Education," edited by Pnina S. Klein and Yaacov B. Yablon, is available on the Initiative's website.

children's behavior and their adjustment to educational settings. The studies to be reviewed are those that examined how adults relate to diversity as well as intervention programs whose goal is to advance children by relating to their unique traits. In the chapter on "Diversities in Family Background and Socio-economic Status," – we related to the importance of providing cognitive and emotional solutions at the earliest stages in life (from birth until three), ages at which the Israeli education system is currently not responsible for. In contrast, this chapter mainly relates to differences between children aged three to seven. However, it is important to note that the division in age groups from birth to three and from three to seven is artificial and stems mainly from the Israeli context. According to the Israeli government's decision of January 1, 2012, as of the 2012-2013 school year, the State has begun providing free public education starting from age three. The new law increased the number of three year old children being educated in public kindergartens. According to Ministry of Education data, from 2004-2005 to 2012-2013, there was a 27% increase in the number of children being educated in public preschools. In the 2012-2013 school year their number was 420,000 (Ministry of Education, August 2013).[6]

Socio-emotional differences

In order to understand the differences among children, present from infancy, in social adjustment and achievements and so that recommendations for efficacious educational methods that respect these diversities can be made, one must look at the socio-emotional characteristics diagnosed at a young age that are connected to effective adjustment. In this chapter, we pay particular attention to differences in self-regulation and self-expression. As we will see, difficulty in self-regulation is expressed in extroverted behavior and opposition whereas difficulty in self-expression is evident in shyness and withdrawal.

Differences in self-control

Young children differ from one another in their level of self-control, which includes regulating behavior, regulating thinking and regulating emotions. There is evidence regarding a connection between preschoolers' self-control and their behavior in social situations. For example, Rotenberg, Michalik, Eisenberg & Betts (2008) found a relationship between self-control and the degree to which

[6] The Education System in Academic Year 2012-2013, Ministry of Education – the Economic and Budgets Administration , Jerusalem, August 2013. http://cms.education.gov.il/EducationCMS/Units/Owl/Hebrew/UvdotNetunim/netunim/Stat.htm (downloaded January 9, 2014)

preschoolers are loyal to their friends, fulfilled their promises and kept a secret. There is also evidence of a continuum running from self-control behaviors in early childhood to later adaptive social behavior, assimilation to education frameworks, and academic achievements. Children with higher levels of self-control at ages two to four had a higher level of morality at age five and had fewer behavior problems in school at age six (Kochanska & Knaack, 2003). Similarly, the ability to restrain oneself and to delay gratification at age four predicts the ability to control thinking and behavior ten years later (Eigsti, et al., 2006).

The ability to restrain spontaneous reactions and to react in an appropriate way predicts adaptive behavior (Eisenberg, 2005). Willoughby, Kupersmidt, Voegler-Lee & Bryant, et al. (2011) investigated aspects of two to five year olds' self-regulation and examined how these are connected to their academic and social development. They examined the children's ability to restrain their behavior in tempting situations (for example, a situation in which the child must show restraint and not take a candy) and their ability to restrain themselves in situations in which they need to slow down or tap twice on the table in response to one tap by the researcher. The research results show that self-control in these two situations was related to more effective social adjustment and higher academic achievements. Control in situations that do not include emotions and require mainly control of thinking and behavior predict academic achievement while control of emotions predicts social abilities.

It is natural that young children differ from one another in their levels of self-control and the frequency with which they exhibit externalizing behavior through tantrums and opposition. Approximately 76% of two to three year old children experience temper tantrums and the adults in their environment (parents, siblings, caretakers, preschool teachers) perceive them as normative. Despite the range of routine externalized behaviors[7] at home or at preschool, most children adapt and assimilate well to their environment (Wakschlag et al., 2007). The way in which adults respond to children with different characteristics of self-control and externalizing behavior in early childhood predicts their future social adjustment to educational frameworks and to society (Belsky, Bakermans-Kranenburg & van IJzendoorn, 2007). It is interesting that parental behavior is differentially significant to adjustment for children with varying degrees of self-control. What then predicts externalizing behavior that includes aggression, opposition and provocations that deviate from the norm? What in the child and his or her parents predicts differences that requires assistance?

[7] For a definition of externalized behaviors, see the chapter on "The Implications of Socio-emotional Diversities and Their Link to Academic Achievement."

In a study that examined three to five year old children in preschool and again two years later, the researchers focused on personality assessments of the children, their self-control and degree of adjustment as expressed in the extent of disruptive behavior, their ability to cooperate and to express emotions, their emotional stability, consideration of others, and their openness. In parallel, the researchers also assessed the parents' behavior toward their children at the same two points of time. Measurement addressed the continuum that extends from support of the child to control of the child. The researchers examined the parents' supervision of the child, the number of rules and type of discipline, the degree of punishment, the amount of reinforcement and the degree of independence given to the child. They found that the lower the child's self-control ability and the more strictly controlling the parents' behavior toward the child was at the first assessment, the more externalized the child's behavior was when he or she was older, at the time of the second measurement. That is, both the child's personality and the parents' behavior predicted the degree of the child's externalizing behavior (Roskam, Meunier, Stievenart & Noel, 2013). The combination of the child's personality with the parents' behavior predicted the child's adjustment. Cipriano & Stifter (2010) found that mothers' disciplining behavior of a positive nature toward their two year old children predicted better social adjustment at age four-and-a-half for children with externalizing behavior with lower self-control, but not for inhibited children with high self-control. The researchers believe that the difference stems from the fact that inhibited children have a naturally higher degree of self-control and are less influenced by the nature of their parents' disciplining behavior than active, externalizing children. Active, externalizing children need more support, rules and limits set in a respectful and calm way. They react more strongly to their parents' stern control.

To summarize this section, the degree of self-control predicts adjustment and achievement. Self-control which requires restraint of reactions and thinking predicts academic achievement. Overcoming impulses also predicts effective social adjustment. Starting in infancy, it is important to discern children's degree of self-control and to work with them in an optimal manner. Adult response is particularly important to young children with low self-control. For such children, setting limits that are clear and respectful is particularly significant. Such behavior on the part of adults helps children develop efficient communication patterns and attain better achievements.

Differences in self-expression abilities

In the previous section, we examined the significance of self-control from the perspective of the adjustment of young children who express their needs and frustrations with intensity, behave in an externalized manner and experience difficulty in self-regulation. In this section, we will relate to children with difficulties in self-expression and social involvement. In particular, we will focus on the social adjustment of more inhibited children who find it difficult to express themselves and are considered shy. We will shed light on the importance of identifying shyness in children at a young age and the most effective way of treating this it.

Already at a young age, children differ from one another in their degree of involvement in social situations. At one time or another, 90% of children behave in a reserved manner. In social withdrawal and distancing from the group one can see quiet, gentle, reflective behavior or aspects of isolation. Shy behavior in a range of situations is a prominent feature in 15% of children (Spere, Schmidt, Theall-Honey & Martin-Chang, 2004). Young children's shyness is evident in their tendency to participate less in social interaction, to be less visible and expressive, and to shrink back from contact with people in general, and with new people, in particular. The central feature of shyness is contributing little to discussion: shy children speak relatively little (Evans, 2010). A ten-year study followed children from early childhood and found evidence that shyness remains a stable trait throughout a person's life (Evans, 2001). Despite the continuum of tendencies to shyness from childhood to adulthood and the broader significance shyness has from early childhood, shyness is a trait that can be altered. Infants and toddlers who demonstrated high levels of shyness grew up well-adjusted and functioning in society (Degnan & Fox, 2007). For shy toddlers, the very fact of entering an education setting is threatening since it brings them in contact with adults and children whom they do not know at first. It is reasonable to assume that this encounter is difficult for them and for this reason, anxious behavior and difficulty in adjusting to preschool can be observed in such children already from a young age (e.g., Coplan, Arbeau & Armer, 2008). By preschool, a child's shy and reserved behavior provokes negative behavior and rejection from the peer group (Rubin et al., 2010) and as a result, the research shows evidence of a relationship between shyness and low self-esteem already at age seven (Nelson, Rubin & Fox, 2005).

Researchers have evaluated the impact of shyness on children's development. From the academic perspective, the language level of shy children is lower

(Evans, 2010). The relationship between shyness and vocabulary is significant from infancy (Prior et al., 2008) and continues on in preschool and elementary school. Evans (2010) emphasizes that the relationship is inverse though not strong. That is, shy children have less developed language skills but one cannot conclude from this that they have difficulty with language. She claims that the language development of shy children is slower but not to a pathological degree. The delay, Evans asserts, stems from their more limited experience with language since language develops by being used. Inverse relationships were also found between shyness and early literacy at age five (Spere & Evans, 2009) as well as a moderate inverse relationship at ages four to five between shyness and achievements in math (Dobbs, Doctoroff, Fisher & Arnold, 2006). Evans (2010) notes that these relationships are moderately *inverse* yet stable. It is possible that they are related to participation in the group, cooperation with the kindergarten teacher and a willingness to try things. From early childhood, shy children participate less in verbal interaction with adults and with other children. Moreover, shy children frequently have shy parents so the entire family is less involved in activities connected with language. In preschool, shy children less frequently participate in various activities and when they do, they say little. Preschool teachers tend to speak to shy children with close-ended questions that require them to contribute little to the conversation (Evans, 2001). Preschool teachers more often engage sociable children whose level of developed language is indeed higher, relative to their peers (Lee, Chang-Song & Choi, 2007). Evans (2001) explains that since there is much evidence regarding the ties between language competencies and academic achievement and since children's degree of participation in activities in the educational setting is related to their achievements, shyness constitutes a risk factor for low academic achievement.

Socially, shy children have fewer communications competencies. Rubin, Daniels, Beirness & Bream (1984) observed shy five year-old children and found that they tended to turn to an adult in order to solve social problems and were less likely to try and solve difficulties on their own. They knew less about how to effectively attract the attention of their friends and how to stick to what they want or to ask their peers for things they wanted. Since shy children have relatively poor communication skills, even when they do make contact with their peers, it is at times less effective and they experience frustration, which further reinforces their tendency to shrink from contact and social discourse. The negative experiences and the diminished social contact lead to poorer social skills, to fears, victimized behavior and greater loneliness among shy and introverted children (Rubin, Coplan, Bowker & Menzer, 2010).

Despite the continuing tendency towards shyness from childhood to adulthood and the wide-ranging significance shyness has in early childhood, it is a trait that can be changed and the functioning of shy children depends on how adults relate to them from early childhood on. Chang (2003) found that when teachers are empathic and warm towards shy children, the children exhibit higher social skills and greater self-confidence in social situations. Evans (2001) notes that adults must be alert to children's shyness from a young age and respond in a way that will help them to function optimally. She describes effective strategies for activities with shy children in preschool and recommends that preschool teachers reduce embarrassing or uncertain situations and give children enough time to react. In addition, she suggests that preschool teachers play many games of speaking in sequence or a chain as this makes it easier on shy children to participate, and engage children in reading activities that allow children to rely on the plot. From the social standpoint, Evans argues that it is important to create "good friend" situations for the shy child and the teacher can encourage friendships. Shy children are sensitive to reinforcements and benefit from them more than children who are not shy. In the interaction between the teacher and the shy child, it is important to smile at such children and not look at them expectantly (Rotenberg, Eisenberg, Cumming, Smith, Singh & Terlicher, 2003). At the same time, it is important to caution against overprotecting shy children in preschool (Burgess, Rubin, Cheah & Nelson, 2005).

From the social perspective, shy children have fewer communication skills. In an observation of the social behavior characteristics of shy five-year old children, Rubin, Daniels, Beirness & Bream (1984) found that the children tended to turn to an adult to solve social problems and tried less on their own to resolve difficulties. They knew less how to attract their friends' attention effectively and how to stick to their opinion or to ask their friends for things they wanted. Because shy children have relatively meager communication skills, even when they have contact with their peers, they are occasionally less effective and experience frustration which reinforces the tendency to reduce their social contact and discourse even more. The negative experiences and small amount of social contact lead to more meager social skills, victimized behavior and greater loneliness among shy and introverted children (Rubin, Coplan, Bowker & Menzer, 2010).

Parents have great influence over their shy children's adjustment. Research shows that parents of shy children tend to direct them and protect them. Such parental behavior in early childhood does not help the children learn open and assertive behavior and intensifies their shyness even more. (Degnan, Henderson, fox & Rubin, 2008). For example, Coplan et al. (2008) found that for children of anxious

mothers who overprotected them, the relationship between the children's shyness and adjustment difficulties in preschool was stronger than for shy children of confident mothers who gave their children much independence. Rapee, Kennedy, Ingram, Edwards & Sweeney (2005) examined the efficacy of an educational intervention program in which parents of shy children learned to be confident and supportive and to avoid overprotecting their children. The parents participated in six group meetings in which the researchers talked to them about children's shyness and social withdrawal and its significance and discussed with them parental behavior appropriate for dealing with shy children in diverse situations, including the transition to elementary school. While the intervention did not change the extent of the children's shy behavior, it was effective in reducing their anxiety.

There is evidence that preschool intervention programs can help children feel comfortable and communicate more effectively with their friends. Aram & Shlak (2008) reported on an intervention program in which preschool teachers guided children in group meetings that addressed the topic of communication. Within the framework of this program, the teachers taught the children to be alert to the differences among children in behavior patterns and in the nature of encounters with others. They practiced dialogues with the children that entailed listening to the other and a technique of clearly expressing frustration while relating to the event that aroused the frustration and to the accompanying emotion. The research findings showed a significant advantage for the intervention group over the control group on the degree of compatibility in choosing friends on a sociometric test and in understanding social processes during conflict. Additional advantages were observed in the intervention group as a result of the program: the ability to carry on a longer conversation, an awareness of the other's inner world and learning diverse ways of resolving a conflict situation using dialogue.

In summary, children differ from one another in their ability of self-expression and this ability predicts academic and social achievement. Children with low self-expression ability, shy children, attain lower achievements in their studies and experience communication difficulties. They have fewer linguistic experiences both in academic and social contexts. Alertness to shyness in children from a young age is important since significant adults can, through appropriate behavior, advance such children's functioning in academic and social settings. Creating clear, comfortable situations andhelp in creating social relationships, support (though not over-protection) helps shy children. Such behavior on the part of adults helps shy children to develop effective communication patterns and attain better achievements.

Differences in academic achievement

The early childhood period is significant for building children's interest in learning. Children's perception of themselves as learners is meaningful for the enjoyment they derive from learning, their behavior in school and their achievements. Entering school is a particularly sensitive time for the children's development of their self-perception as learners. Chapman, Tunmer & Prochnow (2000) found that in contrast to children who started school imbued with a more positive perception of themselves as learners, children who started first grade filled with a more negative perception of themselves, reported less enjoyment from learning and exhibited a lower level of reading at the end of first, second and third grades. Academic achievement at a young age refers mainly to the areas of language, early literacy (the knowledge of written language prior to having learned to formally read and write) and math. Thus, these topics will be at the center of this section. There is significance in recognizing academic difference between young children because such recognition is a condition for provision of suitable solutions that will help children reach higher academic achievements and have a positive perception of themselves as learners.

There is vast evidence for the existence of a continuum of children's academic achievements extending from the early years to the school years. Children with higher achievements in early childhood continue to attain higher achievements at school. The academic achievement continuum is expressed in diverse domains. In the area of language, Bartl-Pokorny et al. (2013) found that vocabulary during the second year of life predicts reading comprehension at age 13. Similarly, preschool children's early literacy predicts achievements in reading and writing in high school (Whitehurst & Lonigan, 2002).[8] There is also evidence of a continuum in arithmetic achievement from preschool to first grade (Bossaert, Doumen, Buyse & Verschueren, 2011; Jordan, Kaplan, Locumiak & Ramineni, 2007) as well as from preschool to third grade (Geary, Bailey & Hoard, 2009; Jordan, Glutting & Ramineni, 2010). Jordan et al. (2010) followed children from preschool through third grade and showed that number perception at the end of preschool predicted children's achievement through to grade three. The predictive power of number

[8] The achievement continuum in literacy is found in different languages, for example, Finnish, from preschool to first grade (Lepola, Poskiparta, Laakonen & Niemi, 2005), Flemish, from preschool to first grade (Bossaert, Douemn, Buyse & Verschueren, 2011), Chinese from age four to nine (Zhang, Tardiff, Shu, Li, Liu, McBride-Chang, Liang & Zhang, 2013), English, from kindergarten to first grade (Piasta, Pescher & Justice, 2012), Hebrew from preschool to second grade (Aram, 2005), Arabic, from preschool to first grade (Aram, Korat & Hassunha Arafat, 2013), and French from preschool to fifth grade, (Costa, Perndry, Soria, Pulgar, Cusin & Dellatolas, 2013).

perception in preschool did not diminish over time and predicted mainly the ability to solve problems in third grade.

An interesting example of the diversity among children in the academic context is their interest in written language. Children display differences in the extent of their interest in language in general, and in written language, in particular. Early readers are those who have great interest in the writing system and learned to read without formal guidance before they enter school. These children are not classified as gifted but rather, as having a high ability and interest in the area of language. There is evidence that they maintain their lead in language in the transition from preschool to elementary school as well, and in elementary school their achievements and their reading fluency are better than their peers (Stainthorp & Hughes, 2000a, 2000b, 2004; Tafa & Manolitis, 2008). It is interesting to learn how adults relate to early readers in the area of language and how they work with them. The reports from parents of early readers relate that at home, these children have positive literacy experiences supported by a wealth of stimuli, help and emotional and academic support from the parents (Stainthorp & Hughes, 2004).

To learn about the unique characteristics of parental behavior towards early readers in the area of language, Besser & Aram (2014) studied the way in which parents help their children to write. They compared three groups of parents on how they mediated writing: parents of early readers in preschool, parents of children of the same age cohort (peers in preschool), and parents of older children (first or second grades) equal in reading level to the early readers. The researchers found that parents of early readers differ in the nature of their mediation on joint writing tasks from parents of children of the same age and from parents of children reading at the same level. In the literacy domain, parents of early readers mediated on a high level that encouraged the child to break up the word into sounds and to connect the sound to the corresponding letter. They also encouraged their children to write the letters by themselves. The nature of their mediation in the literacy domain was similar to that of parents of children on the same level and higher than the mediation of parents of same age children. In the emotional domain, parents of early readers conducted more dialogues with their children and gave them a greater sense of efficacy in contrast with parents in the two other groups. In addition, they elaborated more in conversation, discussed the text more with their children and encouraged their children to use higher order thinking functions (such as cause and effect, generalizations or hypotheses) as compared to the other two groups.

In arithmetic, the few studies that dealt with this topic indicate that parents report a lower frequency of joint activity in arithmetic as compared to the frequency

they report for involvement in literacy activities. It was found that the parents' enjoyment and positive feelings toward involvement in arithmetic activities with their young children predict the frequency of the shared activity in these areas at home. Roitman (2003, in Hebrew) found positive relationships between the degree of interest that mothers exhibit toward activity in the numeric domain, the importance they attach to the domain and their children's computational comprehension in preschool. Children of mothers who attach great importance to arithmetic and are interested in it were more successful in finding solutions to problems during the mother-child interaction. The mother showed sensitivity to her child's ability through effective and flowing communication and by asking high level questions.

In summary, children already differ from one another in the academic realm at a young age. Research that looks at the interaction between adults and young children shows that there are indeed differences among children but they stem from the context in which the children live and are very much connected to the adults who constantly interact with them. From research showing how parents behave towards young children with high academic achievements, we can learn about the nature of effective mediation in these areas. In the area of literacy as well as in mathematics, richer academic and emotional mediation includes enthusiasm for the activity on the part of parents, creation of a pleasant atmosphere, involving the child while giving him a sense of efficacy, enriching and expanding the knowledge area. Rich mediation that includes these features predicts children's high achievements and motivation for activity in these academic areas.

Relationships between socio-emotional and academic measures in early childhood

As mentioned in the previous chapter "The Implications of Socio-emotional Diversities and their Link to Academic Achievement," there is evidence by preschool of relationships between emotional and academic skills and there are studies that show how emotional differences predict academic achievement. For example, the degree of children's emotional control and regulation is connected to academic achievement in preschool. Kindergarten teachers assessed children with higher abilities of self-control as active and productive, as having higher achievements in the area of early literacy and mathematics, more than they assessed children with difficulty in emotional regulation. It is interesting to learn that the level of children's emotional regulation and quality of their relationship with the kindergarten teacher predicted their achievement in preschool beyond

their intelligence (IQ) level (Graziano, Reavis, Kene & Calkins, 2007). Self-control in preschool children is tied to a great extent to attention level. Indeed, Trentacosta & Izard (2007) found that the degree of preschool children's attention to a task while executing it served as a mediating factor in the relationship between emotional regulation in preschool children and teachers' reports of their achievements in first grade. That is, it is possible that attention level predicts achievements and the difficulty in regulating attention in preschool is related to difficulty in regulating emotions. Children's emotional experiences in preschool and their level of motivation to participate in activities in preschool are connected to their reading achievements in first grade (Lepola, Poskiparta, Laakonen & Niemi, 2005). Children's involvement in activities and their social behavior in preschool also predict later achievement. For example, the degree of children's popularity among other children at the beginning of the school year predicts their participation in activities in preschool, which predicts their achievements in reading, writing and arithmetic at the end of first grade (Bossaert, Doumen, Buyse & Verschueren, 2011). A research that followed children from kindergarten through eighth grade showed that as children felt more comfortable in preschool, liked the setting and participated in activities, the higher were their achievements in school (Ladd & Dinella, 2009).

In summary, by the time the child begins preschool the socio-emotional domain and the academic domain are intertwined. Preschool teachers' alertness to children's social and academic characteristics and the differences between them can help them organize the preschool, the activities and the children's behavior and reactions in a way that will advance the majority of the children.

Group activities in early childhood: Homogeneous or heterogeneous groups

There is research evidence showing that relating to children in a less personal manner and teaching the entire group are less effective in preschool. Data from observation studies show that during activity of the entire group, there are children who are not listening at all to what is taking place and learn less of what the teacher is teaching. This problem decreases when activity takes place in a small group, which is relatively common in preschool. Groups in preschool are sometimes randomly organized and the teachers address those children who happen to be available at that moment. At other times the groups are purposely organized in advance. Frequently, the judgment made regarding placement in groups is the level of the child's achievement in the domain of language, literacy

or math (Catsambis, Mulkey, Buttaro, Steelman & Koch, 2012). In such groups, preschool teachers are able to plan activities in the field being studied at the level that is appropriate for the group.

Researchers debate the effectiveness of small groups that are level-tailored in early childhood. The main question revolves around creating the groups and their benefit in advancing the lowest achieving children. Activity within a homogeneous group is ideal for children with average achievements (Hong, Corter, Hong & Pelletier, 2012). Opinions are divided regarding children in the highest achievement levels. There is evidence that preschool teachers challenge children with the highest achievement levels who are in a group with similar children and advance them to a high level of activity (for example, Gadzikowski, 2013). In contrast, there are studies that show that activity in homogeneous groups does not particularly affect high achieving children. That is, their achievements under those conditions do not differ from their achievements in a heterogeneous group (Hong et al., 2012).

Researchers who study the benefits inherent in homogeneous groups for children with the lowest achievements are concerned that these children are deprived in group activity. In a study in the United States, Tach & Farkas (2006) examined the significance of placement in small achievement-based groups on the reading acquisition of children in kindergarten and first grade. They found that activity in small achievement-based groups is highly related to the children's race and socio-economic status. Placement in a "strong" group encourages children to put in effort and advance and is related to high behavioral and scholastic achievements. In contrast, children in the "weak" group have low achievements. Apparently, the teachers challenge the lower-achieving children less. They give in to them and thus perpetuate their low achievements. The researchers argue that placing children in ability groupings at a young age actually widens disparities. Their research showed that placing children in achievement-based groups in preschool predicted their later achievement. As mentioned, researchers who oppose placing young children in homogeneous activity groups argue that this practice perpetuates differences that stem from factors such as SES, behavior and gender (Condron, 2008; Lleras & Rangel, 2009). Chang, Singh & Filer (2009) demonstrated the bias of placement into achievement-based groups. They tracked the implications of placement in achievement-based groups of immigrant children from preschool to fifth grade. They found that dividing the children into groups in preschool had a negative effect on the achievements of these children in school. The division into groups actually intensified their difficulties as immigrant children.

In addition to the placement into groups it is important to relate to the frequency of activity with the children. Hong et al. (2012) examined the effect of the

frequency and duration of literacy activity on literacy achievements and learning habits on low, average and high achieving preschool children in homogeneous groups. For children with average achievements, activity lasting one hour daily was appropriate. The researchers found that for children with low achievements, activity in small groups must be more frequent but the duration of each meeting must be relatively shorter.

In summary, activity in small groups helps more children participate in preschool activities but it is important to examine the manner in which they are assigned to groups. Looking at studies that examine the effectiveness of activity in homogeneous groups shows that the division into groups does not have a similar effect on children at different levels and that the children at the lowest level benefit less from activity in a homogeneous group. Examining the advantages and complexity of working in groups in early childhood requires additional research (such as the interaction of work in groups with the child's traits and with variables related to teaching). It is important to mention that in preschool there is also room for individual learning (for example, work with e-books or computerized activity kits, Korat & Shamir, 2007) as there is also importance to learning with the entire class. Therefore, the recommendation for activity adapted to children's differences must combine the various types of teaching frameworks. Thus, it is possible to combine teaching methods according to children's learning needs and characteristics.

SES as a factor of academic, social and emotional differences in early childhood

As we have already seen in Chapter 2 "Diversities in Family Background and Socio-economic Status," the child's family socio-economic status is a major and highly researched variable in the context of differences among children that are already present in early childhood and that predict academic and social achievement. . There is abundant evidence that gaps in academic achievement between children of different socio-economic groups are already prominent at a young age and are much more pronounced than disparities stemming from ethnicity or race (Fernald, Marchman & Weisleder, 2013). When children from different SES groups start preschool, there are already significant differences between them in their levels of language, literacy and mathematical knowledge (Jordan et al. 2007; Jordan, Kaplan, Ramineni & Locuniak, 2009; Lee & Burkam, 2002). The most significant effect of SES present from infancy is on language acquisition and literacy but there is evidence that it also affects thinking functions (working memory and

planning, for instance) (Hackman, Farah, Meaney, 2010). As age increases, these disparities widen and consequently, there is importance in recognizing them at a young age and providing a solution.

Levy (2012, in Hebrew) followed Hebrew-speaking children from first grade until the end of high school and found that in high school, the language functions of students from low SES were similar to those of students with language disorders from middle SES groups. The researcher found that the two groups differed from the control group (children from middle SES backgrounds with normal development) not only with respect to their achievements but also on the learning curve and the rate of learning. Moreover, these disparities increasingly grew from the beginning of elementary school through high school. These findings are cause for concern and demonstrate the ongoing impact of low SES. It would appear that SES actually harms these children's development and even brings it to a halt. By first grade, children without any innate difficulty who grow up in low SES homes function like children diagnosed with learning disorders. Furthermore, children diagnosed with learning disorders who received support continued to steadily advance their achievements in high school, while the development of children from low SES stopped at the age of middle school.

Exposure to language and linguistic inputs promotes language development and is also mainly responsible for the differences between children from different SES groups (Hoff, 2013). Children learn language via an innate mechanism that uncovers patterns in speech but in order to do so, they have to be exposed to proper language (Mayor & Plunkett, 2010). Evidence for the importance of adult input into language development can be found in studies that showed that the absolute majority of words used by four year old children (86%-98%) are words that appear in their parents' lexicon (Hart & Risley, 2003).

It is interesting to note that within low SES, differences in the mother's education, her level of literacy and richness of the literacy environment that she creates for her child predict preschool children's early literacy (Aram & Levin, 2001). Reinforcement for the finding showing that parental input is significant for their children's development, and not SES in itself, emerges from studies that show that the differences in the nature of interactions between mothers and their children within the same SES are central to creating differences between children. In a series of studies that examined the interaction between mothers and low SES preschool children, Aram & Levin (2001) showed that the nature of the mothers' mediation, that is, the way in which they helped their children complete a writing task, predicted their childrens' literacy achievements in preschool and later on, in second grade, beyond the effect of socio-economic status.

Few studies relate to young children's mathematical achievements in general, and even fewer compare children from different SES groups (Ginsburg & Goldbeck, 2004). A few studies found achievement disparities between children of mothers from different SES groups. For example, Kelly, Case & Griffin (1999) found differences in the mathematical knowledge of children from different SES groups: at age three, children from high SES groups had broader mathematical knowledge and the gap increased during the preschool years. There is also evidence that middle SES mothers provide stronger support in the area of arithmetic than do low SES mothers (Blevins-Knabe & Musun-Miller, 1996; Saxe, Guberman & Gearhart, 1987; Young-Loveridge, 1989). Saxe et al. (1987) also found differences in the degree of activity in the arithmetic domain in families from different SES groups. They found that children from middle SES groups were involved in activities related to arithmetic (activities that involved arithmetic skills such as comparing between series or creating a new series), more frequently than children from low SES groups. As a result, the achievements of middle SES children on those skills were higher than those of low SES children.

In chapter 2 we saw that SES is also related to socio-emotional development. Children from low SES have more behavior problems, generally and socially. Researchers believe that the source of the relationship lies in the children's life circumstances, the stressful environment in which they grow up and the greater tension in their families (Gershoff, Aber, Raver & Lennon, 2007). There is evidence that by preschool, children of less educated mothers whose income is low have lower social skills (Downer & Pianta, 2006; Morris & Gennetian, 2003). Brophy-Herb, Lee, Nievar & Stollak (2007), for example, asked mothers to rank their children's social competencies and found a connection between the mother's level of education and income and the level of social competence they attributed to their children. The researchers assumed that the childhood experience of growing up in low SES families (characterized, for example, by multiple problems and tensions) affects the way in which children understand social situations and that this distorted understanding is what leads to behavioral difficulties (Pettit, Harristm Bates & Dodge, 1991). The researchers hypothesize that children from low SES do not correctly understand social cues, suffer from hyper-sensitivity, and even in situations that are not dangerous, frequently suspect that others are hostile towards them and intend to do them harm.

Ziv & Sorongon (2011) studied 196 four and five year old children from low SES backgrounds. They showed the children pictures of social situations in which a child hurts the hero of the story (for example, a child empties out the hero's juice) or two children reject the story's hero (for example, one child asks to join a game

of blocks that other children are playing, but they refuse to let him join). The reason for the hostile behavior toward the hero of the stories is random (without the intention of being hurtful) or unclear (for example, the children do not answer the child who asks to join their game). Within the framework of the study, the children who were interviewed proposed appropriate reactions, inappropriate ones or aggressive ones. The lower the child's SES level, the less they proposed useful solutions. It is interesting to note that those children perceived by their teachers to be aggressive were those who viewed aggressive responses as useful. Brophy-Herb et al. (2007) found that children from low SES homes, in which there are greater stress factors, have social behavior difficulties when they are in preschool together with children who have behavioral problems. When they are in preschool with children who have good social competencies, the teachers report fewer behavior problems on their part. We can learn from this about the effect that SES differences have on children's social behavior and at the same time, understand what can moderate this effect. The researchers argue that it is likely that if children from low SES were integrated in preschools with children from higher SES, their social behavior would be more adaptive.

In summary, it appears that already in infancy, children from low SES demonstrate low attainments in the language, literacy and arithmetic domains and that these differences increase with age. Review of the literature showed that children's achievements are related to their degree of exposure to academic stimulation and academic interactions. The academic experiences that take place in the homes of young, low SES children are more meager than in the homes of middle SES children. However, the fact that the nature of the interaction between adults and children predicts the children's academic achievements, beyond their family's SES, is encouraging since it leaves room for the education system to "compensate" for SES and to work toward reducing the disparities in the early and so very important stages of life. As we have seen, children's socio-emotional development in early childhood is also tied to SES. Children from low SES have lower social comprehension than children from middle SES.

Intervention programs that "compensate" for socio-economic status

We have examined the significance of socio-economic status as a factor that generates differences between children in the academic domain as well as in the socio-emotional domain already at infancy. Can these differences between children, emerging already in early childhood, be addressed? To what degree can learning methods and the organization of education frameworks in early childhood lead to a situation in which the majority of children will gain the most benefit from

their years spent in preschool? In this section, we will examine teaching methods and intervention programs from Israel and around the world that are designed to cope with socio-economic differences in the framework of public education, while paying attention to academic and socio-emotional differences rooted in SES.

The literature reports on the benefits of intervention programs for advancing preschool children from low SES in academic and socio-emotional areas. In the domain of early literacy, there are interventions that encourage preschool teachers and parents of low SES children to play with the children games that promote phonological awareness and attention to written language. Blachman, Tangel, Ball, Black & McGraw (1999) for example, describe interventions in which games included separating the word into sounds, dropping sounds, connecting the sounds of the word and familiarity with the names of letters of sounds. The results of this program showed an advantage for the children in the intervention group over the children in the control group with respect to their alertness to phonology, knowledge of letters and ability to identify words. In Israel, Aram (2006) showed how preschool teachers can foster the growth of children's vocabulary and their comprehension of the writing system by ages three to four through the activity of reading books and discussing them with the children and through activities connected to the alphabet (for example, letter games or writing games). Levin & Aram (2012) showed how low SES kindergarten children's comprehension of the writing system can be promoted through short writing exercises in which they are taught to be attentive to the sounds of the word and to make a connection between the sound and the corresponding letter.

In the domain of mathematical thinking, Starkey, Klein & Wakeley (2004) report the efficacy of a program in which preschool teachers worked with small groups of low SES children on topics such as counting, enumeration and perception of space. In one of the activities, for example, the children receive bananas and are asked to divide them equally between two monkeys. As a result of the intervention, the children in the intervention group had higher mathematical knowledge than the children in the control group. In Israel, Tsamir, Tirosh & Levenson (2008) showed how preschool teachers can enhance low SES children's sensitivity to mathematical definitions, to the need for justification and to proper methods of justification, all through an activity of sorting triangles. In a later study, they showed how children's mathematical thinking can be cultivated as well as their understanding that problems can be solved in several ways through guided enumeration activities with the children (Tsamir, Tirosh & Levenson 2010).

The research literature also reports on interventions whose objective was to promote the competencies of low SES young children in the areas of behavior

and social comprehension. Tankersley, Kamps, Mancina & Weidiger (1996), for example, worked with low SES children whom preschool teachers identified as at risk for behavior problems. The teachers in the intervention group worked with the entire class and also with small groups on topics such as cooperation, affection, relationships and concern. The children who participated in the study received an extra small group activity. In this activity, the teacher discussed and worked with them on the areas of sharing with others, negotiating, compromise, etc. The researchers showed that as a result of the intervention, the children in the intervention group had an advantage over the children in the control group with respect to behavior and social comprehension. In Israel, the ARYE program was developed to promote resilience to stress among preschoolers and was administered to low SES children. During the program, the children were introduced to diverse methods for coping with stressful situations and taught how to check the suitability of these methods for dealing with situations they encounter daily. As a result of program participation, the researchers found improvement in the way the children expressed their emotions. Moreover, the teachers and parents reported improvement in the effectiveness of the children's conduct in diverse types of situations (Israelashvili & Wegman-Rozi, 2003. 2005).

As has been written throughout this chapter, the interconnection between young children's academic development and their socio-emotional development promoted the creation of programs that simultaneously relate to different aspects of young children's development. Nix, Bierman, Domitrovich & Gill (2013) examined the efficacy of a combined HeadStart REDI intervention program designed to foster early literacy and social competencies among children from low socio-economic backgrounds through activities empirically shown to be effective. Activities to cultivate early literacy and social competence were combined in a regular preschool academic program. In the domain of early literacy, for instance, the preschool teachers read books in dialogue with the children, employing a series of questions and stimuli proven to promote vocabulary, story comprehension and linguistic skills (e.g., Wasik, Bond & Hindman, 2006). In the social domain, the teachers administered the PATHS program in which they worked with the children on socially-based topics such as sharing with others, restraint, negotiation and self-control. The researchers examined the combined program's effectiveness and found that after one year, it was effective in promoting interest in learning, reading achievement and social behavior. It is interesting to note that the extent to which the children advanced in their social competencies during the program predicted academic achievement one year later – achievement beyond vocabulary and early literacy. The researchers claim that these results emphasize the relationship that

exists between socio-emotional and academic competencies among young, low SES children.

Lipsey et al. (2013) examined the effectiveness of a comprehensive program implemented in daycare centers in Tennessee whose aim was to foster school readiness among four-year old preschoolers of low socio-economic background. Within the framework of the program, the children attended a long school day in classes of up to 20 students per class headed by two staff members and a structured curriculum in literacy and mathematics. At the end of the school year, the researchers found an improvement in level of language and in the socio-behavioral domain, and a significant advantage of the intervention group over the comparison group. However, in first grade, the academic differences between the two groups became blurred. Although fewer children from the intervention group stayed an extra year in preschool, comparison of the two groups on achievement did not show an advantage for the intervention group in either the academic or behavior domains. The researchers believe that in order to preserve the advantage, the children would have had to continue receiving reinforcement in the subject areas. An interesting finding from the research showed that the younger the children participating in the program were, the greater their advancement.

Burger (2010) reviewed research that assessed the effect of intervention programs on promoting the achievements of children from different SES backgrounds several years following the end of the program and examined the stability of the program's influence on academic achievements. Although the review showed that the lower the child's SES, the greater the contribution of the intervention program to their advancement, the majority of the interventions proved effective in promoting achievement of low SES children only in the short term and were less successful in promoting achievements in the long term. In conclusion, Burger believes that despite the relative success of the programs in the short term, it is very difficult to close the achievement gaps between children of differing SES backgrounds. He stresses that examining a program's effectiveness over time is dependent on the variables evaluated by the researchers. It is important to examine the one considered more valuable – achievements or more general functioning in life.

Reynolds, Temple & Mann (2001) assessed the effect of a comprehensive intervention program in low SES preschools in Chicago (989 children) on the lives of these children 15 years later. The intervention program was wide-ranging and included consideration of educational and health aspects in the families' homes, an intensive academic preschool intervention program from age three continuing with programs in elementary school until age nine. When program participants were

about 20 years old, the researchers assessed key variables in order to determine effective adjustment. Compared to the control group, which included Chicago youngsters of similar background who attended regular educational frameworks from age three, the drop-out rate, the percentage of those needing to repeat a year and the number of children streamed into special education were lower, and the number who eventually completed secondary education was higher. Program participants also had lower criminal behavior. Lipsey et al. (2013) also found that the proportion of low SES four-year olds who participated in an intensive intervention program in preschool and had to repeat a year was lower. It is also interesting to note that the researchers report that in the intervention group, more children were diagnosed as special needs. The importance of this diagnosis is that they started to receive support focused on their needs at an earlier age.

Support from a young age for special needs can be very significant for children's development and future achievements. Takala & Hausstätter (2013) compared the number of children defined as special needs in each grade in Finland as compared to Norway. They found that in Finland more children are identified and receive support in early childhood (in preschool and the early grades) while in Norway more children receive special education support in higher grades. The researchers claim that the identification in Finland of children with special needs at a young age and the provision of suitable solutions helps children close gaps. In their assessment, early identification of special needs children in Finland and early treatment is related to the better achievements of the Finnish students on the PISA tests.

Barnett (2011) relates to the question of the stability of the contribution made by early childhood intervention programs and to the diverse aspects of development and functioning to which these programs contribute. He summarizes a literature review and meta-analysis conducted in the United States that examined the effectiveness of many intervention programs in early childhood over many years. Barnett summarizes the review with the statement that early childhood intervention programs have significant short-term and long-term impact on cognitive development, socio-emotional development, progress in school, anti-social behavior and crime. He notes that the long-term effects can be smaller than the short term ones but they are definitely substantial and very valuable to the individual and to society.

In summary, there are intervention programs designed to promote different aspects of young low SES children's development. Some of the programs focus on the academic domain, some on the socio-emotional one, and there are those that

combine the two and aspire to promote the children's general development. The studies accompanying these programs generally evaluate the programs at their conclusion and they tend to indicate advancement of the participating children's achievements. Research that examines the contribution of intervention programs to the later development of low SES children reinforce the importance of the nature of the investment and indicate the significance of intensive and steady work with the children from a young age. Longitudinal studies make clear that beyond academic achievement, there is a need to look at the diverse attributes of children's adjustment as measures of a program's success. Besides looking at content, it is important to examine how the program works with the children and how it is possible to reach most children and steadily advance them.

Can individually tailored instruction be implemented – activity in a small group and individual work with children in line with their characteristics?

Is there a way to ensure that the preschool teacher will recognize diversities among the children, to invest the amount of time needed in each child in individual and group work, and also leave him or her enough time to investigate the content learned independently? A new approach for relating to differences and tailoring teaching in the domain of language and literacy in early childhood attempts to calculate, through computer software, the amount of time preschool teachers should spend with each child individually, the amount of time to invest in group activities with the child and the amount of time for playing alone. In a preliminary study, Connor, Morrison & Slominski (2006) used observations to examine the influence of activity with the entire class and in small groups on the language and early literacy achievements of three to six year old children. They found that activity in the language domain (reading a book, for instance) took place mainly with the entire class and the frequency of practice in this domain was found to be related to the children's language attainments. The teachers worked on the alphabet in small groups of children, unrelated to the children's level. A relationship was found between the frequency of this activity and the children's comprehension of the writing system. The researchers did not observe the "one on one" activity in the literacy domain. In their opinion, it is possible that in small groups, the teachers succeed in tailoring teaching to the children and it is possible that under conditions of the entire class it is difficult for them to instruct individually. Connor et al. examined effective ways for teaching beginning reading. Research shows that children at different levels need different directions to promote beginning reading. For example, children with low attainment in listening comprehension reap much from directed guidance from the teacher, while children with high achievements

learn more from independent activity (Connor, Morrison & Petrella, 2004). On the basis of this understanding, the researchers developed an algorithm that calculates the amount of time the child should be involved in activity, the appropriate group and the desired extent of the teacher's involvement in the child's activity. The calculation is based on the teacher's assessment of the child in his or her daily activities. The researchers call their program "Assessment to Instruction" (A2i). The teacher's assessment is simple and frequently made. Corresponding to the varying assessments, the algorithm plans each child's activity in groups, alone, or with the teacher. In a series of intervention studies, Connor et al. compared the achievements of children who received individually tailored instruction to children who studied the regular first grade curriculum. The researchers indicated the advantage of the A2i approach in which the teacher guides the child individually or in a group in activity related to the writing system or language (Connor, Morrison, Schatschneider, Toste, Lundblom, Crowe & Fishman, 2011). Furthermore, they also showed that children with a meager vocabulary who participated in the program were comparable at the end of the program in language achievements to children with a rich vocabulary (Connor, Morrison & Underwood, 2007). At this stage, it is difficult to determine whether the A2i approach to teaching proposes a solution to implementing a different proportion of attention/time for each child. Connor et al.'s research focuses on the language and literacy domains. Additional research is needed in order to determine whether the approach is relevant to other knowledge domains.

How can preschool teachers perform assessments of preschool children – assessments that do not involve daily examination and pressure on the child? How must they plan their activities in order to relate to the differences in the socio-emotional realm in a way that will also take the academic realm into account? What is the correct way to promote academic achievement without neglecting social competencies? One of the solutions is to help preschool teachers with these topics. They should be provided with the time needed for observation and planning activities. It is important to train them consistently and professionally on these topics. Preschool teachers are relatively isolated in the preschool setting and frequent and ongoing consultation with a counselor can help them make time to discuss these topics with a professional, to set policy, to work with the children and to estimate the effectiveness of their activities through repeated assessments. Clearly, today, when we know that child development during early childhood is extremely significant for their later development, we must aspire to develop methods for addressing differences and advancing children in correspondence to their learning style and competencies that will be implemented both at home and

in the education framework. We must not relate to this phase as a "waiting" phase and to start activity for the advancement of children only in elementary school because child development simply does not wait until elementary school.

Conclusions and Recommendations

The above chapter leads to a number of conclusions and recommendations, listed below:

1. Due to children's socio-emotional and academic developmental continuum and owing to the connections between these different areas of development and the ability to influence the direction of development through early intervention, it is important to diagnose the differences between children by early childhood. Delay in assessing differences and in providing appropriate solutions is likely to result in deterioration in the children's situation.

2. The family and the education system can promote effective adjustment and optimal achievement starting from a young age by creating a suitable environment and atmosphere and by providing mediation that corresponds to the children's characteristics. To do so, it is important to give preschool teachers the tools that will enable them to learn about the children's social, emotional and academic attributes.[9] It is important to provide them with ongoing professional training in whose framework the children's personal characteristics will be consistently examined and where they will learn a range of behaviors with the goal of advancing the children. In parallel, the children's parents must receive training regarding ways of responding, at home on a daily basis, that correspond to their children's characteristics.

3. Identifying differences requires appropriate action, coordinated between the preschool and the parents. For example, for children with low self-control, it is very important to set clear boundaries at home and at school. To do so, communication and cooperation between the home and preschool must be expanded. There should be an early childhood educational counselor in all educational settings for enough hours to enable them to consistently give guidance to the parents and help the preschool teachers be in touch with the

[9] In the Ministry of Education's Preschool Education Division, a tool to help preschool teachers was developed for the observation of children during their activities at preschool ("Mabatim," Goldhirsh, Wagner & Winokur, 2002).

parents. This way, the children's special needs will consistently be treated, at home and at school.[10]

4. It is important to cultivate and promote the academic abilities of children at different levels of achievement. Preschool teachers must be very well aware of the children's characteristics and adapt the learning frameworks and activities in kind. In preschool, it is important to devote time to independent learning, individual learning with the teacher, and learning in small groups and with the entire group. It is recommended that the different teaching approaches be combined in line with the children's learning needs and characteristics. Teachers must learn how to effectively mediate activity with children in preschool through work with individual children, small groups and the entire group. They must learn how to structure group learning and their appropriate intensity and frequency with the different groups.

5. In order for the education system to compensate for the disparities that are created as a result of low socio-economic status, it is recommended to start implementation of intervention programs at as early an age as possible. Massive investment at a young age with regular support throughout development can create a significant change and advance children toward high achievements and normal adjustment. Research shows that the younger the child participating in the program, the greater the advancement. Early childhood programs also enable early diagnosis of difficulties and special needs and the provision of appropriate professional responses. Since the effect of short-term programs may wane with time, it is important that programs be comprehensive (relating to different developmental domains), run at home and in a formal educational setting, and continue over time (at least at the level of monitoring and support).

[10] For more on this topic, see: Greenbaum, Z. and Fried, D. (Eds.) "Relations between the Family and the Early Childhood Education System (Kindergarten to Grade 3): Status report and recommendations of the committee studying relations between the family and the early childhood education system and their link to the child's development and success in the education system. The Israel Academy of Sciences, Jerusalem, 2011.

Chapter 4: The Implications of Socio-emotional Diversities and their Link to Academic Achievement

Children's socio-emotional state and their academic achievements mutually influence one another. A child's socio-emotional state refers to a broad range of emotions such as worry, anxiety and depression and to social abilities such as interpersonal skills, empathy, and understanding of the other. In the school context, the wellbeing of children also relates to emotional and social aspects connected to the learning experience, for example, motivation and love of learning, love of new things and curiosity, self-expression, sense of belonging and peer group acceptance. It also includes fear of failure, a sense of inefficacy, helplessness, frustration, boredom and jealousy. This chapter addresses the interaction between children's socio-emotional state and their academic achievement and the ways in which these two aspects shape one another.

A child's socio-emotional functioning is to a great extent related to his or her personal characteristics. These include genetic and inherited components that affect, inter alia, temperament and personality. Clearly, environmental factors at the family level (for example, the relationship between children and parents, parents' temperament and personality structure, and family socio-economic status), in school (for example, the relationship between children and teachers, the relationship with peers, the class and school climate), and in the broader social context (for example, exposure to traumatic events) influence the individual's wellbeing.

The notion, according to which the individual is influenced by personal and environmental factors, confers a great deal of significance to the bio-social aspects involved in the formation of the individual's socio-emotional and behavioral functioning (Zimmerman, 2010, in Hebrew). As was already mentioned in the previous chapter, the family is one of the most influential factors affecting the child's socio-emotional state. Many factors connected to the family, including the communication between e child and parents and the degree of warmth and support that characterizes their relationship, contribute to the child's wellbeing (Zimmerman, 2010, in Hebrew). Negative aspects of this relationship, such as neglect and abuse byn the parents rt andviolence between the parents, can harm the child's wellbeing in both the short term and the long term (Davidov & Khoury-Kassabari, 2013). As mentioned, the family's socio-economic status and the environment in which the child lives have implications for his or her

wellbeing. As we have already seen, children who grow up in poor families have more problems in adjusting socially to school. It was found that among the main factors mediating the relationship between socio-economic status and the child's wellbeing are access to economic and socio-cultural resources, environmental constraints (such as immigration or exposure to traumatic events) as well as psychological influences (such as parental pressure) (Bradley & Corwyn, 2002; Sznitman, Reisel & Romer, 2011).

In addition to the influence of personality structure and the family on the child's behavior, it was found that the school also exerts a considerable degree of influence on wellbeing. Characteristics such as the child's interpersonal relationship with the peer group and the school staff, the school climate and school assignments have implications for the child's emotional, behavioral and cognitive state (Eder, 1995; Hofman, Hofman & Guldemond, 1999; Samdal, Wold & Bronis, 1999). In light of the above, it is clear that children reach schooling frameworks with their own unique emotional baggage and it is also clear that this baggage continues to be formed and altered in school. Positive learning experiences can promote children's wellbeing, and their socio-emotional functioning in school can have implications for their academic achievements and perceptions of the learning experience. Below we discuss different aspects that define the reciprocal links between socio-emotional states and academic achievement.

Aspects of wellbeing in school

Wellbeing in school is defined on the basis of a number of different parameters: the degree to which the student feels good in school, likes school, is satisfied with different aspects (teachers, peers, climate), feels safe and protected, has a lack of fear and no psychological problems that are related to school (Belfi, et al. 2012; Eder, 1995; Hofman, et al. 1999; Samdal, Wold & Bronis, 1999). Teacher behaviors that support autonomy, a sense of efficacy, and the need for relationship all promote intrinsic learning motivation, positive feelings, investment in learning and achievement (Zeidner, 2010, in Hebrew; Kaplan & Asor, 2004). In general, emotional wellbeing impacts educational achievement (Sznitman, et al., 2011) and has been found to be related to positive aspects of academic motivation (Wentzel, 1997).

It was found that the most significant influence on learning achievement is connected to the student's motivation (Wang, Haertel & Walberg, 1993). Such motivation is defined as a belief structure (such as, expectations of self-efficacy, confidence in the ability to advance objectives, or doubts about one's ability,

attributing failure to lack of ability) and emotions (such as a sense of efficacy, joy in the learning process, or boredom, fear of failure and a sense of helplessness) that affect behavior and direct it (Wentzel, 1999; Green, Martin & Marsh, 2007; Martin, 2008). Different models of motivation emphasize specific beliefs and emotions that have been found to promote or hinder achievement. Among these are the belief in self-efficacy, internal attributions for success, internal motivation supported by joy in the learning process, identification with the material learned and setting goals to advance achievement and success instead of goals to prevent failure (Eccles, Wigfield & Schiefele, 1998; Graham & Weiner, 1996; Pintrich & Schunk, 2002). It has also been found that different features of supportive, warm and nurturing interpersonal relationships on the part of significant others in the students' lives, such as peers or teachers, contribute to promoting students' academic motivation, their engagement in learning and their achievements (Ainley, 2005; Hartup, 1996; Martin & Dowson, 20009; Pianta, 1998; Roeser, Midgley & Urdan, 1996; Ryan, 2001).

It was found that various emotional and social problems are connected to failure in the academic sphere, to learning difficulties and to adjustment difficulties in school (Collins & Nowicki, 2001; MacCann, Fogarty, Zeidner, & Roberts, 2011). For example, longitudinal studies by Masten et al., (2005; Obradovi et al., 2010) followed children for 31 years from the age of seven. The research found that children with behavioral problems (such as non-acceptance of discipline and authority) and tendencies to violence in childhood had lower achievements in school (ages 7 to 12). These achievements predicted more severe emotional disorders (such as anxiety and depression) in young adulthood (ages 20 to 30). It was also found that children diagnosed as suffering from anxiety and depression at age 15 had lower academic achievements during their studies at university (Bardone, Moffitt, Caspi & Dickson, 1996). Another study found that learning problems and students' difficulty in reaching acceptable achievement in school predict mental health problems, especially high levels of anxiety, unhappiness and depression (Schwartz, Gorman, Duong & Nakamoto, 2008). Herman, Lambert, Ialongo & Osrander (2007) found that learning difficulties in first grade have a significant relationship to symptoms of depression in third grade. In contrast, it was found that success at school during elementary school can reduce the probability of a child experiencing emotional disorders (anxiety, depression) and dropping out of school during adolescence (Jessor, Turbin & Costa, 1998; Patterson, Reid & Dishion, 2011). In an attempt to thoroughly examine whether improvement in a child's socio-emotional state can positively influence academic achievement, Durlak, Weissberg, Dymnicki, Taylor & Schellinger (2011) conducted a meta-

analysis of 312 intervention programs for improving children's wellbeing in school. The meta-analysis included 270,034 students from kindergarten through secondary school. It was found that in comparison to control groups, participants in the various programs demonstrated a significant improvement in social and emotional competencies as well as in their attitudes and feelings toward themselves and others. In addition, it was found that in comparison to control groups, the participants showed an improvement in their scholastic achievement that was also related to an improvement in wellbeing and socio-emotional functioning. Beyond these, it was found that the impact on academic achievement of the programs to promote wellbeing were significant during all phases of education (Durlak et al., 2011).

Positive emotions such as happiness or pleasure promote effort and increase persistence and learning engagement (Krapp, Hidi & Renninger, 1992). It was found that a positive mood raises the ability to concentrate and think creatively and helps complex cognitive functioning (Bryan, Mathur & Sullivan, 1996; Izard et al., 2001). A longitudinal study conducted in the United States examined the role of positive emotions in school among 392 students from seventh to tenth grades. The study found that children who more frequently experienced positive emotions were more engaged in the learning process (invested more time and effort in learning new material, were more active in class, were more curious and asked more questions related to the material being learned), while the children who more frequently experienced negative emotions tended to invest less effort in learning new material and to be less curious and less active in class (Reschly, Heubner, Appleton & Antaramian, 2008). Children with poor psychological adjustment (children suffering from a high level of depression, emotional and social problems, etc.) are often characterized by low academic functioning, low motivation and low achievements (Jin et al, 2008; Johnson, McGue & Iacono, 2006; Sznitman et al., 2011). The study also showed a significant relationship between student achievement and poverty but the relationship was indirect and was mediated by the child's wellbeing. That is, poorer children have more problems in the area of wellbeing and this is also manifested in lower achievements (Sznitman et al., 2011).

In addition to focusing on the influence of specific negative or positive emotions, on various educational results (achievements, thinking processes and motivation), emotional intelligence is another influence on academic achievement. Emotional intelligence is defined as a set of cognitive competencies related to processing emotional information including the ability to identify emotions in the self and others and the ability to understand reasons for different emotions being aroused,

their cognitive and behavioral manifestations and results, the ability to use emotions to promote objectives and the ability to regulate them (for example, to decrease intensity of fear or anger) in order to promote adjustment and maintenance of wellbeing (Salovey & Mayer, 1990; 1997). Studies have shown that emotional intelligence is connected both to children's wellbeing and to their scholastic achievements. Thus, for instance, a relationship was found between the child's ability to express emotion, to understand emotion and to regulate emotion and a more positive mental and emotional state (Fine, Izard, Mostow, Trentacosta & Ackerman, 2003) and better achievements in school (Collins & Nowicki, 2001). Likewise, in a study among 383 eighth grade students in a number of US states, it was found that as the level of students' emotional intelligence rose, their academic achievements were better (MacCann, Fogarty, Zeidner, Roberts, 2011). Studies found that in the relationship between emotional intelligence and academic achievement in school, there are different mediating factors, such as children's wellbeing, the quality of their social relationships and the extent to which their parents constitute a source of emotional support when needed (Linnenbrink-Garcia, Rogat & Koskey, 2011; Parker, Summerfeldt, Hogan & Majeski, 2004; Wang, MacCann, Zhuang, Liu & Roberts, 2009).

Social wellbeing is also significant for the student's achievements. Research has shown that a stronger sense of belonging to school, expressed in the student's feeling that the teachers are warm and caring, as well as a sense of belonging to the peer group are positively related to the level of scholastic achievement at school (Baker, 1998; Samdal & Wolf, 1998). This sense is also positively related to students' expectation of success (Goodenow, 1993; Skinner & Belmont. 1993) as well as to positive attitudes toward the school, involvement, participation in learning activities and investment in learning (Osterman, 2000), and negatively related to school absences and tardiness. For example, a longitudinal study was conducted in the Netherlands in which 741 students from 49 elementary schools, first to fifth grades, completed questionnaires and were personally interviewed in order to evaluate the connection between their sense of belonging to the school (which is manifested, for example, in the absence of feelings of isolation) and academic achievement throughout the years (Palmen, Vermande, Dekovi & Van Aken, 2011). The researchers found that a high sense of belonging to the school predicted student achievement over time. Another study found that children without friends in school were at high risk for poor adjustment to school (Yazejian, 1999). In a study conducted in Israel among 36 students at risk for dropping out, it was found that as the sense of belonging to the educational institution rose, so did the level of adjustment to school. The sense of belonging was manifested in

positive attitudes toward the school and even generated the motivation to raise achievements in learning and appropriate behavior (Tromer, Bar-Zohar & Kfir, 2007, in Hebrew). In a longitudinal study conducted in the United States among 641 third to sixth grade students, it was found that the sense of belonging to the school was a significant factor in predicting motivation and achievement. It was also found that a high sense of belonging predicted even higher levels of emotional and social integration in school (Furrer & Skinner, 2003).

Another aspect that was discovered to be significant is connected to children's sense of being accepted by the peer group in school, that is, with respect to the question of the extent to which they ares liked by their friends and are treated well by them (Guay et al., 1999; Wentzel, 2003). A positive relationship was found between these characteristics and children's academic achievement (Anderman & Freeman, 2004; Nangle & Erdley, 2001; Wentzel. 2009; Whitlock, 2006). A study that followed 242 sixth grade students for two years found that a lower level of popularity in class was related to emotional distress and lower academic achievement (Wentzel, Barry & Caldwell, 2004). Students who believe that their friends are concerned for them and support them tend to be involved in positive aspects of class life, set high achievement goals for themselves in their studies and attain higher achievements in contrast with students who do not experience such peer support (Goodenow, 1993; Wentzel, 1999). A negative perception of the relationship with the peer group leads to emotional distress and a sense of alienation from class activity (Wentzel, 1998).

The research literature indicates that children's socio-emotional states contributes to their academic achievements in school. At the same time, it should be remembered that at times, an emotional state is a product of a previous negative learning experience and students' inability to meet their parents and their environment's academic expectations and goals. This demonstrates the importance of examining the reciprocal links between socio-emotional functioning and academic achievement.

Coping with differences in achievement and its implications for students' socio-emotional functioning

In the previous section, we saw that there is a reciprocal influence between children's socio-emotional states and their academic achievement. Thus, ways of coping with achievement differences among students in school should affect their socio-emotional functioning.

Ability groupings

Ability groupings and tracking are the most common ways through which the education system addresses cognitive differences among students. Using these methods, students are divided according to their achievements in a particular subject (ability grouping) (Svirsky & Dagan-Buzaglo, 2001, in Hebrew; Vidislavsky, 2009, in Hebrew) or are gathered together as a class (tracking). Learning in groups is intended mainly to advance the student's academic achievements and deals less with the effects on students' socio-emotional states (Hallinan, 1994). The chapter on "Cognitive Differences and the Realization of Academic Potential in School," discusses the implications of grouping and tracking on student achievement. With respect to achievements, we will see that ability groupings can have positive implications for student achievement if they are implemented taking the criteria presented in the chapter into account and are based on the empirical literature in the field. In this chapter, we seek to draw attention to the implications that these organizational structures have on the students' socio-emotional welfare and particularly on those assigned to the lowest ability grouping.[11] It should be noted that most of the research in this area has focused on middle and secondary school students.

A number of researchers believe that, with no connection to the level of students' performance, placement in low ability groupings conveys the message that their competence is lower than that of others (Marsh & Yeung, 1997; Oaks, Rogers & Lipton, 2006; Pallas, Entwisle, Alexander & Stluka, 1994). One of the main difficulties stemming from learning in groupings is the stigmatization of students in the low groupings and their feelings about themselves (Alpert & Bechar, 2008). Students in low ability groupings may suffer from loss of social status and develop negative attitudes toward school and low motivation (Van Houtte, 2005). In a longitudinal study conducted by Pallas et al. (1994) among 756 students, it was found that groupings in first grade had long term implications for student achievement and can shape the expectations that significant others such as their parents and teachers hold in their regard. Placement in a low grouping creates a cycle of low, negative expectations that lead to a low self-image and failure (Teller, 2003, in Hebrew). In contrast, in a case study conducted by Alpert & Bechar (2008) in an Israeli middle school where there was a low ability grouping, the students noted that this did not affect feelings such as frustration, embarrassment or discomfort.

[11] A discussion on work in groupings during early childhood appears in the next chapter.

There is evidence that the groupings approach, particularly groupings of children with low scholastic achievements, can harm their socio-emotional welfare and their self-esteem as related to academic achievement (How good am I in my studies and am I able to cope with school assignments?) (Hofman, et al., 1999; Opdenakker & Van Damme, 2000). It was found, for example, that in schools where there is a lower frequency of learning in ability groupings, students' self-esteem with respect to their studies was higher than in schools that tend to employ groupings (Liu et al, 2005). A longitudinal study conducted among 1,600 students in 23 middle schools (ages 13 to 14) found that the students in high groupings for math, English and science had higher self-esteem than students in low groupings (Ireson & Hallam, 2009). Other findings resulted from a longitudinal study conducted by Liu, Wang & Parkins (2005) in Singapore. In this study, there were 576 middle school students (242 in low ability groupings and 334 students in high ability groupings). The research findings indicate that in the period closely following learning in the grouping, the academic self-esteem of students in the low grouping was lower than the students in the high grouping. After three years, it was found that the academic self-esteem of the students in both the groupings declined (seventh to tenth grades); the decline for students in the high grouping was greater. It was found that after three years, the academic self-esteem of students in the low ability grouping was higher than that of students in the high ability grouping. The reason could be that the students stopped comparing themselves to students in the high grouping and compared themselves to students studying with them in the same grouping (Liu, Wang & Parkins, 2005). Another interesting finding was the relationship between ability grouping and gender. Being in the low grouping had a greater negative effect on girls than on boys. The investigators hypothesized that the girls were more sensitive than the boys with respect to social comparisons and therefore it is likely that they were more affected by being in the low grouping (Liu, Wang & Parkins, 2005).

It is important to qualify this and state that the trend emerging from many studies does not support Liu et al's findings as most studies stress the negative effects that the groupings approach has on low group students' socio-emotional functioning (Belfi, Goos, De Fraine & Van Damme, 2012). It is likely that the differences in the research findings are due to different education policies in the countries where the studies took place (for example, Singapore as opposed to the United States and Europe). Belfi et al. (2012) explain that there are two contradictory psychological processes involved in the effect of groupings on students' self-esteem: cross-group comparisons and intra-group comparisons. These two processes can give rise to contradictory emotions of students toward their academic achievements.

Students in a high grouping can compare their abilities and achievements to those of students in the lower groupings and as a result, feel more confident in their academic abilities and achievements, but when they compare themselves to peers who are their equals in ability or even better, they may experience lack of confidence in their achievements (Belfi et al., 2012). A similar though reverse process may take place among students in the low grouping. In other words, the students' reference group naturally has a great influence on their self-perception but this mechanism is complex since there are different options in terms of frames of reference to which the students can make the social comparison: students in the school or students in the grouping.

There is empirical evidence of efficacious ways for coping with the negative effects of ability grouping on the socio-emotional functioning of students in low groupings (Vidislavsky, 2009, in Hebrew). This was found, for example, in the "flexible ability groupings" approach wherein students from one class or from a few classes belong to a grouping for short and varying periods of time according to their level of ability in a specific field: in this approach there are no negative implications for the socio-emotional functioning of students in low grouping (Dubé, Dorval & Bessett, 2012). That is, the research shows that there are no negative effects of employing ability groupings on the socio-emotional functioning of children in the weaker groupings when the approach is implemented only in focused and limited areas of study and not in all areas (Dubé et al., 2012; La Paz, 1999).

Regarding gifted students, the research picture is not consistent. Different studies have found a range of evidence which occasionally contradicts the effects of various models of teaching on thesocio-emotional states of students. On the one hand, it is argued that for gifted students, studying in a heterogeneous classroom can have negative effects from the socio-emotional standpoint, effects that originate in dynamics such as harassment and bullying, the absence of academic challenge leading to boredom and a decline in motivation (Baker et al., 2004) and the sense that teachers and friends do not understand and appreciate them (Adams-Byers et al., 2004). Such factors can lead to feelings of isolation and frustration, depression, or an attempts to adapt by hiding special abilities (Clasen & Clasen, 1995). On the other hand, studying together in gifted groups limits these students' interaction with their peers who are not gifted and opportunities for normative adjustment to society. In a study conducted among 44 gifted students in grades five to eleven for the purpose of assessing the implications they themselves attribute to studying in a homogeneous or heterogeneous class on their social status and academic achievement, it was found that the students perceived the homogeneous class more positively in terms of academic results. However in

the socio-emotional context, they expressed mixed feelings with respect to their preferred environment and attributed value to both similarity between friends in the homogeneous class and to the social diversity that exists in heterogeneous classes (Adam-Byers et al., 2004). The researchers emphasized the importance of finding ways that enable gifted students to maintain connections with friends from other classes.

Collaborative learning

Another form of organizing studies is collaborative learning, a general term for many approaches to teaching and learning that stress the importance of collaborative (not competitive) discourse among students in the classroom and definition of the teacher's role as enabling and promoting such discussion and an atmosphere of "togetherness" and cooperation in the classroom (Vigotsky, 2004, in Hebrew). Such methods include collective work by students in small groups, without the teacher's direct and immediate intervention so that each student is able to participate in the joint group task (Cohen, 1994). In collaborative learning, students strive to attain their goals through the support and cooperation of others in the group or the class (Martin & Dowson, 2009). It was found that these approaches are effective in improving students' academic achievements and especially in promoting their socio-emotional functioning.

Thus, for example, in the framework of research conducted among 911 five to seven year old children who participated in an intervention program for interpersonal relations to improve the efficiency of teamwork in the class, it was found that compared to the control groups, the children in the experimental group attained more significant improvement in reading and arithmetic, motivation to work with others in the group, interpersonal communication with learning group members, the ability to focus on the task, and participation in group work (Kutnick, Ota & Berdondini, 2008).

The collaborative teaching method has additional advantages especially in relation to reinforcing behaviors of mutual assistance, increasing motivation and willingness to exert effort, taking an active part in the lesson and creating more positive interactions among the students. As mentioned, it was found that these are aspects significant for students' wellbeing (Good, Multyan & McCaslin, 1992; Munns, 1998; Sonja, Melita, Milena, Jana & Cirila, 2009; Webb & Palincsar, 1996). Implementation of these teaching methods can help improve the achievements of students and promote their socio-behavioral functioning.

Intervention programs in the Israeli education system

There are several intervention programs in Israel that aim to address cognitive differences between students and thus attempt to advance their academic performance. Some of these programs incorporate treatment of students' socio-emotional functioning and have implications for such functioning beyond improvement in academic achievement. In recent years, there have been interventions programs in Israel that directly target students' socio-emotional functioning as a way to improve their wellbeing in light of the understanding of this feature's importance for reducing differences in academic achievement. Along with these advantages, there are those who claim that collaborative learning has inherent disadvantages as it allows certain students in the group to work less and to rely to a great extent on the work of other students, especially those with higher achievements. One must be aware of these disadvantages in order to address them when implementing this learning method (see Barron, 2003; Salomon, 1992).

Programs that target improvement in academic achievement which combine socio-emotional components

The framework of the "New Horizon" reforms addresses aspects such as increasing students' sense of belonging to the school, which works on their self-image and their sense of self-efficacy – two aspects which have a significant relationship to the students' socio-emotional functioning. The reform also includes individual work and work in small groups with students who need special help, in addition to work with academically strong students for the purpose of their enrichment.

Among the programs that operate in Israel to advance the attainments of low achieving students is the "Tafnit" (Turnaround) program (a joint program of the Ministry of Education in the various districts, the Education and Welfare Services Division and the "Abilities" NPO, established by the Rashi Foundation), established in 2001 for the purpose of reducing academic gaps through imparting tools and methods of operation for use in schools. The program is administered to students from the end of 9th grade to the end of 12th grade. Students study in academic tracks with a unique pedagogical structure that is based on a special approach to increasing scholastic success: an accelerated method for reducing gaps and the Tafnit program's accelerated learning, according to which "everyone can." An evaluation study conducted among 125 students who participated in the program found that there was an improvement in students' self-esteem, sense of autonomy, and self-efficacy, internal control, aspirations for academic education

and sense of belonging. In addition, there was a decrease in behavior problems (Tafnit Program for Matriculation, Interim Report, May 2013).

Another program operated in Israel is "Individual Wellbeing" (Cohen-Navot & Awadia, 2012, in Hebrew) whose goal is to advance students with difficulties and students at risk of dropping out, by changing the way elementary and middle schools cope with their needs. Intervention is based on ongoing training of the school staff – training whose goal is to equip staff with psycho-educational and didactic tools for working with at-risk children. In addition, there are direct meetings with students and their parents. In order to evaluate the program's effectiveness, an ongoing study of 3,680 students from four elementary schools was conducted over a four year period. Comparing the students' socio-emotional functioning from the beginning of the school year to the end, improvement was found in each one of the following areas: attendance, behavior, accepting teacher authority, emotional adjustment, and social integration.

A third program operated in Israel is the OMETZ program (acronym of the Hebrew words for "belief in the self, ready to invest effort, expects results"). This program is directed toward helping students with academic difficulties who are at-risk for dropping out from the education system, primarily in the transition from middle school to high school (Tatar, 2002). According to the program's rationale, these students experienced an ongoing sense of failure throughout their years in school, and they are incapable of removing themselves from the vicious cycle that leads to dropping out. Their expectations of themselves and the expectations of others in their environment are low as they relate to academic achievement and this directly impacts their self-image and their sense of efficacy regarding social integration in the future. The OMETZ program's main goal is preventing students from dropping out by creating significant success in their studies through setting a clearly defined and challenging goal: attaining a matriculation certificate. The program includes a social component designed to increase the participating students' commitment to education and society. A central element in the program is creating ongoing, focused academic assignments in which students experience success and as a result, begins to believe in their abilities to achieve. While the point of departure is the scholastic, the assumption is that it will become a motivating and influencing factor in the emotional and social spheres as well. An evaluation study of the OMETZ program took place in six schools, among 272 students (Tatar, 2002). It was found that the students reported on the program's significant positive impact in the emotional, cognitive and behavioral domains. These influences are manifested in the students' increased chances to attain a matriculation certificate, a decrease in the risk of dropping out, an increase in

their learning motivation, improvement in their self-image and change in their plans for the future.

A fourth program operated in Israel is the "Take Off" program that focuses on reinforcing students who have difficulties with their studies to ensure that they will complete high school with a full matriculation certificate. The program includes three main components: help with studies before matriculation exams, self-empowerment, and exposure to the world of employment and higher education. This program aims to help students fully realize their abilities through self-empowerment, outlining an expanded picture of the future, building a personal dream and identifying the tools needed to fulfill it.[12]

Programs designed to improve socio-emotional functioning and their implications for academic achievement

There is much evidence from around the world attesting to the fact that programs developed to improve students' socio-emotional functioning result in improvement not only in these aspects but also in academic achievements. For example, it was found that emotional interventions can bring about improvement in relationships among students and in academic achievement (Yeager & Walton, 2011). It was also found that intervention programs that improved students' wellbeing were related to improvement in class climate, reduction in the number of behavior problems and an increase in scholastic achievement (Cook et al., 1994; Domitrovich et al., 2007; Greenberg & Kusche, 1998; Linares et al., 2005). According to most of the researchers, improvement in student achievement was created by a change in the students' subjective experience of school – the way they think and feel about school and the way they perceive the school, the class and themselves. Accordingly, different intervention programs propose ways of fostering emotional, social and academic development through establishing a sense of self-worth, developing supportive relationships and creating a secure place in the group (Dryfoos, 1990; Martin, 2008; Martin & Dowson, 2009).

Below we will present a number of programs that stress the development of elements related to emotion that were implemented in Israel and are empirically supported. Among such programs, we mention "Hope and Motivation" (Ziv, 2009, in Hebrew; Margalit et al., 2006, in Hebrew). This program represents an optimal psychological approach which, in addition to imparting knowledge and subject-related skills, confers great importance to the creation of a learning environment

[12] Further details about this program can be read on its website: http://www.heznek-laatid.org/wps/portal/heznek/ (Hebrew)

that fosters hope and motivation for teachers and students (Ziv, 2009, in Hebrew). The program focuses on strengthening internal resources needed to succeed academically and also imparts emotional and behavioral skills to effectively cope with the learning process and development. In a pilot study that examined the effects of the program using interviews and questionnaires administered to 11 teachers and 47 students in ninth to twelfth grades following the program, it was found that the participating students' level of satisfaction was very high. The program summoned a new experience of success for the students, which grew through their active participation, acceptance of responsibility, comprehension of internal processes, setting of goals and implementing strategies for dealing with learning complex material. The students also noted that the program greatly contributed to their relationships with other students and with the teachers and also contributed to a significant increase in their wellbeing and improvement of their learning skills. In addition, the students noted that the program strengthened them in terms of coping with demands outside the school setting – with parents' demands and problems in the family (Ziv, 2009, in Hebrew). A follow-up study is planned and will examine the long-term effect of the process on the emotional and academic functioning of the participants.

Another program implemented in Israel is the program to promote socio-emotional learning. The main goals of this program are promoting development in five areas related to cognitive, emotional and behavioral abilities: self-awareness, self-management, social awareness, social skills, and decision making (Collaborative for Academic, Social and Emotional Learning, 2005; Elias et al., 1997; Zins & Elias, 2006). This program is based on the theory of self-direction, Asor's concep of growth (1995, in Hebrew; 2005) and the concept of education for autonomy developed by Aviram (2000, in Hebrew) and the Ministry of Education (ILP – Improving Learning Processes, Orenstein, 1991). The program is comprised of different elements whose goal is to transform the school into a place that promotes growth and provides meaningful support for the students' and teachers' basic mental health needs (Asor, 2003, in Hebrew). Among the program's components is the view that the teacheris an "ally" who promotes students' growth and helps them choose goals and fulfill them. They strive to develop areas of interest for each student, foster a high sense of efficacy in all students regarding skills and basic concepts, and strengthen inner listening skills and regulation of emotions.

A new program operating in elementary and secondary schools in Israel is the intervention program in Positive Psychology, run by the Maytiv Center for the Research and Application of Positive Psychology. The intervention program is based on three basic components of wellbeing: happiness, morality and success.

Happiness is assessed through meaning and pleasure – a person experiences purpose in life and enjoys positive feelings. Morality includes fairness and compassion – people are true to their ethical principles and behave with goodness and generosity toward others and toward themselves. Success includes the ability to set goals and fulfill them, to turn dreams into reality and to realize personal potential at the professional, academic and personal levels. In order to implement these theoretical ideas, eight change principles were formulated that increase happiness, reinforce moral behavior and promote success: 1. identifying and setting goals appropriate for the person and which have personal significance; 2. cultivating positive feelings of happiness, gratitude and enthusiasm; 3. identifying and nurturing personal strengths and expanding behaviors based on abilities, talents and enjoyment; 4. cultivating resilience in coping with failure, disappointment, painful experiences and crises; 5. maintaining physical health, including sufficient rest, healthy nutrition and physical exercise; 6. reinforcing positive relationships with friends, family and the community; 7. performing acts of giving, contribution, concern and compassion for one's self and for others; 8. demonstrating ethical behavior true to personal principles. The program is first given to the homeroom teachers who participate in a 30 academic-hour training process (15 meetings throughout the year). The homeroom teachers are trained to conduct the year-long intervention program in positive psychology in their classrooms. An intervention program for students includes 15 bi-weekly meetings, lasting two academic hours in secondary school and one academic hour in elementary school. The education staff is equipped with detailed lesson plans and a multimedia kit that accompanies the classroom lesson. The second year of the program focuses on project-based work of the education staff and the students aimed at integrating the intervention content into the life style of the school, as well as delving more deeply into the substance of positive psychology within the framework of the group meetings.

Two broad-scoped evaluation studies accompanied implementation of the Maytiv Center's intervention program in schools between 2010 and 2012. The first study was longitudinal and followed 1,038 seventh to ninth grade middle school students in central Israel. The second study was comparative and examined the effect of the intervention program on 2,517 students from six middle schools from all over the country. The studies' findings attest to the significant relationship between program participation and decreased emotional distress among students, evident in the significant decline in symptoms of depression, anxiety and general distress. In addition, significant relationships were found between program participation and strengthened positive feelings, optimism, improved self-image, improved sense of self-efficacy, decline in violence in the school and students' improved

academic achievements as expressed in the significant rise in average grades (Shoshani & Guttmann-Steinmetz, 2013).

Another program operating along similar lines is one targeting students with learning disabilities (the "I Can Succeed" program – ICS), operated by Dafna Kopelman-Rubin of the Learning Disabilities and Attention Disorders Unit at the Interdisciplinary Center, Herzliya. The program's objective is to promote scholastic, emotional and social success among youths with learning disabilities and to reduce latent dropping out of school by developing and strengthening personal, familial and systemic resilience factors and building processes for the school's educational-counseling staff's professional development. The principles guiding the program are: 1) systemic work with the entire educational staff and creation of a safe environment for children and for their significant adults in school; 2) psycho-pedagogy of imparting tools to teachers for their work in integrating socio-emotional and didactic aspects; 3) focusing on resilience factors at the level of the student, the parents and the school; 4) a model for work that reinforces the school's internal strengths and trains the staff to work independently in correspondence with the ICS program after two years of supervision. The program is systemic and inclusive and leads to change in the perception of learning disabilities, attention disorders and to transitioning from a situation in which the individual and the family cope alone to one of collaboration and joint responsibility, providing a holistic response at the level of the community, the neighborhood and the education system. The program stages include: establishing a leading staff to map the city's needs, establishing a leading school staff, training the staff in the process of identifying students with learning and attention disabilities or the suspicion of such problems, and enlisting the families in the program. The program, which takes place during two academic years, also includes group work once a week with the teacher who serves as a "mentor" for six to eight students and six individual meetings with students and their parents during each school year. The mentor's work is carried out according to a structured psycho-didactic protocol, which includes the following topics: self-awareness in areas of strength and or difficulty, learning style, decision making, emotional regulation, efficient interpersonal communication, self-defense (verbal), strategies for organizing, and learning strategies.

The ICS program first ran in 2009-2011 as a model of an individual and systems intervention program for students with learning disabilities who are studying in regular education and are at risk of dropping out. The program was run as a pilot (48 students started the program in seventh grade and completed it in ninth grade) and was accompanied by an evaluation study carried out by the National Insurance

Company's "Muvanim" Institute. Improvement was found in the relationships between teachers and students, self-image among teachers, and the way teachers work with all the students. In addition as a result of the program a comprehensive and effective work procedure was developed at the school which corresponded with a detailed and comprehensive protocol. There was also a positive impact on the students in the areas of interpersonal communication, ability to focus on difficulties, goal setting, organization, academic achievement and a decline in the sense of isolation.

Recommendations

The chapter has shown that children's socio-emotional status and their academic achievements affect one another and are reciprocally influenced. As such, a number recommendations, below, emerge:

1. In implementing teaching methods whose goal is reducing cognitive differences (for example by groupings and tracking) or intervention programs whose goal is improvement in the academic achievements of weak students, undesired implications for socio-emotional functioning must be taken into account. These implications may harm the effectiveness of the interventions to reduce cognitive differences.

2. In implementing teaching methods whose goal is reducing cognitive differences or intervention programs whose goal is improvement in the academic achievements of weak students, it is very important to add features that directly relate to improvement in students' socio-emotional functioning. Improvement of this nature can lead to an increase in scholastic achievement and increase the effectiveness of the approach and program being implemented.

3. Teaching methods and teaching programs that focus on e cognitive aspects are not the only means of reducing cognitive differences in schools. Programs designed to improve students' socio-emotional functioning can also improve academic achievement and thus, reduce cognitive differences.

4. It was found that the most effective programs for improving students' socio-emotional functioning and reducing cognitive differences are systemic programs run by the school administration and a leading group of teachers and which involve the entire school staff, the students and their parents.

5. There is a need for research and development on the topic of broad interventions that involve the entire community (neighborhood, town) – interventions designed to cope with socio-cultural factors that hinder children's optimal functioning in both the socio-emotional and academic realms.

Chapter 5: Cognitive Diversities and Realizing Academic Potential in School

This chapter addresses models for organizing learning frameworks in line with the aspiration for all students to realize their cognitive potential. Our point of departure is that academic differences between students exist and that the system is interested in having each and every student reach the maximum level of achievement they are capable of, taking their cognitive potential into consideration. At the same time, our underlying assumption is that the system strives for equality of opportunity and reduction of disparities. In the spirit of the chapter on "Conflicting Values: Choosing Among Alternatives," we discuss the tension between competing goals motivated by the debate over the question of how to organize learning frameworks so that they will ensure high quality instruction for all students. We will present some of the options for responding to the challenge inherent in teaching students who differ from one another in their learning capacities. It is clear that this is a complex picture and we will not be able to fully capture it in the scope of this chapter. We hope that readers will gain an impression of the different considerations as well as the advantages and disadvantages involved in choosing a specific model for school organization. The beginning of the chapter presents models for organizing teaching in school; this is followed by examples of the models implemented in teaching mathematics.

Models for organizing teaching in schools with respect to students' abilities

The attempt to balance between competing goals of, on the one hand, fulfilling curricular objectives in an equitable manner for all students and on the other, responding to academic diversities (including differences in ability, learning styles and special needs), creates one of the main dilemmas facing schools today. In many countries including the United States, Israel and others, a typical solution to this dilemma is instruction in differential frameworks, that is, gathering together students on the basis of similar characteristics, whether in the classroom (tracking) or in learning groups for a specific subject (grouping), and teaching them in a manner that takes each student's abilities into account. Ideally, this situation is intended to lead to fulfillment of each student's abilities. Reality, however, shows that in the main, this is far from what occurs. The extensive literature in the field is abundant with evidence regarding significant differences between groups in

the same school with respect to quality of teaching and the extent that goals are attained. The balance lies in favor of groups at high levels (see Oakes et al.'s review, 1992).

In addition, as was mentioned in previous chapters, this issue has other sides to it that, while not being "purely" academic, still impact the student's academic profile with respect to self-image, sense of belonging, satisfaction, challenge, and motivation. These aspects were also studied as they relate to frameworks for organizing instruction in schools.

The work of sociologist and educational policy expert, Adam Gamoran, is highly relevant to this topic. Below, we will review a number of the main findings and recommendations emerging from his research on the topic of grouping and tracking in schools (Gamoran, 1993, 2002, 2009, 2011; Gamoran & Nystrand, 1994; Gamoran & Weinstein, 1998). As we will see, these findings are supported by other research.

- Due to the sociological conditions outside of school, categorizing students according to their test grades is, de facto, classifying them according to origin and socio-economic status. There is, in general, an over-representation of students from high SES and from advantaged populations in high ability groupings and prestigious study tracks, while in low ability groupings there is an over-representation of students from low socio-economic groups and disadvantaged populations.

- When students are grouped according to their academic ability, whether in grouping or tracking, the gap between their achievements tends to increase over time (Hanuschek & Woessmann, 2006). Gamoran (2009) shows evidence of this in many countries including Britain, Japan, Korea, South Africa, Germany and Belgium.

- Unequal learning conditions, typical of the difference between high-level groupings/ classes and their counterparts at the low level, accounts for one of the main reasons for the growing achievement gap: the more experienced and better trained teachers are generally assigned to the higher level groupings and tracks, the material learned in these tracks and groupings is more challenging and there is greater emphasis on discussion and interaction between the students. In the literature, this phenomenon is referred to as "stratification," meaning the unequal distribution of status which leads to an unequal allocation of resources.

- Teaching in heterogeneous classes creates less inequality but high-achieving students tend not to advance to the same degree that they would in homogeneous classes. However, they will do so if the school explicitly expects them to meet the highest standards. In other words, heterogeneous classes can also cause harm if they are not implemented properly (for example, if the teachers seek the lowest common denominator and as a result, "dilute" the curriculum).

- Dividing students into ability groups leads to even greater inequality the more "rigid" and the more comprehensive they are (for example, in the case of tracking, when the students study all subjects separately); severe inequality is reduced in cases when the division is flexible and applied in one subject area.

- The impact of grouping varies according to the manner in which it operates, and certain types of grouping do less harm to the idea of equality of opportunity than others. Thus, for example, it was found that when the same teachers teach both the low groupings and the high groupings and maintain high expectations of all students, insist on following the curriculum and encourage discussion in the low groupings as well, the achievement gaps between the weak and strong students do not increase and similar advancement is attained for both the levels (Gamoran, 1993).

Since the end of the 1990s, there has been a "detracking" trend in the United States – that is, substituting the differential model with more heterogeneous ones. Different schools apply diverse approaches within the framework of this trend. In a survey of 24 schools (eight elementary schools, eight middle schools and eight high schools) that tried to prepare for the new organization of learning (Gamoran & Weinstein, 1998), the researchers found a small number of schools which demonstrated that it was possible to provide quality teaching while administering different models along the tracking-heterogeneous instruction continuum. The main conclusion reached by the researchers was that there are gaps between the idealization of heterogeneous instruction as a "prescription" for equality of opportunity and the implementation of this ideal in the field. Below, we briefly expand on the research study's findings.

The stated aim of the schools surveyed was to balance the goals of equal education for all with solutions to address academic differences and other diversities among students, such that all students benefit from quality education. Quality education is defined as education that integrates higher order thinking, acquisition of in-

depth knowledge, meaningful discussions among the entire class and assignments that meet accepted academic standards (that is, that are not shallow or below the average required). In actuality, only a few schools attained this goal. From among the eight high schools, only three operated heterogeneous frameworks in all subjects. The researchers found that one of the three (Cibola High School, see details below) did indeed meet the goal of quality education for all students, while the other two schools lowered standards to the level of the weak students and instruction was traditional, based on lower order thinking and a diluted curriculum (especially in mathematics). In the eight middle schools surveyed, heterogeneous frameworks were implemented in the humanities subjects but in math there were different ability groupings. Only one school met the goal of quality education for all students, both in heterogeneous groups and in math groupings. In seven out of eight elementary schools, teaching took place in heterogeneous classes while using in-class grouping for some lessons. In only one school were there separate classes for outstanding students, although a high level of teaching was maintained throughout all classes.

The researchers reached the following conclusions:

1. Neither of the models, heterogeneous or differential, prevents quality teaching, nor do they do guarantee it. Accordingly, it is not possible to point to one model as preferable over the other. The only thing that can be said with relative confidence is that differential frameworks generally promote quality teaching in the higher ability groupings.

2. Math teachers tend more often to oppose the heterogeneous model than teachers in other knowledge areas. In the researchers' opinion, this stems from the prevailing conception that math is a hierarchical and structured subject, and also from the great effort required of teachers to apply quality teaching in heterogeneous math classes. At the same time, the researchers found that it is possible, as was demonstrated in the case of Cibola High School.

3. Elementary school teachers more easily adopt the heterogeneous framework model. This stems from the fact that elementary school teachers spend more time with their students in contrast with secondary school teachers and this allows them greater flexibility in planning a suitable solution for students with difficulties as well as for outstanding students.

The case of Cibola High School[13]

Cibola High School is a six-year school located in an urban area in the United States. Forty-six percent of its students are African-American, 38% are from Latin-American backgrounds, 13% are white and 3% are Asian. About half of the students are from low socio-economic status families. Despite the great diversity of the students, learning in the school is exclusively heterogeneous in all subject areas and quality teaching is maintained. More than 90% of the school's graduates continue on to college. According to the researchers' findings, the prominent characteristics of the school are:

1. The teachers do not compromise the academic level and do not adapt it to the weak students in class. The weak students are expected to go to after-school remedial lessons, provided by teachers of the relevant subject, who work in the program in shifts (these lessons are financed by contributions raised by the school).

2. Only a portion of each lesson is devoted to frontal instruction. The rest of the lesson is conducted in a format using student assignments (these tasks can be differential) during which the teacher gives individual attention to each student. In order to do so, class size is limited to 20 students. All the teachers, in all knowledge areas, teach the same class for two consecutive years, in order to enable thorough familiarity with the students.

3. Each student belongs to an "advisory group" which numbers 12 students and a school staff member. The group meets for 45 minutes daily in order to check the student's academic situation and encourage him or her to advance. In the staff's assessment, these advisory group meetings have powerful implications for creating a relationship of trust with the students and for encouraging them on an individual and daily basis. The staff member responsible for the advisory group is also in touch with the parents of the students in the group.

4. The school employs an alternative method of assessment, mostly through the use of a portfolio that includes scores on standardized state tests and in-school tests. Assessment is differential and individual, that is, the student's work is not judged according to a uniform standard and students are accustomed to the fact that evaluation of outputs can change from student to student.

5. The school culture encourages innovation and requires cooperation among teachers. The teachers are required to work in professional teams and to create innovative curricula together which are then implemented in parallel

[13] From Gamoran & Weinstein, 1998, pp. 400-455.

throughout the entire grade. In seventh through tenth grades, team teaching is also customary especially in math and science which are taught in these grades as a single subject, as well as in the social sciences and English, which are also studied together.

6. The approach to mathematics instruction is one of solving complex problems and does not emphasize techniques or procedures as is customary in many other schools.
7. Several elementary schools with a similar educational philosophy feed the high school; 80% of the school's students come from such schools and their acceptance is automatic. The remaining 20% are selected from among the applicants according to the criteria set by the school. In any case, students can attend the school only after their parents sign an authorization attesting to the fact that they are aware of and agree to the school's educational credo.
8. The school principal has complete freedom in choosing the teaching staff.

The conclusion that emerges from this case analysis, particularly in comparison to schools that did not succeed in applying quality instruction in heterogeneous frameworks, is that conditions critical for detracking's success are a deep commitment to equality, strict maintenance of high academic standards, use of individually-adapted differential instruction within the class and outside of it in a way that does not contradict the idea of equality, and the existence of academic and support mechanisms for students with different needs.

Gamoran & Weinstein (1998) make it clear that these conditions are crucial to the same degree in a school that chooses to employ ability grouping for specific subjects. In such a case, there are additional conditions which we will list below (Gamoran, 2011).

First, if the school chooses to teach a certain subject area using ability groups, it is important that the teacher's attributes are compatible with those of the group. Certain teachers succeed more with students at the extremes (those with difficulties or gifted students) than with others. Thus, the prevalent policy of assigning teachers to groupings on the basis of seniority or political power in the school is not helpful and is likely to increase the above-mentioned stratification phenomenon. If the teaching staff includes experienced veteran teachers with high chances of success in advancing students from diverse levels, it would be wise policy to assign them equally to the different groupings. The tendency to assign new teachers or teachers from other subject areas to a low ability grouping

harms the chances for the success of the grouping instruction model. Secondly, in order to fight against the common outcome of grouping, that is, a diluted curriculum and low expectations of students in low groupings, the school must set clear standards for quality teaching in these classes as well. It was found that in schools where teachers integrated discussion and assignments using higher order thinking tailored to the student's abilities, the gap in achievements between the groupings was smaller (see, for example, the case of the Red Lake Middle School, described by Gamoran & Weinstein, 1998). This finding is in line with Zohar & Dori's (2003) findings which reported that for weak students whose science teachers stressed acquisition of higher order thinking skills in their teaching, there was a significant improvement in achievement similar to those attained by their high-achieving peers, and in some cases, it was even greater. Third, a reasonable amount of choice and flexibility raises the ability grouping model's chances of success. In other words, students should be allowed as much choice as possible – with the staff's help – to reach the level at which they wish to learn, and to enable mobility between groups, as needed.

Socio-emotional influences of the differential model and the heterogeneous model

The chapter on "The Implications of Socio-emotional Diversities and their Link to Academic Achievement" addressed, inter alia, the implications of the differential model and the heterogeneous model on the socio-emotional wellbeing of learners. First, evidence was presented showing that in schools where there is less learning in groupings, students' academic self-perception was more positive than that of students in schools where grouping is employed extensively (Liu et al., 2005; Ireson & Hallam, 2009). Second, evidence was presented that shows that placement in a low grouping may create a cycle of low, negative expectations on the part of parents and teachers and such a cycle can lead to low self-image and failure (Teller, 2003, in Hebrew).

Another finding that should be considered from the perspective of emotional wellbeing is the different process experienced by students in low groupings as opposed to students in high groupings. On the one hand, it was found that students in low groupings naturally experience negative feelings following the initial division into groupings. However, on the other hand, since in these groupings, the climate is usually less competitive and less demanding compared to that in high groupings, with time a situation is created in which students who taste success among their peers in the low grouping, may demonstrate higher self-perception with reference to their academic ability than their peers in the high grouping

who experience constant comparison to high academic-ability peers (Marsh et al., 1995). As was explained, two contradictory psychological processes are involved in the effect that grouping has on students' academic self-perception: comparison between groups and comparison within the group. The students in the high grouping may feel more confident regarding their academic achievements and abilities when they compare themselves to the students in the lower grouping but comparison to their equal-ability or greater counterparts, can cause them to experience lack of confidence regarding their achievements. The comparison mechanism of students is complex and depends on the reference group options: each comparison can have a different influence on the student's self-perception (Belfi et al., 2012).

Considerations for choosing a differential model or a heterogeneous model: Conclusions

In light of the discussion up to this point, we can list the considerations for preferring or rejecting differential frameworks or heterogeneous frameworks.

Consideration in favor of instruction in differential frameworks and against heterogeneous frameworks:

- In differential frameworks, the goals are based on student characteristics.
- These frameworks are adapted to the academic needs of different students: students with different academic profiles need different challenges, teaching methods and pace of learning (Slavin, 1987, 1990).
- Teachers are not required to divide their resources along an ability spectrum but can devote their efforts to teaching at the level to which they were assigned.
- In general, from an academic standpoint, differential frameworks work to the advantage of the students in the higher groupings and the gifted students.

Consideration in favor of instruction in heterogeneous frameworks and against differential frameworks:

- The stratification phenomenon often results when using the ability grouping model, leading to an increase in disparities between weak and strong students.
- Low ability groupings suffer from low self-image. The emotional implications of this situation can have a negative effect on the academic achievements of this grouping.

- The very presumption of dividing students according to needs is problematic since within the grouping there will always be students with different needs and learning styles and thus the assumption that the teacher will be able to teach in a way that will suit all students is not necessarily valid.
- Relating to different student characteristics can lead to other divisions such that it is not at all clear what the advantages of one are over the other. For example, division according to grades will be different than according to motivation and frequently, there will be things that students assigned to different groupings have in common.

The remarks of Maureen Hallinan (1994), cited in Gamoran (2011), represent the views advocated by proponents of differential teaching. Hallinan argues that most of the negative results coming out of the ability grouping model derive from unsuccessful operation of the model. Extreme separation between students, failure in creating classes that are indeed homogeneous, in which cognitive differences between students are actually minimized, low quality teaching of low ability groupings and the negative stigma attached to their students – all these problems of implementation can vanish or at least be significantly reduced with the help of educators who organize the students and teaching in systematic ways that take these issues into consideration. In contrast to Hallinan, Jeannie Oakes (1994) represents the opponents of differential instruction. Oakes argues that the use of tracking and grouping reflects social norms that make a assumptions about the students in a particular grouping or class and the direction of their future. Strategies designed to minimize the differential model's harm will not succeed because few are the students who do not discern the clear message inherent in separation between different populations. Discrimination will always be at the basis of tracking, even if it is well-disguised.

As Gamoran notes, the important point is that research cannot decide between these two approaches. The same data can be interpreted in different ways depending on the researcher's views, especially when each researcher generates his or her own data. In the following section, we will demonstrate this through a review of different research studies that present contradictory evidence with respect to the way grouping in math in middle school affects, or does not affect, students' achievements. One conclusion though, can be drawn and that is that the influences of both these models, the differential and the heterogeneous, are context-dependent (Gamoran, 2010). That is, even if it is not possible to definitively decide between the two models, within the local context, educators can, using judgment and familiarity with the system in which they work, intelligently choose one of them,

knowing that at the basis of the choice there are assumptions about education that stress different values. This is the main reason for the discussion of autonomy for principals which will be presented below. In any case, schools that choose the heterogeneous model must be aware of the need to challenge their high ability students just as schools that choose the differential model must be aware of the need to guarantee quality teaching to the lower groupings so that they can avoid having made a choice that widens the disparities typical of this model's use.

Mathematics as a demonstration case of models for organizing teaching

This section of the chapter focuses on the subject of mathematics, which warrants special and extensive consideration in the literature dealing with models for the organization of teaching. As was mentioned, in Israel and in many other countries around the world, grouping for math instruction is more common than in other subjects. We will focus on two main topics: 1) current data on the implementation of models for math instruction in Israel and the relationship between these data and the findings of the research literature cited in the previous section; 2) review of research that deals with models for teaching math in Israel and around the world, and the conclusions that can be drawn from the review.

It is important to emphasize that the choice to focus on mathematics does not stem from our perception of it as preferential over, or more important than, other subjects. On the contrary, it is important to reiterate that there are many students who, despite average, or less than average success in math are outstanding in other subjects, and schools would do well to stress each student's academic strong points and not to over-emphasize success in math as a measure of academic talent. Today, theories of multiple intelligences are routinely accepted by educators, making the generalization from a person's mathematical ability to his or her overall intelligence, at the very least, controversial (Karsenty, 2013). We chose to relate to math because this subject appears in almost every discussion on grouping or tracking and to a great extent, preoccupies educational decision-makers in Israel and around the world. Thus, we do not claim that the discussion that follows is comprehensive or that it is representative of all subjects.

Mathematics instruction in middle school in Israel: Current data and their relationship to research findings

In March 2013, RAMA (the National Authority for Measurement and Evaluation) published a report addressing instruction using grouping in middle schools in

Israel (Glickman & Lipshtat, 2013, in Hebrew).[14] Here, we will review some of the report's main findings and we will examine the extent to which they are in line with Gamoran's and others' analyses in the studies presented in the previous section.

First, we will mention that since 1994 the Ministry of Education has permitted schools to divide students into ability groupings in math (and in English) starting from the second half of seventh grade and that the grouping model is very common in Hebrew-speaking schools: it is customary in seventh, eighth, and ninth grades in 60%, 75% and 90% of all schools, respectively. The frequency of groupings in Arabic-speaking schools is lower: 40% in seventh and eighth grade and 45% in ninth grade. The Ministry of Education has instructed schools choosing to use this model to strictly engage in the following actions when implementing the model (ibid: 3):

- Allocate more study hours to students in the middle and low groupings
- Develop teaching methods and materials to advance the students at the low levels
- Assign better teachers to the low levels
- Create mechanisms that enable transfer from lower level groupings to higher levels

These guidelines are in keeping with some of the conditions listed by Gamoran and other researchers as necessary for the differential model's success (Gamoran, 2011; Gamoran & Weinstein, 1998; Hallinan, 1994): increased academic support of weak students, assigning suitable teachers to low groupings while strictly following the principle of matching the teacher's characteristics to the group's characteristics and not assigning teachers on the basis of seniority, and flexibility regarding mobility between groupings. In its guidelines, the Ministry of Education, however, did not stress two other main conditions mentioned in the literature: the first, setting clear standards for quality teaching in all grouping levels (including discussions and assignments involving higher order thinking skills adapted to the students' ability), and the second, mechanisms for the emotional support of students with different needs.

Glickman & Lipshtat's report presents detailed data regarding achievements of students in different groupings in math, as measured by the MEITZAV standardized

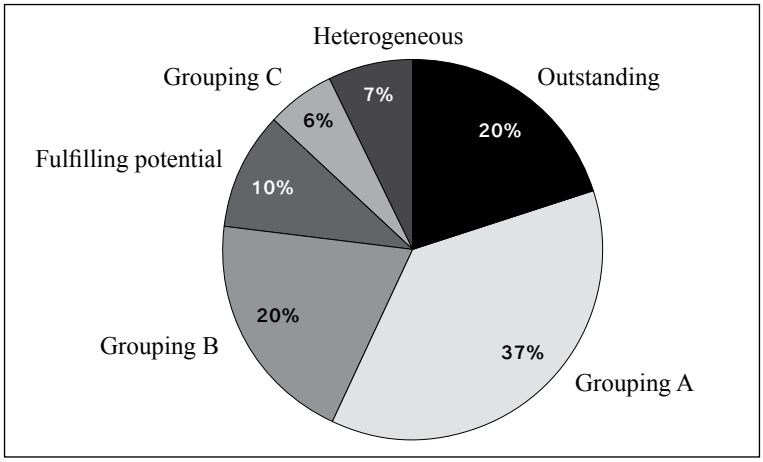
[14] The report relates only to Hebrew-speaking schools since the response rate to the research questionnaire in Arabic-speaking schools was relatively low.

achievement test administered to all eighth grade students from 2008 through 2011. Below, we will relate to the data and the various cross-sections cited in the report.

A. The proportion studying in the different groupings

The report shows that 57% of students studied in high groupings (the Outstanding grouping and Grouping A), 36% studied in low groupings (Grouping B and C and a "Fulfilling Potential" Grouping for those with difficulties where students in the 15th to 30th percentiles study in a special three-year program), and only 7% studied in heterogeneous classes. These data are in line with those reported in the literature, showing that the differential model is accepted in many countries as the prevailing and dominant model used for teaching mathematics.

Illustration 1: Distribution of middle school students by mathematics groupings (2011)



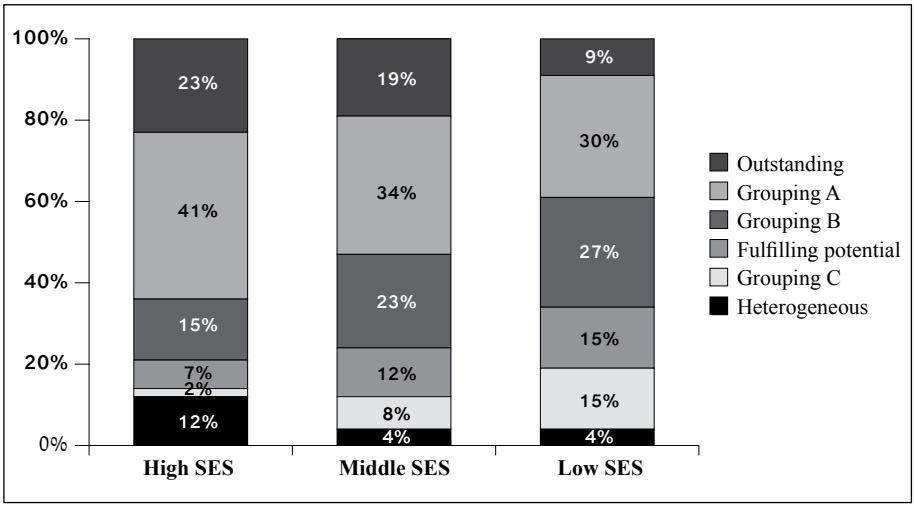
Source: Glickman & Lipshtat, 2013 (in Hebrew), presentation accompanying the report

B. Breakdown of the learners in the different groupings according to socio-economic status

Illustration 2 presents the distribution of students by grouping and by SES. This diagram clearly shows that the situation in Israel reflects the research findings presented, that is, a greater proportion of students from high SES families can be found in higher groupings while in the lower groupings there is a greater

representation of students of low SES. In other words, the lower the student's SES, the higher the chances are that he or she will be in a lower grouping for math.

Illustration 2: Distribution of students by grouping and by socio-economic status (SES)



Source: Glickman & Lipshtat, 2013 (in Hebrew), presentation accompanying the report

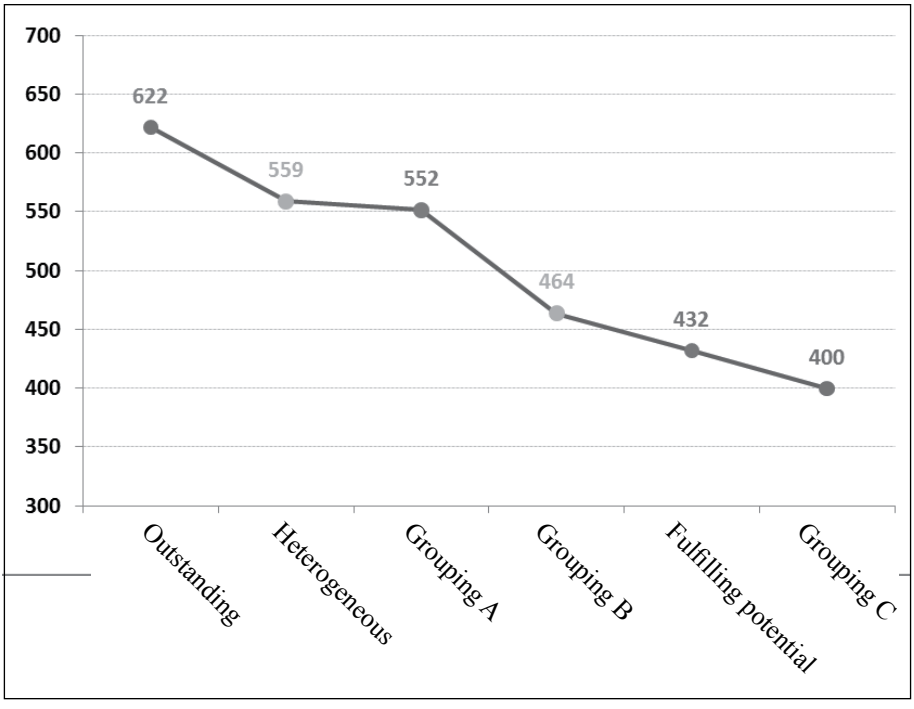
C. Breakdown of student achievement on the MEITZAV 2011 test by grouping

Illustration 3 presents the achievements of the students by learning grouping. Here too, it can be seen, as expected, that the higher the grouping, the higher the achievement. The diagram shows that the gap between the students learning in the Outstanding grouping and the achievements of the students in Grouping C is 222 points (more than two standard deviations) and that the gap between the achievements of students in Grouping A and the students in Grouping B is very high (88 points). This finding is also in line with research findings from around the world with respect to the large achievement gaps between students who study in the grouping model.

Illustration 3 shows that the achievements of students in the heterogeneous groups are similar for those in Grouping A and lower than those in the Outstanding grouping. Seemingly, one could argue that in light of this finding studying in heterogeneous groups benefited the achievements of most students (excepting

those at the highest ability level). We, however, advise caution in making a hypothetical claim such as this (which does not appear in the report) for two reasons: the first is the small number of students who studied in heterogeneous groups (7% of the entire sample), a figure which greatly limits the validity of the comparison. Second, there is insufficient information regarding the makeup of these groups and what is known about them confirms our reservations. For example, Table 4 in Glickman & Lipshtat's report (2013:9, in Hebrew) shows that of the 1,000 students in the heterogeneous groups in the sample, about 72% come from high SES backgrounds, about 22% from middle SES backgrounds and only 6% from low SES backgrounds. In other words, it appears that the heterogeneous environment under discussion is not very heterogeneous, at least in the socio-economic sense, and does not recall the diversity of a school such as Cibola, that was described in the previous section.

Illustration 3: Average student scores on the MEITZAV 2011 test for eighth grade by grouping



Source: Glickman & Lipshtat, 2013 (in Hebrew), presentation accompanying the report

Indeed, breaking down student achievement by SES in the report's Table 4 (ibid) shows that in contrast to the students from high SES backgrounds (who are, as mentioned, the majority of students) who attained an average score of 586 points, the students from low SES attained just 399 points, similar to the average for students in Grouping C. This is an example that illustrates how reading the data from different research reports can be accompanied by interpretation that are not necessarily valid; one must be doubly cautious when deriving conclusions based on research findings about which we do not have sufficient data. As we will see later on in the chapter, there are debates between different researchers in the field of math instruction around the world regarding the desired model for teaching (heterogeneous or differential) and often the conclusions reached have been diametrically opposite one another It can be presumed that similar to what occurs in other areas of the social sciences, the paradigms and worldviews held by different researchers in this case influence the way they collect, interpret and present their research data.

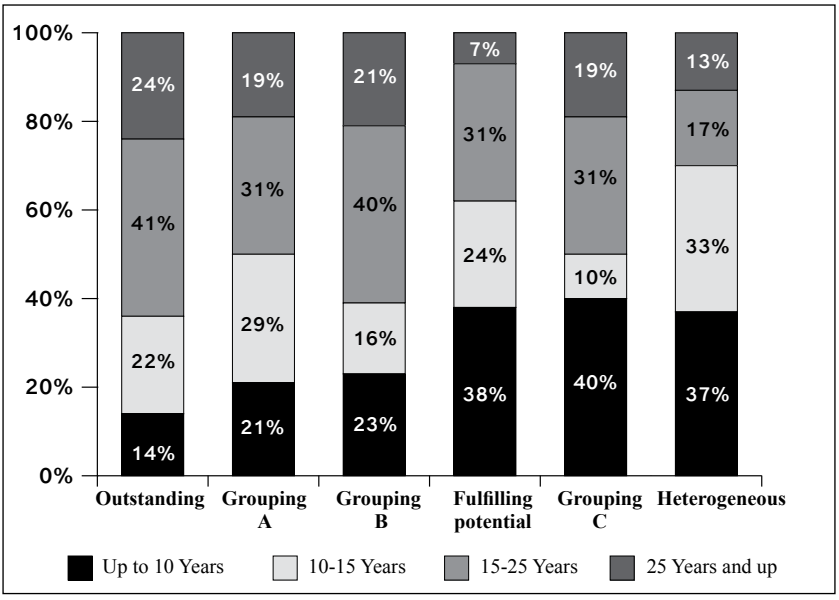
D. Teaching in different groupings: Analysis of data collected from teachers

Within the framework of their report, Glickman & Lipshtat also analyzed data collected in the 2011 school year through questionnaires distributed to 389 teachers, each one of whom was asked to choose a class in which they taught for the most number of hours and to note its level. They also collected data about teacher seniority and education. Illustrations 4 and 5 present the distribution of teachers by grouping broken down by seniority and education, respectively.

The diagrams show that the lower the level of grouping, the greater the proportion of teachers with less seniority (up to 10 years) who teach the grouping. Likewise, except for the "Fulfilling Potential" group, the lower the grouping level, the greater the proportion of teachers without a specialization in math who teach the grouping. About 90% of the teachers who teach the Outstanding grouping have a math specialization, and about half of them have an academic degree in mathematics. In contrast, in Groupings B and C, the proportion of teachers without a specialization in math is 30% and 37%, respectively.

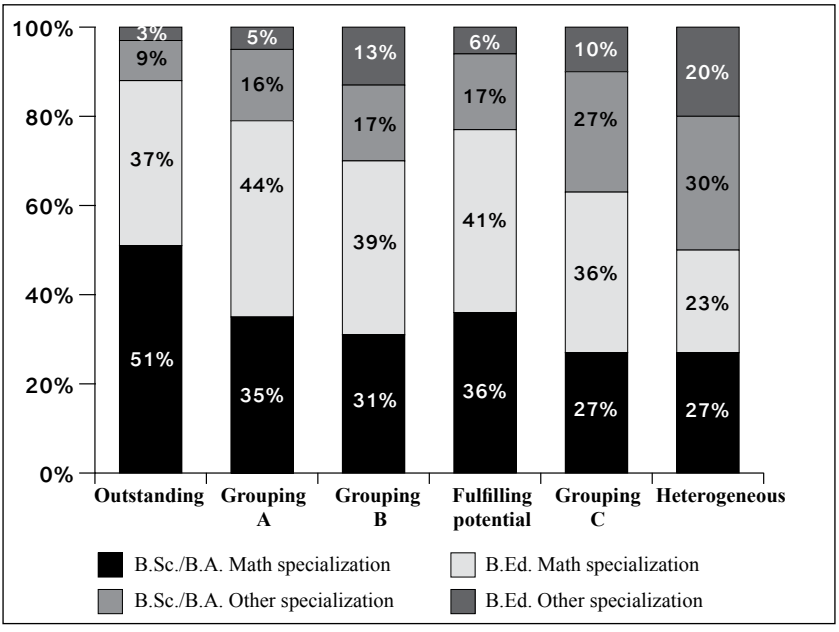
The researchers also found that except for the "Fulfilling Potential" group, the higher the level of the grouping, then the greater the incidence of teachers who report on engaging in activities classified as reflecting more advanced levels of thinking required by students, i.e., students must explain, justify, draw conclusions from a graph or diagram, participate in discussion or solve a problem in different ways. Likewise, the higher the grouping level, the greater the frequency of using advanced test questions.

Illustration 4: Distribution of teachers by grouping taught and by seniority



Source: Glickman & Lipshtat, 2013 (in Hebrew), presentation accompanying the report

Illustration 5: Distribution of teachers by grouping taught and by education



Source: Glickman & Lipshtat, 2013 (in Hebrew), presentation accompanying the report

These findings reflect the stratification phenomenon referred to by Gamoran and other researchers, that is, the inequitable distribution of resources between high level groupings and their counterparts at the low level. We see that in Israel too, according to this sample, the tendency to assign more experienced teachers and better educated teachers to higher level groupings takes place. According to Gamoran & Weinstein's (1998) definition cited above, instruction in the higher groupings is of higher quality.

To summarize this section, we have seen that the current findings presented in the RAMA report on mathematics grouping in Israel are in line with the findings of experts around the world who address the differential model of instruction. In other words, the worrisome phenomena that researchers such as Adam Gamoran, Maureen Hallinan and Jeannie Oakes address in the context of inequality that can result from grouping are at least somewhat characteristic of the situation in middle school math classes in Israel. The question of whether these phenomena are an unavoidable outcome of teaching in groupings, as Jeannie Oakes contends, or can be significantly limited through proper operation of the differential model, as Maureen Hallinan claims, is a question that is left unanswered here too, or at least a question for which an answer is context-dependent.

The differential and the heterogeneous model in teaching math: Review of research from Israel and around the world

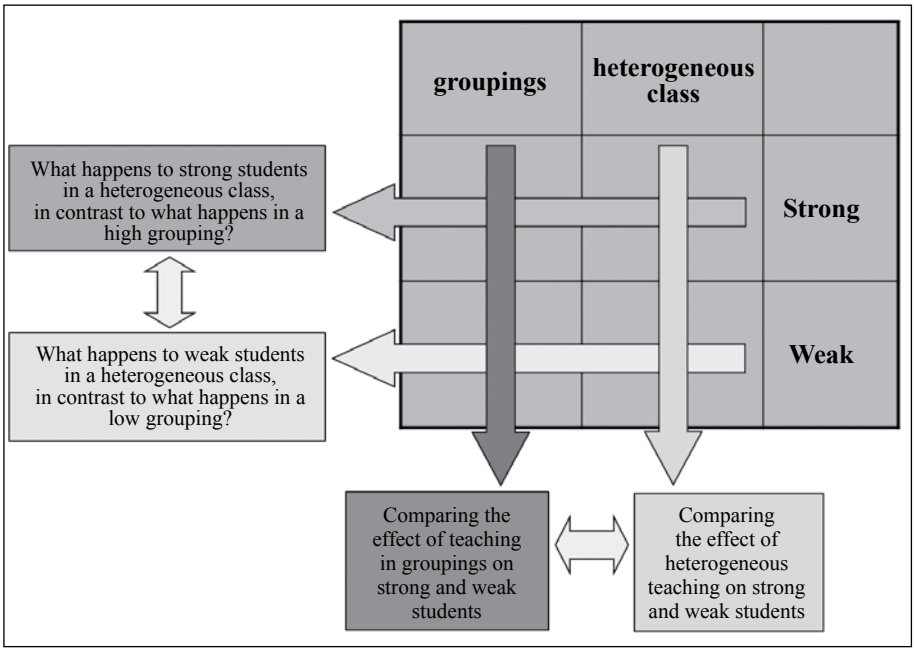
We have already mentioned that different research studies from around the world have drawn contradicting conclusions with respect to the desired model for organizing math instruction, mainly in middle school. The following quotes from two studies on the topic illustrate this well:

> "A wide range of evidence […] connected placement in groupings to low achievement, both for students in low groupings and for students in high groupings. This, despite the prevailing conception in the public, in the media and in government, that ability grouping raises academic achievement." (Boaler et al., 2000:634)
>
> "Our results reinforce the conception that tracking has teaching advantages for all students." (Mulkey et al., 2005: 137).

In general, research studies look for relationships between the model for organizing teaching and student achievement, and some also relate to emotional and social aspects. Thus, assessments made are usually based on different types

of comparisons, as described in Illustration 6. The diagram shows the customary approaches to examining the topic: there are studies that focus on comparing the influence of learning in a heterogeneous class on students of different levels, others examine the influence of the grouping model on students of different levels, and there are those that compare the effects of the two. There are, likewise, researchers who focus on outstanding or gifted students and compare these students' learning in heterogeneous classes to learning in a grouping. There are those who, similarly, focus on weak students and in addition there are those who discuss the influences on both these groups of students. The studies are generally quantitative or combine quantitative with qualitative approaches and most address a number of issues for comparison in order to obtain as much comprehensive evidence as possible.

Illustration 6: Types of frequent comparisons in research concerning mathematics instruction in groupings or using the heterogeneous model



We will briefly review four studies in this field that represent different views with reference to the question of the optimal model for teaching.

Jo Boaler, one of the more prominent researchers in math education, opposes instruction using ability grouping and works to increase equality in math classes

with respect to social background, gender and use of advanced teaching methods. During the past two decades, Boaler has published many articles and books on this topic following studies she conducted in Britain and the United States (for example, Boaler, 2002, 2006, 2008; Boaler et al., 2000; Boaler & Staples, 2008). One of these studies sought to thoroughly examine the effect of grouping in math on the achievements of students at different levels and on their attitudes towards math (Boaler et al., 2000). The study was conducted in six schools in Britain with 943 eighth and ninth grade students taking part. The data were collected using questionnaires given to the students, interviews with 72 of them, and 120 hours of lesson observations. A comparison was made between the attitudes and achievements of students studying in heterogeneous classes (two schools) contrasted with those who transferred from heterogeneous classes to a grouping in the move from eighth to ninth grade or earlier (four schools). The study's findings were: 1) students in high groupings, and especially girls, complained of pressure and inflated expectations; 2) instruction in the lower groupings was not professional and was "diluted" and boring; 3) 15% of students in groupings described math lessons positively as opposed to 34% of students in heterogeneous classes.

The conclusion reached by Boaler and her colleagues was that instruction in groupings was less geared to the needs of the individual than instruction in heterogeneous classes and it limited the chances of poor students for higher education. In later studies, Boaler more thoroughly examined cases of schools that use a heterogeneous model and non-traditional, advanced teaching methods and that succeeded in having their students attain high mathematics achievement (Boaler, 2002; Boaler & Staples, 2008). As in the case of Cibola High School, Boaler also found that the success of heterogeneous math classes depended upon the teachers' deep commitment to equality, the use of an innovative curriculum, non-traditional teaching methods that stressed thinking and discussion, and setting high academic standards for all students according to their level.

In Israel, Liora Linchevski has conducted much research into the topic of math instruction in middle school, both on the heterogeneous model and the differential model, partly in her capacity as the head of the "Together and Separately" project for heterogeneous instruction, and as head of the "Fulfilling Potential" project mentioned above (see the Linchevski abstract in Appendix B). A study conducted in Israel by Cahan, Linchevski & Ygra (1992) measured achievement at the end of the first year of study in groupings and at the end of the third year, and showed that the differences in academic achievement between students studying in groupings at different levels were larger than expected on the basis of initial differences. As

mentioned, this finding is common to many countries. On the basis of this study, Linchevski & Kutcher (1998) sought to answer two questions:

- Is it possible to prevent disparities of this nature in heterogeneous groups?
- Is the achievement gap growing because grouping helps students in the high grouping or because it harms students in the low grouping? (Or, perhaps it is some combination of the two?)

In their article, the researchers describe two studies that statistically compared students in homogeneous classes to students in heterogeneous classes while focusing separately on poor, average and good students. The first study was conducted in heterogeneous classes (that were part of the *Together and Separately* project) with the participation of 1,629 seventh grade students from 12 schools who were tested at the beginning of seventh grade and at the end. Of these, 389 (in four schools) were also tested at the end of eighth grade. The study's main conclusion was that the differences in the end of year student achievement can be attributed to the initial differences between them, that is, the gap was not widened. The second study was conducted in heterogeneous and homogeneous classes in the same school with five seventh grade classes participating – three homogeneous and two heterogeneous. The teachers were randomly assigned to the classes and they all took part in weekly meetings (meetings in the *Together and Separately* framework as opposed to meetings with the math coordinator). After two years, at the end of eighth grade, the students completed two test questionnaires: a uniform test for everyone and a differential test. The study's main findings were: 1) when learning in homogeneous groups, the good students' achievements were a little higher than their achievements in the heterogeneous groups, but not significantly; 2) when average and poor students studied in heterogeneous groups their achievements were significantly higher than when they studied in homogeneous groups. Linchevski & Kutcher's conclusion was that heterogeneous classes push average and weak students higher while its effect on good students is negligible.

Saunders (Saunders, 2005) conducted a study in three Arizona (US) schools in which 305 sixth and seventh grade students participated. Saunders compared the achievements of students when they learned math in homogeneous classes and when they learned in heterogeneous classes, with the aim of examining which type of instruction contributes more to academic achievement and advancement in math. The students were tested in sixth grade and in seventh grade using the school district's math test. A comparison between achievements was made before seventh grade and at its end for students studying in homogeneous classes as

opposed to those studying in heterogeneous classes. The data was also broken down by gender and ethnicity. The research showed that students studying in ability groupings achieved larger improvements than students in heterogeneous classes. This finding was valid following a breakdown by gender and ethnicity as well. That is, for students with similar characteristics, improvement was greater for students in ability groupings.

Mulkey et al., (2005) conducted a longitudinal study in the United States with the goal of examining long-term relationships between studying math in ability groupings and student characteristics. The research question was: How does the assignment of students to math groupings in eighth grade influence these students, academically and psychologically, in tenth and twelfth grades? The research's underlying argument was that as long as there is no comprehensive tool for assessing the effects of grouping over time while relating to academic, social and emotional aspects, there will be an unclear understanding of the influence of grouping on students. The study focused mainly on good students (though it did include students from all levels) and addressed to two competing theories in the context of the effect of grouping on these students. According to one theory, good students benefit less from being in a high grouping than from being in a heterogeneous class (the *big fish little pond* effect, see Marsh, 1987) and according to the second theory, good students benefit more from being in a higher grouping than from being in a heterogeneous class because the instruction in the high grouping is of better quality.

Participating in the study were 8,900 students during three time periods: eighth grade, tenth grade and twelfth grade. The study used data taken from the National Education Longitudinal Survey conducted from 1988 to 1994. The survey relates to variables such as attitudes toward math, self-image, choosing math courses in high school, as well as grades in math. The sample was broken down according to gender and ethnicity. Mulkey et al. found that learning in a grouping had a positive effect on later achievements for both good and poor students. At the same time, it was found that grouping had a negative influence in the social and emotional realms. Grouping also had a negative influence on the self-image of good students, especially boys, and it is possible that this negative influence affected their achievements.

Mulkey's research is especially interesting since more than anything, it points to the complexity of the issue. According to Mulkey et al., math achievements improve but there is harm on the social and emotional planes. This conclusion takes us back to the dilemma of conflicting values. As we mentioned and as the

research shows again and again, there is no, and there cannot be any, universal tool to use for definitively deciding this dilemma. Those dealing with mathematics education interpret the research findings based mainly on their educational beliefs and on their accumulated practical experience. As a result, we again emphasize that the decision regarding the types of models used must be made in the context of each and every local school.

In the chapter sections that follow, we will present and define the effective school, we will expound on the importance of giving principals autonomy to decide on the teaching model appropriate for their school and we will describe some cases in the Israeli context.

Effective schools and the importance of educational leadership

There are many definitions of the concept of the successful or effective school. The narrow definition of an effective school boils down to the distribution of students' scores on achievement tests. Many researchers have come out against this limited definition. Thus, for example, Rowan, Bossert & Dwyer (1983) note that an effective school is a multi-dimensional variable since a school is not intended to focus exclusively on academic training but also on developing its students in areas such as education for citizenship and independence and promoting development resulting in self-esteem and self-discipline. Sergiovani (2002) reviewed research on effective schools and notes the strong influence of the principal on what takes place in the school and the importance of the presence of "massive" leadership. In other words, leadership is not only the principal's province but an element in a process in which the principal helps teachers, other staff members and students function optimally and activate the leadership for the school's benefit and its guiding objectives (see, for example, the description of the visit to the "HaGalil" School, in Appendix A). In addition, principals in effective schools adopt a range of behaviors that are supportive of the teachers and their work. Effective schools have a path and a clear practical vision: these serve to consolidate those involved and act as the guiding light for their decisions and actions (see, for example, the description of the visits to the "Ramot Hefer" School and the "Misgav" School, in Appendix A). Fullan (2007) emphasizes that principals differ in the way they choose to perform what is demanded of them and in the projects they embark upon in order to go beyond what is required. One of the attributes of a successful principal is the ability to expand the scope of choice and thus reduce the influence of requirements and constraints.

As was written in the introduction to this report, the committee visited five schools within the framework of its work. Each one of the schools proposed a multi-dimensional solution to different aspects of diversity among students. These schools are obviously not representative but they do provide "proof of existence" that in Israel it is possible to implement excellent teaching in heterogeneous frameworks while taking the needs of each student into account. Below are a number of insights that were formed following the visits.

Reducing gaps upward: The schools visited by the committee emphasized the effort they make to reduce gaps between students by aiming high with respect to academic achievement. As part of this goal, three mechanisms were mentioned: setting a high bar for expectations from students, differential instruction, and emotional support for students, as manifested in personal relationships, trust and the students' sense of self-efficacy regarding academic success.

A holistic model combining achievement with wellbeing: The schools were characterized by different combinations of concern about academic achievement and fostering students' wellbeing. These combinations included for example, building a "treatment file" and appointing a "case manager" for students who need it (at the "Leo Baeck Education Center"), defining an individual curriculum for each student (at "HaGalil" and the "Dror Experimental Educational Campus"), and emphasizing the development of functioning skills not only in academic areas (at "Misgav"). The DREAM program that was developed by the Secondary Education Division of the Ministry of Education and which is applied in a great number of middle schools in Israel is designed to foster students' wellbeing together with cultivating their academic abilities.

Taking the student's interests into consideration: Some of the schools enable students a great deal of freedom in choosing their areas of interest. For example, at the Dror Experimental Educational Campus, there are 70 options for combining different majors. The Misgav students choose the product they will develop as part of the young entrepreneurship framework and the "Ramot Hefer" students choose the product/output they wish to present alongside the results of their theoretical work that was determined by the teaching staff. The "Carmel-Zevulun" school collaborates with the "PalRam" factory located in one of the surrounding kibbutzim. This cooperation was developed for students for whom academic studies are unsuitable so as to still afford them the possibility of excelling.

Student-focused pedagogy: Five schools implemented pedagogies that placed the student and her/his choices at the center. In Misgav, for example, the student can gain experience in entrepreneurship that begins with identifying a need in

society for a specific project and leads up to the group's creation of that product. In the HaGalil High School the students plan and implement an idea for improving society. At Ramot Hefer, students engage in research processes within a work group, starting with selection of the topic through to submitting the paper and presenting the research outcomes. Each school noted with satisfaction that the students gain experience in important practices of value to their lives in the future and that each student can make use of his or her talents within the ongoing process of the group.

Another pedagogic model is employed at the "Amal BaGalil" Comprehensive High School by the principal, Yinon Maimon (1998, in Hebrew). Instead of individual subjects, study is organized around topics, for example, the topic of "leadership," for which the teachers have combined the areas of Jewish Oral Law (Mishna) and Bible. These reports correspond to the findings of Barnea, Kaberman & Dori (2007, in Hebrew) who examined the attitudes of teachers, principals and students participating in the "Matriculation 2000" project. This project examined the option of replacing the traditional method of matriculation examinations using an external test with an internal one that applies alternative methods of assessment (for example, portfolios of work). The researchers report that as a result of this program's adoption, students learning was enhanced and they developed important skills. Teaching in these subjects improved as did the discourse in the school.

Placing the teaching staff's wellbeing at the center: The schools visited by the committee stressed their perception of the teaching staff as a valuable resource and the importance they see in empowering them and in having them as partners in the practice of teaching. The school principals emphasized the centrality of fostering the teachers' wellbeing. Although the principals set a high bar for expectation from the educational staff, in parallel the principals also set one for themselves with respect to giving the teachers and their ideas support and listening to their needs. Much effort is devoted to establishing and maintaining relationships of trust between them and the teachers and to setting a personal example of the school's vision and its path. These are evident in, for example, the sense of support and confidence, in the "open door" policy and in encouraging the teachers to develop and to take on projects in the school.

Multi-culturalism

At the schools the committee visited, use of student diversity as a valuable resource was not reported. Although in a number of schools emphasis was placed

on collaborative learning and even on peer assessment, only one school explicitly mentioned diversity as a value in the learning process. The literature contains a range of topics and ideas for making use of student diversity as a learning resource. An example applied in Israel is learning about "Grandma's Remedies" that were prevalent in the Diaspora as a way to learn about the body's immune system. Another example is a joint learning program developed by the Gilo Center for Citizenship, Democracy and Civic Education within the framework of the Educational Administration's trans-district classes. This second program, an expansion of the civics curriculum,[15] was designed for secular Jewish, religious Jewish and Arab high school students and addressed the topic of multiple cultures in Jerusalem (Matusov, 2009; Pollack & Ben-David Kolikant, 2012; Goldberg, 2013). Lee (1997) developed pedagogical principles that rely on the cultural capital of minority students. Thus, for example, an instruction booklet for teaching Shakespeare was written, which includes jokes and is designed to teach literature and concepts such as irony.

Moreover, Israel is a country of immigrants where diverse Jewish and non-Jewish populations live. Despite its importance, the committee did not review this aspect of diversity and there is room for its examination in the future. From the perspective of the literature that addresses multi-culturalism as a resource, there are programs being run in the field and empirical research is being amassed. For example, Resnik (2009, in Hebrew) reviews three Israeli schools that adopted multi-cultural pedagogic models. Resnik argues that the approach to their implementation, in which the immigrant is called upon to forget the culture of origin while at the same time, being at the bottom of the social ladder, served to dislodge in Israel the belief in the "melting pot" model. Its place was taken by theories of multi-culturalism that advocate recognition of different cultures. According to Resnik, the multi-cultural model aspires to shape an alternative identity for children of a specific ethnic community through strengthening the positive visibility of their community, a process that is believed to contribute to strengthening these students' self-confidence and self-image which lead, in turn, to improved achievement in school and in the future, to improved employment and social attainments. So, for example, the "Liberating Identity" program at the "Kedma" School encourages Sephardic visibility by emphasizing the right to equality and respect for Sephardic creativity, and by conducting an open struggle against the hegemony of the mainstream culture. At the "Shevach Mofet" School, a positive Russian presence is sought and to this end, their program combines Russian culture and language, scientific excellence and the Jewish and Israeli

[15] More about this program can be learned on the Gilo Center website: www.gilocenter.huji.ac.il

experience in the belief that in this way the students will be able to find occupations of relatively high social status and successfully cope with the negative visibility of their group. Resnik raises many questions regarding the effectiveness of these approaches and the link between communal identity and that of the collective.

The absence of discourse on the potential inherent in technology as a solution for cognitive differences

In schools there is almost no discussion related to the potential of technology as a tool for attaining different objectives, despite the fact that technology can advance the various programs and goals schools set for themselves. In the committee's discussion with Dr. Ofer Rimon, who was head of the Ministry of Education's Science and Technology Administration, he presented the educational content portal and emphasized the choices open to teachers through different ICT lessons. Some of the different content providers, licensed by the Ministry (for example, "Time to Know"), enable tasks to be differentially assigned to students and for the technology to track the student's progress in a way that can at times identify difficulties that arise during the learning process. In general, much knowledge is being collected in the field of educational technology about adaptive learning, a learning environment based on the conception that all learners have their own learning styles and a need to adapt the learning approach to the learner. This technology can also contribute to systematic tracking and systematic mapping of the student and to enable sharing knowledge accumulated about the student – as was done, for example, at the Dror Experimental Educational Campus – and thus it can serve as an aid in helping the student. This committee did not review the potential inherent in technology.

In this chapter, we reviewed different models which, each in its own way, addresses the challenge of diversity among students – models that appear and are much discussed in the international literature (here we focused mainly on organizing teaching by grouping as opposed of its organization in heterogeneous classes) and models implemented in different schools in Israel that were visited by the committee. The main conclusion emerging from our review is that it is not realistic, and not even desirable, to look at the various models and translate them into precise formulas that each school can adopt and thus succeed. The opposite is the case. Each model and each program is context-dependent. Each one of the schools reviewed emphasized how the program it built and implemented relies on manpower, on the school ethos, on resources it had at its disposal, on its understanding of its students, and on more. It can be argued, and rightfully so, that

a specific school does not cope with the difficulties, constraints and contexts of any other school. Each school, however, did demonstrate unconventional thinking about their school's characteristics, needs and strong points, thinking that enabled unique pedagogy. For example, at the Dror Experimental Educational Campus, the school's vast size, an attribute generally perceived as a disadvantage, was transformed into an advantage as a result of creative thinking about the schedule, the insistence on placing students and their advancement at the center, and taking advantage of the large numbers in order to enrich the range of options available to students. In addition, the intensive work done by this school's assessment unit is entirely relies on the staff and was achieved by thinking differently about its work. Another example can be found at the Misgav School where they literally broke down the classroom walls in order to enable the students to engage in collaborative entrepreneurial work in a large space.

The important attributes observed in the field are the belief in the rightness of the path chosen by the school, rallying around a vision and an ethos, belief in and support of the staff and feelings of trust existing between them and the administration, setting a high bar for expectations of every student (and every staff member), placing students at the center – their needs, wishes and strong and weak points, the close connection with the world outside school and in the end, the attribute which we see as most important: the ambition to improve the student's wellbeing in school through a holistic perception of optimal functioning, and not through an outlook limited to academic achievement. All these characteristics constitute, in our view, a lesson that can be learned from this chapter and are the basis of the recommendations that we can derive from it.

Conclusions and Recommendations

A number of conclusions and recommendations emerge from the above chapter and are listed below:

1. It is not realistic, and not even desirable, to look at different models of effective schools and transform them into formulae that each school can successfully adopt. The opposite is the case: each model and each program is context-dependent. Programs implemented in effective schools take the following attributes into account: belief in the rightness of the path chosen by the school, joining forces around a vision and an ethos, belief in and support of the staff and trust between it and the administration, setting high expectations for every student (and for each staff member), placing the student at the

center – needs, wishes and strong and weak points, the close connection with the world outside school and the aspiration to improve the student's wellbeing in school through a holistic perception of optimal functioning, and not through an outlook limited to academic achievement.

2. The debate between teaching using the heterogeneous model and instruction using the differential model (tracking and grouping) cannot be definitively resolved since the effects of these models are context-dependent. Therefore, based on their judgment and familiarity with the system in which they operate, educators can intelligently choose one of the models and in so doing, recognize that their choice is made on the basis of educational views that stress different values. Giving principals autonomy to choose between alternatives is essential.

3. Schools that choose the heterogeneous model must challenge high-ability students. Schools that choose the differential model must guarantee quality teaching to low groupings as well in order to prevent the problem of widening gaps, common when using this model.

4. Conditions necessary for the transition from tracking or grouping to heterogeneous teaching are a deep commitment to equality, strict adherence to high academic standards, used of individually adapted differential instruction within and outside the classroom and the establishment of academic and emotional support mechanisms for students with different needs.

5. The choice to teach a specific knowledge area within a grouping framework requires compatibility between the teacher's characteristics and those of the group. Certain teachers are more successful than others in working with students at the extremes (those with difficulties or gifted students). The prevalent policy of assigning teachers to groups based on seniority or political power in the school is not helpful and may increase inequality. If the teaching staff includes veteran, experienced teachers with high chances for advancing students at different levels, it would be wise policy to assign them equally to the different groupings. The tendency to assign new teachers or teachers from other knowledge areas to low groupings harms the chances of successfully teaching in ability grouping.

6. One of the common results of separation into groupings is a diluted curriculum for the weak grouping and the low standards set for these students. Schools must set clear standards for quality teaching for these classes as well.

Maintaining a suitable academic standard and setting appropriate challenges and high expectations of all students are conditions necessary for the successful treatment of cognitive differences in any model of the organization of instruction.

7. A reasonable level of choice and flexibility raises the chances of the grouping model's success. Consequently, students should have maximum choice (with the staff's help) in deciding on the level at which they want to learn and mobility between groupings should be allowed.

8. The response to cognitive differences among students cannot be divorced from the broader context that includes the students' needs, wishes, strong and weak points, areas of interest, as well as the world outside of school that they experience. Thus, such response must be made through a holistic perception of optimal functioning and not through a view limited only to academic achievement in school.

9. Students' optimal functioning is a result in part of teachers' optimal functioning and therefore there is great importance in school principals' investment in the teaching staff's wellbeing. Such investment must be expressed in support of the teachers and their ideas, attentiveness to their needs, establishing and maintaining relationships of trust with the teachers and setting a personal example of the school's vision and its path, while setting high expectations of each teacher and encouraging leadership and personal initiatives.

Chapter 6: Addressing Diversities in Teacher Training and Professional Development

As has emerged from the report's chapters to this point, a central aspect of the way the education system relates to student diversities relates to teachers' knowledge, their skills, expectations and attitudes. It is important for teachers to get to know their students' social and cultural characteristics and to understand how their background affects the children's social and academic functioning in school. Furthermore, teachers must become familiar with different teaching strategies, to know how to adapt them for students and to be able to properly apply them in the classroom. During educational activities, they must know how to occupy students with different backgrounds and with different competencies and how to create interest and motivate them. A rich toolbox is critical so that teachers can, on a daily basis, make informed decisions about teaching. We have described the diverse practice we discovered in the schools we visited and have presented a range of projects they run in order to advance students from disadvantaged populations. From them we have learned that it is possible to successfully engage in reducing disparities between students. At the same time, we have seen that there is no single prescription for organizing classroom teaching, nor is there a single prescription for a strategy to advance different children. This being the case, the question arises, how and when do teachers acquire the knowledge necessary for coping with diversities? In the chapter below, we address this issue.

Although a range of diversities exists among students, the literature addressing diversities in teacher training and professional development deals mainly with the topics of multiculturalism and social diversity. Thus, for example, an online search for information using the keywords "class heterogeneity" resulted in much literature from the 1970s and 1980s. In contrast, a search using the keyword, "diversity" led to a vast number of results though most of them related to ethno-cultural diversity. Reinforcement of this focus in teacher training and professional development was found in a large-scale study conducted in the United States. The research examined teacher training programs in 142 universities which train 23,000 to 30,000 teachers annually (Jennings, 2007). The research addressed a number of questions relevant to this chapter:

1. Which part of the training program relates to diversity?
2. What kinds of differences warrant greater attention?
3. How do program coordinators assess the challenge inherent in integrating topics of diversity into programs?

4. Is there a correlation between teacher educators' attitudes and knowledge related to diversity and the attitudes of student teachers?

An encouraging finding in this study was that most of the programs address the topic of diversities across the board and at multiple times. However, the main focus in the discussion on diversity is the ethno-cultural aspect. Other features, ranked according to the scope of its focus in the training program, were: special needs populations, diversity as a result of language, economic and gender differences, and differences in sexual orientation. A surprising finding of this study was that there are almost no differences between training programs intended for future elementary school teachers and those designed for secondary school teachers, although it is obvious that certain topics, for example, sexual diversity, would be more relevant in secondary school. The article contends that addressing diversities in teacher training is a function of the teacher educators' preferences, who tend to deal more with the multi-cultural aspect than with other aspects. Accordingly, and as reflected in the literature from around the globe in the context of training teachers to deal with diversities, in this chapter the multi-cultural aspect will serve as a kind of test case that can be generalized to other types of diversity.

The first part of this chapter is concerned with different views of teacher training in the context of student diversity. The second part presents approaches for addressing diversity in teacher training, while the third part discusses teachers' learning processes throughout their career and ties this in to the acquisition of knowledge and skills relevant to addressing diversities among students. In this section, we will go into the topic of training programs and professional development for teachers in Israel. The chapter closes with conclusions and recommendations.

Equity, social justice and equality in teacher training programs

Society has many expectations from the education system and from schools, among them, to develop knowledge in different areas, pave the path for social mobility, socialize students to the local society and wider culture and prepare them for meaningful citizenship.[16] Because schools face many challenges in delivering on these expectations for all students, equity must be ensured in the area of education. The National Research Council's (NRC) report which proposes an updated framework for science and engineering education[17] from kindergarten

[16] For a detailed discussion of these factors and their effect on the learner, see chapter 2, "Differences in Family Background and Socio-economic Status."

[17] A Framework for K-12 Science Education: Practices, Crosscutting Concepts and Core Ideas (NRC, 2012).

to grade 12 sees the aim of promoting this kind of social justice as a first goal at the forefront of a national effort to improve educational goals and practice which supports learning and fulfillment for all students. The report devotes an entire chapter to equity and diversity on the topic of academic educational experiences, achievements and science and engineering outcomes. The report determines that equity is an expression of social justice and is characterized by a call for repairing historical injustice towards groups in society that did not receive adequate treatment in the schools and therefore had a lesser chance of succeeding occupationally in socially and financially prestigious fields. The reasons for the lack of equity are numerous and complex and warrant many explanations. The NRC report relates to two main reasons: the first is the relationship between inadequate achievement and inadequate opportunities for study in school, in communities and in different areas and the second is an approach to teaching that is not inclusive with respect to diverse populations of students and does not encourage them to succeed.

A large part of the NRC report is concerned with teachers and schools and with the opportunities they grant students from diverse backgrounds. It is argued, for example, that many schools lack the ability to support teachers in order to enable optimal teaching of students from diverse backgrounds. The report criticizes the expectation that all students should attain the same achievements and the policy of high-stakes tests that is designed to confirm the attainment of similar goals by diverse students. In addition, in the view of the report's authors, the focus on the domains of language and mathematics have led to more superficial instruction in the sciences, the arts and the social sciences, especially in elementary school. In relating to teaching methods, the NRC's framework document calls for inclusive instruction. This is a strategy that combines techniques and methods based on the interest shown by the students and on their background, with the goal being to get them more involved in learning and to give them support throughout. These strategies must be explicit and meticulous so that they can become standards in curriculum development, teaching and assessment. Although the report does not relate to the issue of tracking in contrast to heterogeneous classes, it supports teaching methods that actively involve the learners in building knowledge while interacting socially and creating scientific discourse.

The researcher, Felicia Moore Mensah (2012), addresses issues of diversity in the context of science education in the United States. Her claim is that equity in education is a *process* in teacher's learning but also a *goal* of teaching. She further argues that critical self-reflection brings the teacher closer to the goal of social justice in the classroom. Repeated and guided reflection, of individuals and of groups, interlaced in all courses on teaching methods, encourages learning for

social justice. Such reflection can be directed toward phenomena of exclusion, unequal opportunities, poverty and social oppression in society, in general and in education systems, in particular. In the context of teacher training, the opportunity of discussion with different groups of people in each course can encourage awareness, caring and learning to cope with lack of equity. Training teachers to examine reality in the context of culture, background, language and communities is, in her opinion, welcome.

With respect to training teachers to handle diversity, Mensah describes, for example, how writing a journal and participating in a book club support knowledge development and awareness among student teachers. She describes how reading a multi-cultural text concerned with the life and language of two communities in remote rural areas in the southern U.S. led student teachers to rethink their experiences in school and to re-examine their conceptions regarding learners from diverse backgrounds. For example, she cites the reaction of a student which related to the awareness he developed of his ethnic seclusion and of his bias towards different populations and toward creating stereotypes. Experiences such as these are expressions of students' learning about themselves. During the learning process, the students were given the opportunity to see different forms of discrimination which prevented learners from assimilating and caused the exclusion of certain population groups to continue.

Another approach to training teachers for equality proposes that training programs articulate a position regarding social justice and diversity, ensure that social justice is part of all teacher training activities and encourage an ongoing journey of transformation (Nieto, 2000). According to Nieto, there are only a few approaches to diversity in the United States, some of which view diversity as inherent and therefore demand study and acquisition of methods to address the issue, while others view it as something that must be uprooted in the goal of reaching a uniform national identity. She argues that in any case, one cannot relate to schools' position papers or vision statements due to the exaggerations and generalizations typical of such documents and because they have nothing to do with teachers' daily practice. Teachers must learn how to advance learning for all students and to develop learning environments that are educational and nurturing. She stresses that with respect to the wide gaps in achievement between students of different backgrounds, creating equal conditions and opportunities must be the main concern in the context of living with diversity. Nieto argues that the emphasis on multiculturalism as the face of diversity is problematic. Celebrating diversity, for example, by holding special programs, ethnic events, multi-cultural meals and the like are meaningless if the lack of equality for the students in

the school is not truly addressed. One cannot be satisfied with the training of "designated teachers" who are meant to deal with differences in language and cultural attainments. Training must include all teachers because the objective is to deal with in the entire school. She even suggests that schools consider the idea of encouraging acceptance of teaching candidates who have been exposed to the ideas of multiculturalism and who have prior multi-cultural experience in the field of teaching. Finally, in dealing with diversity, Nieto sees a long-term transformation process during which teachers learn and change. She encourages teachers to get to know their students' identities and to accept them, to learn their reality of life, to develop meaningful relationships with them and to become more multi-cultural themselves.

What should teacher training include in the area of dealing with diversities?

Milner (2010) greatly emphasizes the importance of educating for diversity in teacher training. Regardless of the type of training program, he believes it must include training teachers to address diversity, social justice, and equality and that this is the most challenging task in the field of training. He attributes some of the responsibility for the inadequate education of student teachers on the topic of diversity to the lack of awareness and the insufficient knowledge of teacher educators in institutions of higher learning.[18] Milner suggests five foci or emphases deserving of attention during training in the context of education and recognition of student diversities.

1. **Teachers' color-blindness and ethnicity blindness**: Milner claims that teachers who avoid relating to race or origin and see it as irrelevant to students' success are ignoring the "elephant in the room."

   In his opinion, teachers who adopt beliefs, ideologies, concepts and teaching methods that entail such blindness miss important characteristics of their students. The consequences can be inadequate judgment with respect to the differences between the experiences of students in class, school, and society and can lead to decision-making that is based on the teacher's norms and with which students of a certain race or ethnicity will have trouble coming to terms with. For example, student teachers assume that if they relate to their students' racial or ethnic differences, this means that they are racists. They also assume that if they believe that people experience the world in different ways and that

[18] This claim is also made by Jennings, whose research was discussed above.

ethnic origin is important in shaping one's world, then they hold a view which is politically incorrect. In other words, student teachers assume that they must relate in an identical manner to all their students regardless of their origin or family background.

2. **Cultural conflicts** between teachers and their students: Cultural conflicts can lead to the creation of a culture of power games in the classroom. In contrast, use of music and other cultural tools from the students' backgrounds can be a bridge between cultures. Citing Delpit (1995), Milner argues that conflicts, incompatibility and lack of consistency exist between white teachers and black students in the United States with respect to the question "What does being normal mean?"

3. **The meritocracy myth** holds that success is the result of hard work and the right decisions and failure is the result of choice, laziness or lack of ability. Perceiving students as if everyone is born equal ignores the advantages and disadvantages of race, economic status and opportunities which the student either had, or did not have.

4. **Deficit conception** is teachers' selective vision regarding the capital the student brings to class. The teachers focus on what the student is lacking and not on the wealth that each one of them can contribute to the other students in the class. The claim is that teachers who advocate a deficit perception are reluctant to challenge their students in tasks that require higher order thinking skills. In this way, diluted curricula are created for these students.

5. **Teachers' expectations**: Teachers hold low expectations of students from disadvantaged backgrounds. These low expectations are obvious in everything they do and in the curriculum they study. Milner argues that these teachers base their beliefs on one of the following assumptions:

    a. I am helping to build my students' self-esteem by giving them easy assignments to perform.

    b. Economically poor students cannot fulfill high expectations because their ongoing lack of resources in their personal history, and therefore it is better to give them low level assignments (for example, filling out work sheets).

    c. My task is to enable these students to continue in the system and to pass standardized tests. With certain students, you cannot achieve much more than that.

Clearly, such a set of expectation does not permit creativity, excellence of any kind, or depth.

Milner believes that a core program is needed in teacher training that deals with the topic of diversity. In his view, with the understanding and collaboration of teachers in the schools, teacher educators must build a "teacher training diversity studies" program based on the five points presented above. On the basis of the curricular reform model in the field of multiculturalism that proposed a number of approaches for coping with multiculturalism (Banks & Banks, 2009), Milner proposes basing teacher training on the transformative approach. This approach changes the nature and core of the teacher training curriculum. He suggests that education students study a curriculum that facilitates experiencing transformation and social action, and to try these approaches out in their teaching. The transformative approach must incorporate, and not only add, multiple perspectives to the curriculum so that it does not end up expressing only one dominant worldview but it must enable the existence of conflicting perceptions. The transformative approach focuses on teachers' perceptions and their thinking processes and encourages critical and reflective thinking. From Banks & Banks, Milner also takes the second approach they propose in their reform – an approach to **decision-making and social action** that deals with actual practice. This approach, which embellishes upon the transformative approach, calls for having student teachers engage in relevant activity following a learning process. According to this approach, student teachers should be actively involved in projects related to diversity since these will make it possible for them to deepen their understanding and change their practice in a way that will enable them to teach their students how to identify inequality and fight against it. In other words, not only do the critical approaches provide tools for the teacher but they also encourage students to identify inequality and promote social activism.

Despite the wider attention given to cultural diversity, the literature also deals with training teachers to address other types of diversity, such as cognitive diversity. In a British study concerning differences in students' cognitive styles (learning styles) (Evans & Waring, 2011), a main recommendation, similar to that of studies dealing with teacher training and social diversity, was to encourage teachers to develop sensitivity to diversity. According to the authors, student teachers must be aware of learning style preferences and therefore, of the need to develop a range of teaching methods that support different styles. Other research addresses the need to train teachers to cope with the diversity that exists in the classroom as a result of mainstreaming special needs students in regular education. A study conducted in the U.S. by Harvey, Yssel, Bauserman & Merbler (2010) found that

the majority of courses offered in teacher training programs for (elementary and secondary) regular education which address the topic of mainstreaming – focus on the characteristics of the special needs child (for example: "Introduction to the Exceptional Child") and on the mainstreaming classroom (for example: "Inclusive Classrooms"). These courses are general and theoretical. Programs that offer courses enabling acquisition of teaching, assessment and learning management tools for the mainstreamed classroom are few and far-between.

In Israel, as far back as 1994, a book entitled "Teaching Methods for the Heterogeneous Classroom" by Yisrael Rich and Rachel Ben-Ari, was published (in Hebrew). The authors indicated two main diversities to which they related: socio-cultural and cognitive-achievement. They argued that despite the importance of teachers' attitudes, in Israel the "top-down" model is more widespread and this was their reasoning in turning to experts responsible for methods implemented in this manner, since it is more important to examine the developers' ideas and objectives.

The book presented the following teaching methods in detail: Active learning, adaptive teaching, learning according to cognitive styles, learning for mastery, collaborative learning and complex teaching. The authors also offer a comparative review of the methods, examining them along the dimension of diversity (social or cognitive), the method's goals and means of attaining them, its theoretical basis, application in school, its efficacy and conditions for its effective operation in schools. For example, a prerequisite for implementing each one of the methods is the education authorities' clear message regarding the requirement of adopting alternate teaching methods in a heterogeneous classroom. Another example the authors relate to is creating working teams of teachers that will be able to more easily cope with the challenging task of the changing accepted teaching methods. Another suggestion is development of dedicated learning materials, although it should be noted that the authors express a number of reservations with respect to this idea. Rich and Ben-Ari divide the methods into two groups: a) those that require a change in values – a fundamental change in the perception of teaching and the attitude towards the teacher's and student's place (for example, collaborative learning, complex teaching), and b) those in which teachers are mainly required to learn to use new tools and to try them out (for example, learning for mastery). In any case, the authors relate to the changes mainly from the perspective of the school and teachers' professional development and do not touch upon teacher training.

A completely different approach views the diversity issue as a socio-political struggle. This is the critical approach, presented below.

Critical pedagogy

The literature on teacher training is divided into at least two trends: researchers that see the main task of teachers in addressing diversity as taking place in their own teaching discipline, as contrasted with those who view the teacher-educator as a driving force for coping with diversity on the socio-political plane through critical pedagogy. Critical pedagogy deals with equality and lack of equality, with inherent discrimination, which is an outgrowth of power relations in society and in the history of education which reinforces the existing socio-economic structure. The aim of critical pedagogy is to expose the origins of inequality and to struggle against them through education for change. In his article on teacher training written in the spirit of critical education, Gover (2000, in Hebrew) seeks to instill in young teachers an awareness of social mission and ethical motivation to actively fight against the exploitation or use of people, including oppression and the veiled uses typical of techno-centric, post-modern capitalist society. He argues that the critical model seeks to educate teachers to implement the values of a humane and just society in order to arouse in the young generation the desire and ability to change reality, not only to become accustomed to it.

Training in this vein places a pedagogy of dialogue at the center of school discourse. The critical model negates training focused on the acquisition of teaching skills and techniques and aspires to educating teachers to be change agent intellectuals who, through dialogue, create their own responses to teaching and educational situations. This model presents student teachers with a demand for ideological transformation: from a position of adaptation and agreement to the existing social order to formulating a critical stance vis à vis the social order. Gover describes how the critical pedagogy discourse, and the teacher training proposed as a result, are different from the accepted professional discourse models that dominate teacher training around the world and in Israel. It is an ideological social struggle discourse. In his opinion, dialogue must first take place between the student teacher and the teacher educators, and training must include meaningful components of culture, history, politics, and arts. Gover lists three main principles that training programs must include:

1. On the theoretical dimension: Theoretical-educational training that requires the study of areas in addition to education, in order to develop the ability to intellectually and ideationally deal with non-humane components (in Gover's language – apparently the reference is to unequal forces, exploitative entities, etc.) of education and society.

2. In the practical-strategic dimension: Training the student teacher to develop the competencies to conduct a dialogic discourse with students.
3. In the practical-tactical dimension: Teacher training that manifests a synthesis between the acquisition of known attitudes and competencies and the development of research and discovery methods, through the acquisition of knowledge and attitudes.

Questions that arise in this context relate to where training in specific content areas comes into play, and whether or not the socio-political power struggle is the main essence of the education system.

It is important to note that many who support the critical models tend toward a dichotomous presentation of reality. For example, from Gover's remarks, the question arises whether dealing with teachers' pedagogic-content knowledge (which Gover refers to as "teaching skills and techniques") contradicts encouragement of social justice among teachers? One answer that comes up is from research conducted by Paul Gorski (2009). Gorski analyzed 45 syllabi of courses on multiculturalism that are given in teacher training programs across the United States. Only 29% of the courses made use of the critical approach and related to education on multiculturalism from the perspective of power relations and inequality in society. Most of the courses (58%) simply encouraged awareness of "others" and their acceptance in society, while in the remaining courses (16%) the "other" student was perceived as completely outside the hegemony. Gorski concluded that teacher educators who teach courses in multiculturalism perceive their role as being mainly one of imparting sensitivity and tolerance toward diverse groups, but they do not prepare the teachers to identify conditions of inequality and do not give them tools to create an equitable learning environment. They do not present multiculturalism as a political movement with social justice at its center. At the same time, within the context of this research, should not the question be asked whether the definition of the concept of "multiculturalism" is too broad and as a result, the picture that emerges is unsatisfactory? Also do teachers who are sensitive to diversity deal with it differently than teachers who believe that diversity is a derivative of political power?

Relating to the topic of diversity in teacher training and professional development

Up to this point, the discussion has stressed pre-service teacher training, that is before they enter the career. Teachers' learning, however, does not stop

with attaining a teaching certificate from an academic institution. As in every profession, professional development is lengthy and ongoing, as Sharon Feiman-Nemser (2001: 1026) explains:

> No matter how high the quality of the training program was, there are things that can only be learned at work. The studies during training provide the basis and make experience in teaching possible. The first encounter with real teaching takes place when the beginning teacher steps into the classroom. Then, learning begins in earnest.

Feiman-Nemser notes that the first years of teaching are especially important, influencing the future course in the profession and shaping the practice of those that continue to engage in it. Being assigned to a school, the pedagogic, emotional and ecological support (the latter being the help the new teacher receives in order to learn the norms and rules that characterize the school's organizational routine, see, for example, Vonk, 1995) that the new teachers receive when entering the profession and the opportunities offered for expanding and deepening knowledge – all contribute to the quality of their teaching and to their identity and commitment to the profession.

Today, it is customary to relate to teacher training as a learning continuum that includes four distinct phases. The first phase is pre-service training in an institution of higher learning. The second phase takes place during the first years of teaching. In Israel and in many other countries around the world, the new teacher in this phase participates in a governmental or local induction program. In most programs, the new teacher receives professional mentoring from a teacher-mentor. In the third phase teachers are designation as "experienced." They have self-confidence, established practical knowledge and possesses an evolving repertoire of planning, teaching and learning assessment skills. At this stage they are prepared to more intelligently examine the needs of all the students in their classes and to try out new strategies and teaching methods. In the fourth phase, which continues until retirement, teachers are classified as expert or master teachers.[19] Despite the knowledge and experience acquired over the years, they continue to learn and

[19] According to the Ministry of Education classifications, a beginning teacher is one with up to three years of teaching seniority (Zilberstraum, 2013, in Hebrew). Following "inductee" status and receipt of a teaching license, the teacher is classified as a "new teacher." These teachers are offered a course or workshop for new teaching staff, with a scope of 40 hours (instead of the 60 hours during induction) and 20 hours of mentoring by a teacher-mentor. The areas of assistance given to new teachers in this framework have not been studied yet.

develop.[20] The professional literature recognizes teachers' need to continue to learn and to develop beyond their initial training and this is reflected in the use of common terminology such as "Life Long Learning" (LLL) and "Continuing Professional Development" (CPD). In these concepts there is recognition of the teaching profession's complexity and its wide scope as well as of the wealth of knowledge and tools needed to implement good teaching.

Feiman-Nemser (2010) maps out the main tasks in learning how to teach during the first three phases (Central Tasks of Learning to Teach). The mapping both directly and indirectly relates to the topic of diversity. For example, during the initial training phase student teachers are expected to examine and clarify their beliefs regarding good teaching and to develop their understanding of learners, learning and issues of diversity. In the induction phase (entering the profession), teachers are expected to learn about the context in which they are teaching (including the students' characteristics and those of the school community), about building lesson plans that respond to the students' needs and about creating a class climate in which everyone learns. As she explains, in this phase the new teachers learn how to actually apply the knowledge and the tools they acquired during training. According to Feiman-Nemser, only at the phase of professional development can teachers learn in depth about teaching their subject area; this is when they broaden and deepen their knowledge, skills and competencies. From the mapping we can understand that teachers' ability to handle diversity is gradually acquired. In the training phase the teachers study the subject and when they enter teaching they must address it daily in practice. Their ability to cope increases with experience and with continued study in various frameworks (in-service education, learning communities, etc.).

The research does not give rise to an unequivocal conclusion regarding the contribution of training programs and professional development (in-service) study to teachers' teaching efficacy. Harris & Sass (2011) analyzed the state of Florida's huge database for the purpose of finding a relationship between student achievement and selected teacher characteristics (data on admission into a training program, type of training program, teaching seniority, acquisition of advanced degrees, participation in professional development, etc.). The study's findings indicated the lack of a relationship between training and the preliminary data and student achievement, an inconsistent relationship between the quality of teaching and teachers' professional development and a highly positive relationship between

[20] A detailed description of the teacher's phases of development is presented in the book, *The Continuum*, published in 2013 by Dr. Sara Shimoni and Dr. Orit Avidov-Ungar and in the report by Drora Kfir, Shlomit Avdor and Roni Reingold from 2006 (in Hebrew).

the teacher's teaching experience and student achievement. The findings were somewhat different when analyzed by teaching subject and educational level and it was found that the effect of experience and continuing study is particularly significant in teaching mathematics. It should be mentioned that the researchers themselves note the methodological difficulty of clearly and unequivocally determining a relationship between teachers' teaching quality and the training they received, their experience in the field and their participation in formal in-service education (professional development).

As in many other countries, training of student teachers in Israel lasts for a relatively short period. According to the basic guidelines of the Council of Higher Learning and the Ministry of Education (Ariav Committee Report, 2006), pre-service teacher training programs must include from 24 to 30 hours weekly split between two required learning components: a) education and teaching studies (the educational sciences, pedagogy and methodology and academic literacy and research); b) practical experience in the field. The length of training lasts between two to four years in the "regular" training programs (first degree – B.Ed, teacher training for academics and second degree in teaching – M.Teach). Occasionally accelerated programs for retraining academics to teach select subjects are offered in these programs, studies are condensed into a number of months or up to one year. It is not realistic to expect graduates of both the regular and accelerated programs to be prepared to cope with diversity, multiculturalism and social justice at the level where they can be truly effective in the classroom. With the limitation of a short period of study, training programs can only expose future teachers to theoretical knowledge and the values relevant to dealing with diversity in the education system: they can only raise their awareness of the topic's importance and impart to them basic tools and practical experience that will be of service in their future professional development. Below, we will examine how the issue of diversities is addressed during teacher training, by looking at student teaching induction programs during the teacher's first years in the field and at Ministry of Education in-service education programs for veteran teachers. Analysis of the status quo vis-à-vis the subject of diversities can be of assistance in identifying the weak links in the training continuum of teachers in Israel.

Teacher training and diversity in Israel

In the attempt to relate to the topic of diversity, variety and multicultural education, the new guidelines for teacher training from the Council for Higher Education were examined (Ariav Committee Report, 2006) as well as the curricula offered at

teacher training institutions. The guidelines detail the main core content that must be addressed from a general overview on the one hand, and from an age group perspective, on the other. The core topics are not intended to be specific courses but rather, must find expression in the curriculum and in the practical training. Of the six core areas listed in the guidelines, the sixth one relates to training teachers for diversity: "**teaching students with different needs and students from different socio-cultural backgrounds"** (emphasis ours).

A study that examined implementation of the training guidelines (Lidor et al., 2013, in Hebrew) analyzed 67 training programs for the B.Ed degree and four training programs at the master degree level (M.Teach) at 21 academic teacher training colleges, that included all training tracks: early childhood, elementary school, secondary school, special education, and multi-age. It was found that the percentage of courses in which there was some kind of declared consideration of each of the six core areas ranged from 17% to 26%. **The core area with the lowest rate of inclusion in the courses was the one related to diversity**. It should be noted that the area included at the highest rate was "aspects of social and moral values," which perhaps deals indirectly with diversity.

Data collected by the committee[21] following a request from 24 teacher training colleges and eight universities for a list of courses and syllabi that deal with diversity shows that there are few courses that place the topic of diversity at the center and the courses that do relate to the topic are generally theoretical introductory courses that deal with, for example:

- Aspects of psychology (cognitive/ developmental/ social/ early childhood/ adolescence)
- Discipline: navigation/ class management/ the role of the educator
- Teaching strategies
- Focus on a specific sub-group: special needs (at both ends: poor students and gifted), learning disorders
- Sociology: the composition of Israeli society and multi-cultural society

The overwhelming majority of required courses that relate to the topic of diversity are theoretical, and one semester in length. Only a number of courses relate to the topic of special needs at the two ends of the spectrum. Just a few courses

[21] The request produced partial responses. A more detailed consideration of the programs and courses appears in the Appendix to this chapter.

in just a few institutions relate to the emotional aspects of learning. Courses on online teaching do not relate to the issue of diversity or the potential inherent in technology as providing a possible response to differences among students (for example, through differential teaching). Courses that deal with lesson planning do not relate to diversity, and occasionally, courses that appear to deal with diversity only relate to it in a narrow sense.

Studies that examined how teacher training programs in Israel relate to cultural diversity show that changes have taken place throughout the years. For example, Leah Shagrir (2005, in Hebrew) analyzed 874 course syllabi in education in three teacher training colleges, each one with a different social orientation (kibbutz, Zionist, and religious). She focused on courses in the educational sciences given by these colleges from 1970 to 2000. The research objective was to examine whether changes took place in the curricula for training teachers for elementary school in light of the demographic changes that took place in Israeli society, particularly as a result of the waves of immigration. The research findings indicate that positive change did indeed take place during those years – from the topic's non-existence in the 1970s to making a moderate appearance (in from 7% to 25% of the courses analyzed) in later years. It seems that the social orientation of the college is related to the importance it attaches to the topic in the training program. Another study conducted in the 2000s indicates an increase in teacher training programs that relate to the topic of multiculturalism (Ezer, Millet & Patkin, 2006). The study was conducted at two academic colleges. The findings from a teacher educator survey at the two institutions show that the topic warrants the staff's growing awareness. However, it is still not dealt with in a thorough and appropriate manner. It turns out that teacher educators themselves are uncertain about how to promote the topic, as was shown in Jennings's study mentioned at the beginning of this chapter. A relatively new study conducted by Paul & Reingold (submitted for publication) at two teacher training colleges in Israel reveals a worrisome picture of training in the area of multiculturalism. The researchers analyzed the course catalogue as well as a sample of syllabi at each institution. They found only a few courses that relate to multiculturalism. These were not only electives. An in-depth examination showed that these courses were offered to students as a result of a private initiative on the part of certain staff members and do not reflect institutional policy.

In addition to the theoretical courses in the training programs, there is also a required practical component of student teaching in the field. According to the guidelines, this component is meant to take up six to fifteen hours weekly. The research conducted by Lidor et al. (2013, in Hebrew) found that at teacher training

colleges the average number of weekly hours devoted in the curriculum to student teaching was 13.7, with variation from track to track and from institution to institution. In university programs that that deal mostly with training secondary school teachers, the average is significantly lower and stands at just 7.7 hours weekly. The parallel figure at colleges shows that in the secondary school track the average number of student teaching hours is 12.9. In other words, those who are learning to teach in a secondary school framework receive fewer student teaching hours in the field than other student teachers, and this is particularly prominent in teacher training programs at universities. Another finding from this study indicates that only 27% of the 67 programs analyzed took into consideration diversity within the framework of student teaching (at least as stated). In addition, we do not have information about the extent that the practical experience in the field in teacher training programs actually entails having student teachers experience the handling of student diversity with respect to ability, motivation, and culture and we do not have information about the extent to which student teaching, in colleges and in universities, does indeed involve student teachers encountering diverse populations of learners. From these data it is difficult to conclude that the component in the program that is called "practical training" contributes much to the training of teachers on the topic of diversity.

Teacher learning during the initial years of teaching

The professional literature is replete with empirical evidence of the difficulties new teachers are up against in the transition from the status of student teacher to the status of classroom teacher. Terms such as "reality shock" (Veenman, 1984) or "praxis shock" (Kelchtermans & Ballet, 2002) describe the reactions of beginning teachers when they must deal with the tasks of their role and with the reality of the school. In addition to the challenges faced by every new teacher, some of the new teachers are up against additional difficulties. For example, there are those who only find positions in school where they have to teach a subject or an age group that they were not trained to teach. In a study of teachers in their first year of teaching (Nasser-Abu Alhija, Reichenberg & Fresko, 2006, in Hebrew) it was found that out of 390 new teachers in the research sample, about 20% were teaching subject areas they were not trained to teach. Most of the new teachers who were trained to teach elementary school found work teaching in Grades 1 to 8, while among teachers trained to teach high school, only 64% found work in secondary schools. This phenomenon is not unique to the Israeli education system and is called "out of field teaching." The phenomenon has implications for new teachers' ability to cope with diversity in the classroom. New teachers who teach

out of their field of training must cope with planning lessons with unfamiliar content and pedagogy. It is doubtful if they will be sensitive to diversity of any kind in the classroom when they must invest most of their efforts in planning and executing teaching in a field in which they did not specialize.

Although the period of entry into teaching is not easy for new teachers and they experience anxiety, tension and frustration, it is also a period in which they learn, consolidate their knowledge and develop professionally (Feiman-Nemser, Schwille, Carver & Yusko, 1999; Keltchermans & Ballet, 2002; Wayne, Youngs & Fleischman, 2005). In order to increase the teachers' professional development and ease their adjustment difficulties, many countries around the world require new teachers to participate in an induction program. Many empirical studies have examined the contribution of induction programs and conclude that programs made up of many components, such as mentoring, orientation, workshops and written materials, can significantly contribute to the assimilation of new teachers and their professional development (Smith & Ingersoll, 2004).

An induction program for beginning teachers has also been adopted by the Ministry of Education in Israel. Starting from 2000, participation in the program is required of every teacher college graduate and from 2003, for all university graduates (Ministry of Education, 2004). The induction program in Israel includes two support systems. The first, personal mentoring by a teacher-mentor from the same school, a professional colleague who accompanies the inductee and whose role is to help him or her assimilate into the school's organizational culture and to provide professional and emotional support. The second is a workshop including 15 to 20 participants that takes place in a training institution. The purpose is to enable free discussion of issues that are of concern to new teachers and to enable them to search for solutions to shared problems in the atmosphere of a learning community. Another component in the induction program focuses on formative and summative assessment. Successful completion of the program is a condition for receiving a teaching certificate. The Ministry of Education's induction program, designed to help new teachers with their adjustment to the role of teacher and with consolidating their professional identity, does not explicitly deal with coping with classroom diversity. The new teacher must raise the topic with the teacher-mentor or at an induction workshop meeting. Examination of the syllabus of induction workshops during the 2013 school year at one of the universities in Israel reveals that of the 60 hours of study, only four hours were formally devoted to the topic of "Coping with Students with Learning Disorders in a Heterogeneous Class." Beyond this, there is no mention of the topic of differences – not cultural diversity, not heterogeneous classes, and no other topics related to diversity. Since

the Ministry of Education does not direct the institutions regarding the content to be included in induction workshops, there is no way of knowing what other institutions are doing but it is reasonable to assume that the situation is similar.

Inductees who participated in a national research study on the induction program reported the degree of benefit they reaped from the workshop and from the teacher-mentor in different areas related to their functioning as school teachers (Nasser-Abu Alhija, Reichenberg & Fresko, 2006, in Hebrew). Among the topics they related to, two are relevant for coping with classroom diversity: "adapting study material and teaching methods to student needs" and "finding ways to increase students' motivation." According to the inductees, the teacher-mentor helped them at a medium level only on the first topic while the induction workshop helped them very little. They rated the contribution of these two frameworks as medium with respect to the guidance they received in finding ways to increase student motivation. Observation of induction workshops in this same research revealed that to a large extent, the new teachers were the ones to raise these topics, a fact that indicates their importance. It appears that there is room to strengthen treatment of these topics in the support frameworks provided to new teachers.

Another component of the induction program is assessment. Inductees are evaluated by the principal, the teacher-mentor, the school inspector and often others s. The results of the assessment at the end of the first year determine whether the teacher will be granted a teaching license. Examining the assessment tool can show to what extent treatment of diversity is manifest in the criteria regarding the quality of teaching, as perceived by the Ministry of Education. A look at the assessment tool shows four main areas of assessment with each one of them divided into sub areas. Below are the main areas and the relevant sub-areas that relate to the topic of diversity:

1. Role perception and professional ethics. The first sub-area in this section is "commitment to the success of all students in the cognitive, emotional, moral and social domains."

2. Knowledge of subject matter and its instruction. This section includes reference to adapting resources and teaching strategies to the characteristics of the subject matter and to the characteristics of the learners.

3. Academic and educational processes. This section includes the planning and organization of instruction (such as determining lesson objectives and adapting them to conditions), learning and assessment methods (including working differentially to advance the learning of all students), and the creation

of a supportive environment (including the essence of the teacher-student relationship and routine teacher-student meetings).

4. Participation in the professional community. There is no reference to diversity here. This area relates to the teachers' continuing professional development and their participation in collaborative work with colleagues at school and in their subject areas of specialization.

As is apparent, advancing different populations receives a clear place in the inductee assessment tool. The tool is accompanied by an indicator that defines the standard for the inductee's appropriate level of performance in each area. We do not know how the evaluators actually apply the assessment tool and how they interpret the criteria presented in the indicator. It should be noted that despite the assessment of how new teachers are advance the learning of each and every child, during this period in their careers new teachers are mainly preoccupied with their own survival and as we have already seen, the assistance they receive is not specifically directed to acquiring values, tools and strategies geared to handling diversity in the classroom.

The advanced phases of teachers' professional development

After several years the teachers' status in the education system is already established and they possess self-confidence in the classroom at school. At this stage, they are ripe for trying out new teaching methods and are able to focus on the needs of each and every child. Professional development programs aspire to improve and enrich the teaching methods of experienced teachers, their beliefs and their students' learning outcomes. They are integral to the improvement of the education system (see, for example, Lieberman & Pointer-Mace, 2008 and Borko, 2004).

Under certain conditions, professional development does indeed improve teachers' instruction. For example, Porter, Garet, Desimone, Yoon & Birman (2000) examined the effect of teachers' professional development within the framework of the Eisenhower Professional Development Program in the United States that operated from 1985 to 1999 with the federal government's massive investment in developing the knowledge, skills and competencies of working teachers. Within the framework of this program, the government transferred budgets to the departments of education in different states, to institutions of higher learning and to non-profit organizations in order to fund operation of

high quality activities for teachers' professional development, mainly in the domains of mathematics and the sciences. The program's objective was to support professional development initiatives that enrich classroom instruction and lead to improved student achievement. The program placed an emphasis on providing an appropriate response to the needs of different learner populations in order to give each one an opportunity to advance (Ibid). The findings show that professional development focused on specific, higher-order teaching strategies and reinforced the use of these strategies in the classroom. The effect is found to be even greater when professional development takes place in network forums or learning communities, when it provides opportunities for active learning that is compatible with the teacher's professional objectives and activities, and when other teachers from the same subject area and who teach the same age group or come from the same school participate. The researchers found that during three years of participation in a professional development program there was a moderate change in teachers' teaching methods. They conclude that if teachers participate in a coherent, systemic, high quality program of professional development, the effect of professional development on student achievement will be greater. According to Sandra Harwell (2003), every professional development effort for teachers must relate to gaps in student achievement. Relevant professional development is that which focuses on the teaching profession, pedagogic weaknesses, assessment of student learning and professional questions relevant to the context of the participating teachers' instruction.

The OECD's Teaching and Learning International Survey (TALIS), conducted in 2009, included a large sample of middle school teachers and principals in 23 countries and examined the extent that education systems provide solutions to the professional development needs of their teachers. It turns out that while most of the teacher sample (89%) participates in professional development activities, they are short and ineffective activities. A significant percentage of teachers reports that their professional development needs are not met. A finding relevant here is that more teachers noted that their need for professional development in "teaching special needs students" is greater than in any other area. The research report's authors interpret this need as an expression of two recent trends in education: 1) mainstreaming special needs students in regular classes (the sample did not include special education teachers); 2) a growing emphasis in these countries on a policy of equality alongside quality teaching in an effort o respond to the learning needs of all students.

In recent years there has been a change in the Israeli Ministry of Education's approach to the professional development of teachers and this is as a result of the

"New Horizons" and "Courage to Change" reform programs. According to the two reforms, teachers must undergo assessment before being promoted from one rank to the next. The tool used here to assess veteran teachers when they advance in salary grades is very similar to the tool used to assess inductees, which was presented above. The expectations for teacher performance in each area rise in accordance with the level of advancement. Likewise, the message that teachers must advance all students is clearly transmitted in the criteria for quality teaching. However, similar to the case of inductee assessment, it is not clear how the criteria are applied in practice when veteran teachers are assessed. These two reforms were instituted for the express purpose of strengthening the teacher's status, improving the level of teaching and advancing student achievement. According to the official responsible for the Teacher Professional Development Division at the Ministry of Education, in building a work plan for the professional advancement of teachers, relating to the different populations and their needs is obligatory. [22]

In looking at the Ministry of Education's website, one can find approximately 800 in-service courses offered to teachers in the framework of the "New Horizons" programs (elementary and middle school teachers) and about 500 courses for teachers in the framework of the "Courage to Change" program (secondary school). The courses are intended for subject-area teachers, general and homeroom teachers and school staff who hold professional administrative positions in addition to teaching. The impression is that most of the courses are designed for teachers (not for other school staff) and focus on improving instruction in a subject area or deal with a broad educational topic. Some of the courses offered address topics that touch upon diversity in the school and in the classroom, such as developing excellence, developing thinking, gender, and equality.

Beyond each teacher's personal professional development, the Ministry of Education offers professional development to the school as a learning organization (Avidov-Ungar, Rosner & Rosenberg, 2013, in Hebrew). Both the New Horizons program and the Courage to Change program offer three development programs to schools. . Of these programs, one for elementary school appears relevant to the topic of diversity: "Education and Teaching Focused on the Individual." Two of the three programs for high schools appear to be relevant to diversity: "Characteristics of Teaching and Learning within the Framework of Individual Instruction Time" and "Deepening Meaningful Dialogue in the School." These programs focus on improving teaching but we do not have enough information to know how they relate to student differences.

[22] From a discussion with Mr. Moti Rosner, Director of the Division for Teacher Professional Development at the Ministry of Education, which took place on September 6, 2012.

A recently conducted study examined a national sample of 2,854 teachers in 21 in-service education courses given by the New Horizons program. Participants were asked about pedagogic and scholastic aspects of the courses, the course's planning, the nature of the studies and its contribution to teaching competencies, expanding knowledge, reflection and teaching efficacy. The last area examined is relevant to this report. The study's findings show that the teachers ranked the courses' contribution as only middling, and in comparison to the other aspects, this area received the lowest ranking. It should be noted however, that among the statements that examined "contribution," this statement, "The course imparts knowledge, insights and tools that can be applied in differential instruction in a heterogeneous class," earned a relatively high ranking (Avdor, 2012, in Hebrew). This finding reinforces the impression gotten from the list of in-service courses offered by the Ministry of Education, which is that there is consideration of the topic of diversity in the professional development courses. It is important to mention that a course that was rated relatively high with respect to its contribution to teachers was the school in-service course on "The Class as a Learning Social Group," and it is reasonable to assume that this course relates to student diversity.

From thinking to action in the field – an example of successful professional development

The literature is filled with projects, approaches and professional development programs for teachers. We have chosen to present one that to us appears especially relevant to this report. In her book, "Immigrant Youth who Excel: Globalization's Unsung Heroes," Eisikovits (2008) presented a practical model for teachers' professional development. Eisikovits does not relate to the teacher training phase, but rather to professional development through working with the entire school staff. She describes an actual model that was implemented in the north of Israel. The professional development process included not only teachers, but also all the professionals working in the school, including those in the informal organizations. Project training included lectures, workshops and counseling in small groups which took place once a week throughout the school year. The centerpiece of the learning process was an actual research study carried out by the participants that included three stages characterized by growing involvement: 1) the teacher as anthropologist, 2) the teacher as ethnographer, and 3) the teacher as designer and experimenter. An important principle of this model was to have the participants step out of the narrow niche of teaching and learning in school and enter into wider frameworks of the school and the community. This was the way that recognition of diversity in its wider context was created.

In the first phase of the model's operation, the goal was to expand the teachers' anthropological awareness through "problem-based learning" (PBL). In this phase the teachers expressed their intuitive conceptions of students who are new immigrants and of the problems in their functioning and in the functioning of their families. The discussions were based on an ecological approach that sees in culture, a mechanism which a population develops in order to adapt to its environment, and an understanding how these mechanisms become disrupted in the immigration process. In the second phase, the teacher as ethnographer, the participants became familiar with ethnographic research methods (such as observation) and coped with the limitations of being a participant observer in collecting research data. Imparting research skills to teachers assumes that they will utilize these skills and will develop a more reflective approach toward their daily work. In the third and final phase, the participants conducted ethnographic action research on topics of their choosing. The studies focused on topics that interested them in the context of immigrant students, their needs and the process of their adjustment. All the projects included three levels of discourse: a theoretical level, an interpretive level, and a generalization level in which they moved from the experience to the rule. This model makes it possible to use the example of teachers as researchers (of their own practice), in which through their own research change is brought about. In this way the model differs from the approach which refers to understanding and accepting diversity but does not offer practical tools to teachers and educational staff.

Summary

Teachers' professional development does not end with the completion of studies for a teaching certificate but continues on for many years. It is expected that each development phase will contribute to successful handling of diversity in the classroom. Training programs must encourage student teachers to develop a personal worldview toward diversity and equality in the classroom and in school through in-depth discussion of the. They must also develop professional values and professional commitment to achievement for all children. It would be desirable for student teachers to learn methods for coping with diversity and within the framework of their practical work to gain experience with a population of diverse learners. At the phase of entry into the teaching profession, the new teachers must implement in the classroom what they learned in training and establish their teaching repertoire. During this phase, they need the guidance and support of experienced teachers. The more senior teachers at the school can have an important influence on the new teachers' teaching methods. Through

pedagogic suggestions and reflective discussions, they can reinforce in new teachers an orientation of equality toward children. Coping with the practical side of dealing with equality can be different but as we saw, the phase of awareness, recognition and self-reflection is important regardless of the strategy for coping. After several years of teaching, the teachers become experienced teachers who have created their own "routine" teaching methods and they have acquired self-confidence. At this stage, they are "free" to add tools to their toolbox, and their participation in professional development programs can enhance their teaching abilities. It is important to guide professional development to areas that will help them optimally advance each and every child. Training courses and professional development courses must bring the teachers in contact with the philosophical, social and political aspects of diversity and with diverse populations of learners and different learning styles. In a guided and supportive manner, these courses must offer tools and strategies for coping with diversity and encourage dialogue among teachers in a collaborative search for solutions.

Recommendations

A number of recommendations, derived from the chapter content, are listed below:

1. Treatment of the topic of diversities in teacher training programs and professional development programs should be increased. The topic should capture a **central place** in professional studies and deal with developing awareness of diversities and providing teaching tools that take diversities into consideration. Training programs must relate not only to cultural diversity but also to other aspects of diversity between students, such as diversity along emotional and cognitive dimensions.

2. Student teachers should gradually and systematically be exposed to different theoretical approaches to diversities, living with diversities and addressing them in different dimensions, including familiarity with and discussion of the ideas of critical pedagogy.

3. In student teachers' work in the classroom, it is important for them to encounter diverse populations of students.

4. Inductees in their initial years of teaching are in special need of assistance in coping with diversities in the classroom. The system should not wait until the

novice teacher asks for help from her mentor in the school or from colleagues in the inductee seminar. Attention to the topic of diversities must be an integral part of the induction program.

5. It is also important for professional development (in-service education) to devote a central place to the topic of diversities. At this stage, studies should be adapted to the teachers' specific needs with respect to the subject taught and the age of the children.

6. The topic of diversities should also be stressed in training school principals. They should be presented with new ideas and effective practices for coping with diversities in the school as part of their initial training and their professional development. Principals' awareness of the issue should guide them in their choices for in-school education for teachers, in directing teachers with respect to their in-service education outside of school, and in encouraging and supporting the initiatives of teaching staff or of individual teachers for promoting the students' learning.

7. The teacher assessment tool developed by the Ministry of Education transmits a clear message that a good teacher is one who advances all students. However, information is lacking on how evaluators employ this criterion in their evaluation of teachers and what happens when a teacher does not succeed. Research on the subject would help the system to more effectively utilize this tool.

Chapter Appendix: Courses in Teacher Training Institutions that Relate to Diversity[23]

Below are several examples of courses the committee learned of through teacher training departments or institutions:

The "Teaching in a Heterogeneous Classroom" course which is a requirement at the Hebrew University of Jerusalem. In the course description, the following appears:

> We will examine what is a heterogeneous classroom according to different approaches and what are different explanations for the disparities that exist there. We will propose viewing disparities as stemming from different types of thinking that are the result of students' different personality structures. Thinking characteristics of students who have difficulty in learning will be presented and "cognitive empathy" will be developed towards them. Methods for the teacher to intervene in the students' thinking will be proposed – methods for activating thinking and autonomy. The students will learn how to plan a lesson around a basic topic that will serve as a catalyst for thinking.

The full course syllabus, sent to the committee, presents a more in-depth and broader picture. The syllabus describes social diversity, class inequality, multi-culturalism, the aspiration to social justice, and more.

At Tel Aviv University, a number of courses dealing with diversity in a deep and broad manner are offered however, these are elective courses on theory. A course that deals with the education system and social inequality – a sociological analysis, is described as follows:

> The education system constitutes a central factor in shaping opportunities for social leadership and for coping with social gaps in the modern era. In this course we will try to understand the system's roles and its method of operation through the use of sociological concepts and approaches. Emphasis will be placed on stratification processes and inequality in school and the influence of education on stratification and social change.

The course on Leadership in Education in the Era of Globalization mentions that:

[23] The course descriptions presented in this appendix are quoted from the official yearly course catalogue and syllabi of the institutions mentioned.

> The course will deal with the manifestations of economic globalization in the education system. In so doing, the course will focus on questions of whether and how these manifestations encourage or hinder the education system from being an agent of social leadership for disadvantaged social groups such as at-risk youth, women, and ethnic minority groups. The course will discuss the topic both at the theoretical and empirical level and by relating to educational events at the local and global levels.

An exceptional example, which describes students' actual experience, is from the course on "Inequality, Otherness and Separation," described as:

> A unique course, combining theoretical and research knowledge about inequality as it relates to children and youth from disadvantaged social groups and special needs populations, with volunteering in the schools and organizations that seek to promote such children and youth. In the course, we will see how different types of inequality are manifest in Israeli society, in general and in the education system, in particular and we will attempt to learn the meaning of the categories of inequality, otherness and separation and the way in which they are manifested in the complex reality in which we live. Students will be asked to choose from a list of schools and organizations that cope with these types of inequality and will earn in-depth preparation ahead of entry into the field and have close guidance throughout the volunteering experience.

The following are several examples of courses in which the topic of diversity was explicit: "Diversity as an Educational Challenge – Distance Learning" (Beit Berl College); "Difference and Diversity in Israeli Society" and "Learning Strategies Adapted to Ways of Thinking" (David Yelling College); "Coping with Learning Disabilities in a Regular Classroom" (Hebrew University); "Languages and Literacy in Education and Social Contexts – In Practice", "Inequality, Otherness and Separation," "Leadership in Education in the Era of Globalization" (Tel Aviv University); " Approaches and Conceptions of the Value of Diversity in a Heterogeneous Classroom," "The Group as a Social System," "Discourse and Agency in Teaching and Learning Processes" (Levinsky College).

At several institutions there is reference to teaching gifted and outstanding students (Hebrew University, the Technion). It is important to note that some of the courses that deal in depth with cultural diversity and difference, and where it is at the heart of the course, are electives.

An example of a program in which the topic of social diversity is at the center is the teacher training program for social change at the Kibbutzim College. The program places critical pedagogy at the center:

> The B.Ed degree program in Education for Social and Environmental Justice and Education for Peace at the Kibbutzim College is a teacher training program for elementary school designed to educate teachers for social change through education. The program is run according to the principles of critical pedagogy and provides the opportunity for its learners to develop themselves as educators who operate from a worldview based on social justice, environmental awareness and peace. The program grants tools for alternative, experiential, diverse and principled teaching – teaching in which there is sensitivity to disadvantaged populations at the margins of society. The program imparts knowledge that enables assimilation into the existing education system by leading change and innovation projects on the pedagogic, value, group and personal levels. The program trains teachers to lead change in elementary schools, and educators for educational projects in social organizations (http://www,criticalpedagogy.org.il/#)

In the document written by Leah Eckstein (undated), head of the college's teaching committee and which was downloaded from the Kibbutzim College's site (on September 10, 2013), there is explicit reference to training teachers in the multi-cultural era. The document raises a number of questions related to training teachers:

What is the perception of the educator's role in a society with multiple identities?

- What is the connection between prejudice and stereotypes and educators' professional functioning?
- What is multiculturalism in the form of a daily emotional and professional practice in the teacher training process?

According to the author, the answers to these questions necessitate relating to the following points:

- Creating awareness of social mechanisms, personal and social prejudices and stereotypes toward different identities and cultures.

- Learning the way in which social prejudices and stereotypes influence the educator's emotions, ways of thinking and professional conduct.
- Acquisition of knowledge and tools that will enable creation and management of an educational / social environment that provides room, expression, exposure and legitimacy to children's identities, opinions and feelings.

Beyond this report's important consideration of the need for multi-cultural awareness, the absence of reference to this issue in the context of curricula, expectation for achievement, and use of teaching methods that are sensitive to cultural difference is interesting – all these are practical issues that are beyond development of awareness. In one way or another, translation of the question of what is an "educational environment that provides room, expression, exposure and legitimacy to children's identities, opinions and feelings" is lacking.

In an article on graduate programs at Levinsky College (Zellermeier, Elkad-Lehmann, & Leor, 2008) reference to student teachers' learning about diversity appears mainly in connection with a program called "Linguistic Education in a Multi-Cultural Society," which deals with teaching languages, mother tongue, second language and a foreign language.

> The Constructivist conception is also reflected in the multi-cultural and multi-disciplinary emphasis. The population of students is itself multi-cultural: It has women (mainly) and men, Jews, Muslims and Christians, native born and immigrants and long-time citizens from around the globe. They learn to relate to their own cultural diversity and that of their students as a value and not as a problem. In doing so, they are basing their acts on the principles for promoting discourse and reflective thinking that enable each learner to emphasize his difference and to receive support according to his needs. In the context of training music teachers, diversity in tastes, background and tradition is also emphasized.

It is interesting that reference to diversity is missing from the texts about the main study major, "Teaching and Learning."

Summary

This chapter presents the main ideas and points that emerged from the report. It opens with a review of the theoretical background and presents sections from the report's chapters that address the family and socio-economic status with respect to socio-emotional aspects, cognitive-academic ability, as well as the issue of early childhood. The chapter closes with a brief discussion on the topic of training teachers to handle multiple diversities in society and in education.

The report title, "Education for All and for Each and Every One," reflects a dilemma. Is it possible to simultaneously gear education toward the collective and toward the individual, or is there an inherent and unavoidable conflict between these two educational challenges? And, if such a contradiction exists, can it be addressed and overcome (and how?); perhaps we must accept it and live with it, and even welcome it? Or is it possible that only education geared toward the individual will also be of benefit to the collective?

The chapter on "Conflicting Values and Choosing among Alternatives" presented a philosophical-conceptual platform for addressing this dilemma. The dilemma was presented as an individual case of a familiar conflict between the values of freedom and equality (which itself is an individual case of a series of conflicts between "value pairs" such as peace versus truth, justice versus compassion). The discussion of these conflicts relied on the theories of two philosophers – Isaiah Berlin and Michael Rosenak. Berlin advocated the pluralistic approach according to which different and even conflicting values evolve in different cultures (and occasionally within the same culture) though, supporting one value does not necessarily negate understanding and appreciating the other value. Multiple values and value systems are unavoidable and at times, there is no choice but to make a decision and choose between conflicting values. In all cases, one needs to be receptive to the uniqueness of the situation, on the one hand and on the other, to adapt to a broad worldview.

Rosenak's approach emphasizes commitment to Jewish culture alongside openness to human creativity. He views as one-dimensional and limited the model prevailing in certain Jewish circles in which the essence of the moral life is a struggle against the evil inclination, and since the simple person is necessarily influenced by the evil inclination, moral decisions must be left to the absolute authority of those "elevated above the nation" owing to their Torah study and observance of the commandments. But, says Rosenak, the important dimension of a moral life is not a conflict between values and inclinations but rather between values. And, indeed,

examples that portray conflicts between peace and truth, compassion and justice, saving a life and distancing oneself from violence, etc. are not lacking in the Talmudic and homiletic literature. In some of the cases, there is a clear decision in favor of one of the conflicting values and in other cases, the dilemma remains a topic of debate. This is Rosenak's important and innovative addition to Berlin's approach on the issue of the relationship between meta-values and values that are in a state of conflict. States of conflict are what confer significance on meta-values as the example in the previous sentence shows. These situations and methods for coping with them shed light upon the character of a particular culture and on the significance of its meta-values in practice.

From here, the road is short to the thought that perhaps there is not necessarily a contradiction between "Education of All" and "Education for Each and Every One" (which, to one degree or another, represent the value of equality as opposed to the value of freedom), and if there is a contradiction between them, it is more appropriate not to "cope" with it but rather to "celebrate" it. It is possible that the right question in this case is not whether "Education for All" together with "Education for Each and Every One" is possible but rather, whether "Education for All" **without** "Education for Each and Every One" is possible. And it is possible that the answer is that only when there will be "Education for Each and Every One," there will be "Education for All."

The report relates to this issue extensively in the introduction. The discussion is anchored in the transition from a discourse on "difference" to a discourse on "diversities." The difficulty in combining education for everyone with education for each and every one is generally attributed to formal education systems, to differences between learners expressed in measurable achievements in selected fields. Obviously, reality is more complex and not only one type of difference exists, but there are a range of diversities. In other words, there is difference between the diversities. Does this fact increase the difficulty we face or does it, actually open up a porthole for dealing with it or even celebrating it? We believe that just such a window can be opened. The introductory chapter emphasizes that even when the spotlight is directed exclusively on the area of academic ability, we are facing multiple diversities. Different students have different needs, interests and abilities. Instead of focusing on a one-dimensional scale and defining the resultant "deficits," the learner's "strengths" in different areas of his "ability space" should be considered. This is an approach intended to enable the learner to invest and to stand out in areas where he is strong. In principle, this approach can ensure education for all through education for each and every one, according to his unique needs and abilities.

The discussion of specific diversities in the report opens with the chapter on "Diversities in Family Background and Socio-economic Status." The relationship between gaps in socio-economic status and gaps in academic achievement is familiar and well-known. Surveys and follow-ups in Israel and in other countries (particularly the United States) clearly indicate that in recent decades income disparities between affluent and poor families are increasing and along with these, the gaps in education is deepening. The lack of financial resources is just one of the components of family background which, according to publications of UNESCO's International Institute for Educational Planning, accounts for the single most influential variable on academic achievement. In addition to the resources gap, there are also differences in values, beliefs, expectations and lifestyles between high and low social classes. The norms of most formal educational institutions are largely dictated by the elite that control different kinds of capital. As a result, the middle or upper class student's home culture is consistent with the school culture, a fact that simplifies their adjustment and success. In contrast, a low class student is more vulnerable to adjustment difficulties due to the incompatibility between the two cultures in which he finds himself.

It is, in addition, well-known that in the advantaged classes, learners benefit from an abundant range of types of assistance including private lessons, various extracurricular classes, music lessons, sports activities, etc. All these help increase emotional resilience, self-confidence and the expectation of achievement. In contrast, the lower class learner inevitably feels deficient and as a result, frustration and lack of confidence ensue, which decrease the chances of advancement. The conclusion is that schools must be capable of creating a supportive environment, especially for students from the more disadvantaged strata of society. To do so, diverting additional resources – an obvious step – is insufficient. In contrast to the widespread failure resulting from assigning inexperienced teachers to disadvantaged populations, there is a need to recruit a lead administrative and teaching team for these populations, in particular. The expectations of lower class students must be raised and we should not be hesitant about demanding suitably high standards. And perhaps, above all else, ways should be sought to build relationships of trust between teachers and students and between the school and parents and the community.

Following up on the discourse of multiple diversities and multiple strengths of different types, we note that there are more than a few professionals who believe that the way to advance students from disadvantaged backgrounds is to reinforce their natural abilities in the sports and music fields, etc. This can be done within a framework of formal tracks or within a framework of enrichment activities

at school. Success in one dimension can increase the chances of success on additional dimensions and as a result, ease the social integration of students from disadvantaged backgrounds in the academic arena as well.

The influence of socio-economic status (SES) and family background on personal ability, evident by early childhood, is well known. By the time children from different SES groups attend preschool, there are clear differences in language and literacy, as well as in their level of knowledge and abilities. In fact, there are studies that indicate the formation of these disparities already begins with the production of the first words. Other studies show that at the age of two, an 18 month gap in vocabulary exists between children from high SES and children from low SES.

It should be noted, however, that parental inputs are, in practice, a mediating factor in the effect of socio-economic status on linguistic and academic development. Support for the importance of parental mediation beyond SES itself is shown in research studies demonstrating that within the same SES there are differences in interaction patterns between mothers and their children that are later manifest in the differences in the children's literacy attainments. The fact that the effect of SES does not operate in a vacuum but is mediated by parental inputs generates the almost obvious thought that the inputs of additional "significant other" adults can be influential. From here, the way is open to planning intervention programs in preschools that will enable low SES children to close, or at least to narrow, gaps in vocabulary, literacy, mathematical thinking and even social competencies. Research indicates at least partial success of such programs when preschool teachers devote the needed attention to them. However, success in the short term does not guarantee long-term success and completely erasing disparities is just about impossible. It is probable that the most successful programs are those that, through games and guidance, seek to simultaneously touch upon gaps in academic ability and emotional and social behavior.

Cognitive-academic diversities, on the one hand and socio-emotional diversities, on the other, are generally the focus of interest in the context of education for each and every one. There are many reciprocal and branched relationships between these two clusters of diversities. The discourse on socio-emotional diversities relates to the wide range of emotions such as worry and anxiety contrasted with confidence and wellbeing, as well as social competencies such as empathy and the ability to accept and understand. In the school context, there is also obviously the consideration of motivation and curiosity, a sense of efficacy and belonging, as opposed to helplessness and frustration, loneliness and jealousy. All of these

are intimately connected to unique personal characteristics and to background and environmental factors such as SES and family background, discussed above. It is superfluous to mention that school characteristics, including climate, assignments and relationships with teachers and friends, all have far-reaching implications for the learner's feelings and behavior.

To a great extent, academic achievement is affected by the student's sense of wellbeing in school. Many studies show that the positive sense of wellbeing promotes intrinsic motivation, belief in self-efficacy, love of learning, and setting goals for advancement and achievement. Situations of happiness, pleasure and high morale encourage effort and persistence in learning, improve the ability to concentrate and to be creative and are helpful in performing complex cognitive tasks. In contrast, a relationship was found between emotional and social problems and learning difficulties and adjustment difficulties. These then intensify emotional problems and the sense of failure and frustration. Thus, a vicious cycle is created. The social aspect is connected to academic achievement no less than to the emotional aspect, so much so that it is hard to separate them. In studies conducted in Israel and around the world, it was repeatedly found that the sense of belonging to the school and the sense of acceptance by the peer group are directly related to effort invested in learning, participation in different school activities and positive attitudes toward the educational setting. In contrast, a negative perception of the relationships with teachers and friends leads to emotional distress, a sense of alienation and eventually, to low academic achievement.

Relationships between socio-emotional status and cognitive ability and academic achievement develop by early childhood. A child's popularity among his friends in preschool contributes to his sense of comfort and his involvement in social activities and predicts academic achievement in preschool and in elementary school. Adaptive social behavior, which aids in assimilation into the school setting and academic success, is, in part, tied to the ability of self-control. This ability, which is expressed in delayed gratification and regulation of behavior and feelings, has a degree of continuity. No less significant than the ability of self-control is the ability for self-expression. Children who have difficulty expressing themselves are perceived as inhibited and shy. In preschool, children's shyness is expressed in their meager contribution to the social discourse, in limited participation and social interactions, and in drawing back from contact with people, in general and new people, in particular. Cognitively, shyness is tied mainly to relatively inferior language competencies, apparently due to lesser participation in the group discussion. The preschool teacher's empathic and supportive behavior and

the other children's social encouragement of the shy child can help him to feel more confident and raise his sense of self-esteem.

When it comes to diversities in cognitive abilities and academic achievement, one of the discussion's foci relates to the question of heterogeneous groups versus homogeneous groups. Assuming that in one field or another, not all the children are able to progress at the same pace, the question is whether it is worthwhile to engage in separating students according to ability levels or is it preferable to maintain the framework of learning in a heterogeneous class even if the situation leads to difficulties and tension? This is a dilemma wherein practical-achievement aspects encounter ethical-moral aspects.

It would seem that separation into homogeneous groups of stronger students versus weaker students, whether using tracking (separate classes) or grouping (leaving the class framework for a separate learning group in certain subjects) can ensure the fulfillment of each student's potential. Research and field experience however, show that in general, this is not actually the case. In most cases, the divisions of each type benefit the strong and not the weak, and the achievement gaps increase over time. This has many explanations and we will mention three of them here:

1) A not insignificant association exists between the division into ability levels and division according to SES status. In the high groupings, there are generally more students from the middle or upper SES levels, while in the lower groupings there are more children from lower and disadvantaged backgrounds. Thus, cultural and economic capital helps the students in the high grouping maintain and expand the gap between them and the students in the low groupings.
2) Principals tend to assign the better and more experienced teachers to the high groupings. The material studied in the higher groupings is more challenging while the material studied in the lower groupings tends to be more diluted.
3) A student's assignment to the low grouping labels him and leads him to start out with a sense of helplessness and lower expectations.

A heterogeneous class is not exempt from failures and problems either. First, in most cases, it does not permit the good students to fulfill their potential and progress at a pace they would be able to under conditions that are compatible with their talents. Second, and related to the above, in a heterogeneous class it is very difficult to avoid instruction geared to the relatively lowest common denominator. Third, and also related to the factors above, success in this kind of class requires

a unique environment and a teacher with special training that enables him to simultaneously attend to the different needs and different abilities in the class framework.

As noted above, placement in a low grouping incurs stigmatization and lowered expectations on the student's part as well as on the part of his teachers and parents. The result can manifest itself in low motivation, low self-confidence, low self-image, frustration and embarrassment, development of negative attitudes towards school and the learning process, and eventually – failure. Many studies do indeed show that students in low groupings have low self-esteem as compared to the students in high groupings. The only message in this context is in the findings that indicate that improved self-esteem can result for students in the low grouping once they adjust to the situation and cease comparing themselves to the students in the high grouping.

It turns out that in the context of the effect of placement in groupings on self-esteem, two well-known psychological processes are involved – intra-group comparison and inter-group comparison. When the student in the low grouping looks at the students in the high grouping, he can feel a lack of confidence regarding his own academic abilities and achievements. When he learns to accepts his place and to look inward – inside his own group – he can feel more confident and invest more effort in advancing. A similar though reverse process occurs not infrequently among students in the high grouping. This implies that the grouping is not useful for them either, and this finding is relevant to gifted students too. Research data concerned with gifted students are not at all conclusive, especially with respect to the socio-emotional aspect. In a heterogeneous class, a gifted student can suffer by being annoyed and bullied, a lack of challenge and lowered motivation, not being understood by the teacher or friends, and as a result, from a feeling of isolation and frustration, or even depression. In contrast, a student in a gifted class can find himself disconnected from his peer group, which is not gifted, and in constant competition with his classmates who are no less gifted than he.

It therefore seems that it is not possible to point to one of the two methods as preferable and the decision must be made in the local context on the basis of constraints and value-driven considerations, which differ from place to place. Clearly, the heterogeneous model requires creation of a suitable environment and training teachers for complex and delicate tasks. In parallel, the homogeneous model requires allocating many more resources and more class time for the lower groupings, assigning experienced teachers to these grouping and opening the option of enabling the transfer from lower to higher groupings. With both these

models, the balance of considerations taken into account must include not only the implications expected with respect to the cognitive aspect, but also for those related to the socio-emotional aspect.

Separation into groups frequently takes place not only in elementary and secondary schools but also in preschool. Moreover, there is research evidence that in early childhood, activity that takes place with the entire group is less helpful than activity in small groups. In a large group, some of the children do not listen to the teacher and do not take part in what is going on around them. In a small group, such phenomena are rarer and thus, small groups are more frequent in preschool. At times, such groups are randomly created and at times, the teacher deliberately arranges them. And, in preschool as in grade school, deliberate placement into small groups is often based on ability level in literacy or math. And, as in the grade school context, there is no consensus as to whether achievement-based separation is beneficial in preschool.

Regarding children at the high level, there are research studies which show that placing them together in their own group allows the preschool teacher to challenge them and to raise the level of their activity, and as opposed to these, there are studies which conclude that there is no significant difference between high-ability children's achievements when they are in homogeneous groups or in heterogeneous ones. There is a great deal of agreement that for average-level children the preference is for activity in heterogeneous groups over homogeneous groups. The main difficulty is with reference to low-achieving children. Typically, such children are less benefited and perhaps even experience deprivation by being placed in separate groups. It appears that the teachers challenge them less and this perpetuates their low achievement in preschool that can spill over later on to the early grades in school. In all likelihood, individual work in their case is to be preferred. In Israel and around the word, many intervention programs directed to promoting achievement in preschool are implemented by focusing attention on the different ability levels and also on the socio-emotional aspects.

The discussion on dealing with diversities between students cannot be complete without discussing how the teacher training processes address diversities. A review of the existing status in universities and colleges in Israel and around the world reveals that the topic of diversities is generally given very limited room in formal teacher training programs (except for programs geared to special education, where, from the outset, stress is placed on the diversities entailed in special needs).

The Ariav Report delineates six core areas for teacher training programs in Israel. Only one of these areas deals with diversities, and a survey conducted in academic

colleges shows that this area warrants the lowest proportion of inclusion in courses given by the various programs. A survey of research findings revealed that during the past 20 years, there has been a moderate rise in addressing diversity in Israel – from an almost complete lack of attention in the 1970s to being included in 7% to 25% of the courses surveyed in the 1990s. In the United States, more time is devoted to dealing with diversities but most of it is dedicated to ethno-cultural diversities; a small part of this effort is directed towards dealing with economic, social, linguistic or gender diversities. The irony is that despite the stress teacher training programs place on cultural diversity, in their classrooms, many teachers display "color blindness," perhaps in the effort to appear enlightened and advanced.

In consequence, researchers in the United States proposed that teacher training programs stress the importance of teachers not ignoring the connections between race, origin and SES. They must let go of the "meritocracy myth," which does not take note of these connections and assumes that success or failure depends only upon the individual's abilities and efforts. In addition, teachers' low expectations of students from disadvantaged backgrounds must be renounced, as well as the "deficit conception," that focus on what such students are missing, rather than on the wealth they bring with them. Owing to these perceptions and expectations, teachers tend to assign low level tasks to disadvantaged students and create a diluted curriculum for them. It is important to neutralize cultural conflicts through tools such as sports and music that can bridge between cultures and socio-economic status.

Despite the fact that these suggestions are first and foremost directed to those dealing with ethno-cultural diversities and teacher training programs in the United States, they are, to a great extent, relevant to Israel as well and to the range of diversities surveyed and discussed in the present report. The issue of diversities deserves to be included as a central topic in teacher training and stressed in all phases of teaching employees' professional development. Student teachers and experienced teachers should be exposed to theoretical approaches to the multiplicity of diversities and to ways of building a "toolbox" of strategies for dealing with all the dimensions of diversities. For this purpose, it is important to think beyond teacher training to principal and staff training and to view the approach to diversity as an ongoing collaborative mission.

Integrating the critical pedagogy approach in teacher training processes should be considered. This is a comprehensive approach that sees the consequences of power relations in society and education expressed in social differences and inherent

discrimination. The sources of inequality must be exposed in order to fight against them through education for change. The teacher must strive to awaken in his students the desire to change reality and not only to adapt to it. He must engage them in a critical dialogue regarding the social order and toward showing respect to the "other" and to other opinions within the framework of multi-culturalism. We note that in this case, the pluralistic approach of Isaiah Berlin and others can be referenced, as well as the theories of Michael Rosenak on the issue of the hierarchy of values.

However, when dealing with a range of diversities in a range of areas, the broad critical pedagogy approach cannot take the place of the individual approach. These two approaches are not contradictory. Indeed, they can be seen as complementary. There is a place for discourse that strives for political change and social justice, but in parallel, as emerges from the discussion in each of the report chapters, it is the individual, with all his unique needs and competencies, who must be related to. The combination of these two approaches in teacher training can pave the most appropriate way for dealing with multiple diversities and even for celebrating them, in order to ensure that "Education for Each and Every One" will necessarily be "Education for All."

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Appendix A: Summary of Visits to Schools Made by the "Education System for All and for Each and Every One" Committee

The Ramot Hefer Experimental Six-Year School, Kibbutz Ma'abarot

Visit Summary
Sunday, February 3, 2013[24]

The Ramot Hefer Experimental Six-Year School, numbers 950 students. The Hefer Valley Regional Council precinct mapping is the basis by which students attend the school; the school does not have an admissions process to select students. For the past 18 years, Ramot Hefer has been a leader in implementing alternative teaching and assessment methods for the matriculation examinations. Within the framework of the model developed by the school and employed with the support of the Ministry of Education's Division of Experiments and Innovations, the students are taught a portion of the material for the matriculation exams using the "Creative Dialogue" model. Currently, the school also serves as a center disseminating this model to other schools. The teaching method developed at Ramot Hefer is based on a dialogue the students conduct among themselves and with their teachers, content specialists and other sources of information. The model is based on four components: Group research work, output representing conclusions and insights, presentation of the research and final product to peers and various audiences (including parents), and an oral test given by a representative of the Inspector's office for the subject in question.

The dialogue the students engage in is at the level of one to two study units and is based on the standard curriculum. Throughout their years in middle school, students conduct approximately six dialogues, while the high school students conduct between three and six. In the high school, each dialogue is conducted for about three months. The school prepares students conducting dialogues for the matriculation exams in many subjects: literature, civics, Arabic, English, geography, social sciences, chemistry, biology, the arts, communications, music, dance, and Jewish thought. The decision regarding the dialogue topic is made by the teachers, with the authorization of the Inspector's office for the subject in question.

[24] The summary is based on conversations with Ms. Bruria Sela, the school principal , and with some of the teaching staff as well as a meeting with students from the middle and secondary divisions.

Learning stages of creative dialogue:

1. The lesson that inaugurates each topic includes a teacher's presentation of the subject matter, experts in the field, lectures, films, presentations, interviews, and more. This is done with the aim of presenting the topic of study in the broadest and most general manner. Following the general presentation, the students divide into groups of three (occasionally in pairs and infrequently, a student will work alone). Division into groups is made independently but with the supervision and guidance of the teaching staff.
2. General and theoretical research on the topic in the school library, the internet, discussion with experts and in other libraries outside the school.
3. Articulation of the research question and writing a research paper derived from the general topic being studied (for example: "How does the character of Jane Eyre reflect women of the 19th century?" "How does the State of Israel, as a Jewish and democratic entity, relate to the issue of abortion?").
4. Insight and output – each group prepares a report, written following academic guidelines. In addition, each group prepares an original piece that reflects personal insights and conclusions the students reached during the course of their study. The piece can be of any type and in any area; it can be a performance, presentation, musical piece, sculpture, painting, experiment, installation, film, radio program, etc.
5. Sharing the findings with the school community and parents ("sharing forum").
6. Oral test administered by a Ministry of Education examiner.

Dialogue assessment is based on tracking the work process, the level of research and knowledge, the output, the presentation and the oral exam. The oral exam is administered by a representative of the Inspector's office for the subject in question. The final grade is comprised of two parts: 40% for the research study and 60% for the remainder of the elements, as described above. The subject teacher and the external examiner make the assessment jointly. The grade for the research study is given to the group while the remaining elements of grade are given to each student individually.

Ramot Hefer's staff believes that through dialogue with peers, experts and the study material, the students construct their knowledge on their own and do not leave it to the teachers to "transfer" knowledge to them. According to the principal and representatives of the staff, the dialogue method of study has advantages

for all involved: The teachers enjoy diverse teaching and benefit from the staff cohesiveness and high motivation, and the students are exposed to experiential and creative learning and to topics in which they are interested. As a result, their learning is meaningful and critical. Learning through dialogue endows students with additional life skills such as teamwork, research skills and familiarity with independent study, critical assessment of varied sources of knowledge, meeting defined deadlines, taking responsibility for learning, and public speaking.

Creative dialogue as a response to student heterogeneity

For several reasons, the teaching staff believes that "creative dialogue" provides a good response to student heterogeneity : Since the stages of study are diverse and each student is better at a different stage, dividing the students into groups gives more students the possibility of expressing themselves. Students with learning disabilities receive help through the group and can express their talents. Strong students get a chance to develop and go deeper into the topic, each according to their own competencies. Students become more familiar with their own strengths as well as that of their classmates. The teachers have an opportunity to closely follow their students and get to know them better. The teachers report that the dialogue method of study enables them to allot their time in a differential, and thus, better, manner, in accordance with the students' needs. According to the principal and the staff, learning through dialogue makes it possible for more students to complete their studies with high achievements, as compared to the rate of students completing school in the conventional route. On a social level, the students relate that this method of study allowed them to encounter classmates that they would not ordinarily connect to in other circumstances, and created the opportunity to make new acquaintances and friendships. The original piece the students must produce, in addition to the research report – the video clip, song, painting, radio program or any other expressive form – serves as another channel for the expression of their difference and creativity.

The impact of the experiment on school structure and culture of teaching

In the opinion of the staff and the principal, the experiment resulted in changes in the entire school culture. Teachers became mentors and no longer serve as the sole source for the acquisition of knowledge but rather, learn with the students. The teachers' and students' work environment is not limited to the classroom but includes the library, computer room, arts room, yard, and places outside the school – public libraries, universities and research institutions.

Also, the teacher's traditional role changes in the dialogue method of teaching: The teacher becomes a mentor and navigator and not an exclusive source of knowledge; the responsibility for learning is transferred from the teacher to the students; the teacher must be able to simultaneously work in different channels in order to help the various teams with their different topics and to also share the students' learning; the teacher is called upon to be creative and to guide the students towards creativity while being flexible and adaptive to different situations. On the professional level, the teacher must develop new interactions with teachers from other knowledge areas.

The principal of Ramot Hefer believes that Creative Dialogue can be implemented in any school ready to tackle alternative methods of teaching. The advantage of the creative dialogue learning process is that it can be applied in all grades and in all subjects.

The Misgav Experimental Elementary School, Hefer Valley

Visit Summary
Sunday, February 3, 2013[25]

Background

The Misgav Experimental State Elementary School was established in 1975. They presently educate 760 students. Misgav takes in all students who live in the school's registration precinct, and use no vetting procedure. The school population is heterogeneous. Students from surrounding agricultural settlements and kibbutzim as well as children from nearby cities attend. The school makes a special effort to integrate children with emotional and behavioral difficulties as well as children from the Arazim boarding school (a closed rehabilitation and treatment institution for at-risk children and youth). In the 2013-14 academic year, Misgav became an expert dissemination center, under the new Ministry of Education guidelines. This recognition makes it possible for the school to disseminate the unique model they developed as a comprehensive program and as part of the core curriculum.

"Entrepreneurship at the Starting Line" – the experiment

In 2006, Misgav became an experimental school. The motivation for engaging in the experiment was the principal's sense that the disparity between life outside

[25] The summary is based on conversation with the school principal, Ms. Hila Porat, a short observation of a lesson in a first grade class, a meeting with students and conversation with the teachers from the school staff.

school, where many processes that take place are unknown and uncertain, and the conventional, traditional bubble in which school functions was too great: Students are passive and 90% of the time is spent on imparting knowledge. The feeling was that the dominant kind of thinking in school did not promote understanding and a sense of complete absence of what is referred to in the school as contextual thinking – expansive thinking abundant with ideas that leads to diverse interpretations. The school believes that creativity and contextual thinking are crucial in the information age and predict success more than heredity and education do. As a result, development of creative thinking and the derived activities are at the core of the school's curriculum.

Thus, this was the motivation for Misgav to adopt the language of business and entrepreneurship and began to develop the experiment. Within this framework, the staff develops each child's inherent "entrepreneurial potential" and sees it as the main source for excellence and success. The entrepreneurial process includes facing many frustrating situations that demand confrontation. The principal and staff search for precisely those situations in which the students' "stomach aches a little" as a result of confronting crisis situations. They believe that these situations awaken students' motivation to succeed. The entrepreneurial process requires students to identify a true need (of special needs children or adults, for example) and convince their peers of the necessity of solving it by presenting supported arguments and justifications. At the next stage, with the help of teachers and outside experts, the students begin to learn more intensively everything connected to the product and its environment. The products generated by the process are not meant to be sold. The emphasis is on doing and on the joy of learning, curiosity and challenge. The process experienced by the students is long and difficult and thus, necessarily, edifying.

The students study the experimental program between six to eight hours weekly. The school's curriculum is very flexible in order to enable students to be part of the program by allowing the students, for example, to miss core lessons. The staff believes that students are not missing out on knowledge but rather earning other things. Each grade has a group of student-mentors that undergo a more intensive entrepreneurship process after which, in collaboration with teachers, they mentor younger students.

The school experiment is based on the following dimensions:

- A "tool box" of functions that students need: Cognitive flexibility, upgrading ideas and knowledge, the process of manufacturing (from formulation of an idea to its execution)

- Diverse values: Being proactive as a code of conduct, sensitivity to the surrounding environment, leadership
- A different kind of pedagogy: Teacher as a guide, mentoring, language of entrepreneurship as a unifying factor
- Organizational change in the institution's daily operations
- Partnership circles: Experts coming to the school, academic advisors
- Openness to constant innovation and change

The transition to an experimental school took place as a pilot study and was not a revolution. Five teachers started the experiment and the rest of the teachers joined in what was a gradual process. Today, the staff has improved upon what was done at the beginning of the process. The experience of creating new knowledge contributes significantly to teachers as well. In order to allot time for contextual thinking, there was a need to change the school atmosphere and to create a fundamental change in the perception of the teacher's role.

The school often enlists the help of external academic consultants but is scrupulous about changing them every two years in order to gain exposure to a wide range of worlds of knowledge and conceptions.

The view on heterogeneity at Misgav

According to the principal, Misgav does not think in terms of "difference," "integration," or "reducing gaps" and therefore the students' socio-economic backgrounds are not relevant to its work. The assumption underlying its work is that many different types of students attend the school including those with severe learning and behavioral disorders. The entrepreneurial approach provides a solution to many different needs since the process the school is developing is group-based and everyone can find parts in which they are strong, contributory and significant. From this perspective, Misgav is part of a process taking place in the Israeli education system since the 1980s in which schools become more autonomous and have the option of developing second order curricula. These are generalized curricula that transform the school and give it the type of added value the system wishes to "consume." Such schools are characterized by their "life-style" and unique school culture.

Students talk about the entrepreneurial learning experience

4th grade student: "The entrepreneurial process creates new friendships with students who aren't aware of my academic knowledge […] Everyone connects

to something he is good at and everyone has the opportunity to show his strong sides."

2nd grade student: In robotics we learn how to build robots but we also learn about different functions: Being proactive, persuasive, getting out of situations when you're stuck. We don't learn, we get experience in the entrepreneurial process. This way, it'll be with us for our whole life […] What we learn in entrepreneurship also helps us in life and in our other lessons – for example, in language expression class it helps me identify the text's structure. It gives us tools for life. In the text, a child or someone always has a need, idea or problem and always, at the end of the story the problem is solved and this reminds me of the entrepreneurial process.

The HaGalil Municipal Experimental High School, Nazareth

Visit Summary
November 14, 2013[26]

Background

The HaGalil Municipal Experimental High School is the only Arab sector experimental high school in the country. It belongs to the regional council and is self-managed. Historically, it was one of the only Arab schools running in 1948 when the State of Israel was established (the first graduating class was in 1953). Owing to its historical standing and its extensive influence on creating the academic educational lay of the land in the Arab sector, it is perceived as the "father" of Arab schools in Israel. Many tens of teachers and principals emerged from its roots, alongside thousands of graduates. The school principal is himself a graduate. He was previously the assistant principal and a biology teacher. He has been HaGalil's principal for the past 22 years.

HaGalil is a public school and as such, must accept all the students in its registration precinct, with no selection process. In the current school year, 1,100 students (boys and girls) attend the school – 11 classes per grade. Almost all the students are Muslim, a portion of whom are religious (traditionally, in Nazareth, the Christian students attend private schools that are part of the Church). About 95% of the students come from low-middle socio-economic families.

[26] The above summary is based on conversations with the school principal, with an English teacher who serves as the pedagogic coordinator and assessment coordinator, and with four students studying in the outstanding and gifted classes.

Each grade has a Regular Track to Matriculation (RTM) (for students needing extra help in order to obtain a matriculation certificate) and a Challenge track with remedial help for weaker students with the aim of having them sit for the matriculation exams. Three years ago, the school instituted gifted classes as separate homeroom classes; they are the only such classes in the entire Northern district (including the Jewish sector). Special needs students also attend the school and they are occasional accompanied by an aide. There are about 100 teachers in the school.

HaGalil is classified as an academic school but also includes tracks of different types – technology, electronics, computing, computers, tourism, and fashion majors.

The school has been awarded several prizes: The District Education Prize in 2013, the Israel Education Association Prize, the Teachers Association Award for Co-existence, and the Environment Ministry Award for environmental projects. The experiment's staff was awarded a prize from the Ministry of Education and the principal was awarded an individual District Prize for Excellence, while the school was awarded the Education Prize for Environment and Innovation.

A process of change

HaGalil High School underwent a process of change and transformed itself from a school for failing students to a school with an excellent reputation which students choose to attend (even those who live far away). The essence of the process is in the change that took place in the school's discourse. In the past, school discourse centered on issues of cultural belonging or socio-economic belonging. Today, the school discourse is mainly educational and is centered on the question of, "What are we giving the student?" So, for example, in the past, when a meeting would be held about a student with behavioral problems, the staff would tend to conclude that the student was at fault. In the new educational discourse, the underlying assumption is that the adults are responsible for the child's welfare. Therefore, according to the principal, the staff must ask themselves why the student is failing, why he screams, why he hates school. In this spirit, the school also put an end to the practice of "throwing" students out of school. In the new discourse, expelling a student from school is like expelling the teacher and disparaging his teaching abilities. The working assumption is that the student's behavior reflects that of the adults. A student who experiences a teacher who relates to him by shouting and with condescension reciprocates accordingly. At present, the conception is that school dynamics are dependent on the adults, not the students.

The start of the change process occurred when the principal decided to run the school according to an educational vision and conception and not by coercion and authoritarianism. In the second stage, the teachers were asked whether they liked their place of work. The message from the administration was that the answer to this question was dependent upon them – if the teachers want it to be good, it will be good. That is to say, the teachers are responsible for what happens in the school. In the third stage, positive elements active in the school were identified – teachers, students, resources. The process lasted about one and a half years at the end of which, the principal made personal contact with each one of the staff members. In parallel, the process of establishing the principal's trust and integrity in the teachers' eyes began. This process was based mainly on maintaining a close connection between words and actions.

It was not easy for the teachers to get used to the change process. The difficulty was particularly apparent for those teachers who were personally negatively affected since they continued to use the old authoritarian language and did not adopt the new discourse. Despite the difficulties, after four years, a change in the discourse held in the teachers' room did take place.

A main component of the change process was the entire staff's collaboration in the teachers' successes in the classroom. Cooperation achieved a twofold aim: Reinforcement and empowerment of the individual teacher and creation of positive competition among the teachers in striving to improve. Thus, when the fashion major, which was considered a weak track, was awarded a national design prize, the school held a big party and invited the entire staff to take part in the success and learn from it. Having the school become part of the experiment made a big impact on the school atmosphere and climate. The experiment changed the school's image and gave teachers a sense that they are a focus of interest (more about the experiment below).

The teachers are the school's main resource

The teachers are perceived to be the most important group and the backbone of educational practice at HaGalil. In line with this perception, it is important for the school to invest in the teachers and to give them backing and a sense of confidence. The principal's door is always open to them and he is always available on his phone. Part of the school's educational vision is to make it into a place where the teachers feel at home, part of a family. It is very important to the administration to protect their teachers from any outside intervention. Meetings between teachers and parents to clarify complaints or dissatisfaction are always held in the principal's presence.

On the other hand, each homeroom educator is perceived as a principal responsible for all aspects of his class's functioning – from handling the class's physical conditions to setting academic goals and achieving them (for example, setting a goal of 70% of the class sitting for the matriculation exams). When a teacher of an RTM class set a goal of 100% matriculation and met it, the school shared her success with all the teachers. Her success inspired other teachers to set high goals and meet them. This was the way the school was able to raise its percentage of those eligible for matriculation by 21% within two years. In the principal's view, the teachers must serve as worthy role models for their students – the situation of a student who does not see a good personal example in front of him is problematic.

The English teacher also serves as the school's assessment coordinator and pedagogic coordinator and defined her role as follows: "My goal is for the students to come to school with a smile and to go home with a smile… I work my way into many cracks. Where there's a crack, I enter. If it helps the students, I don't care, I'll go in. I try to get to know as many students as possible. I know everyone's name and their grades. Faisal [the principal] knows everyone."

About the atmosphere in the school: "There are many teachers at the school whose mission is teaching. I don't know if this is a matter of luck. I don't think it's luck. These are people who are in the right place at the right time, who are excited about teaching and love the students. The teachers also have many activities together – parties, get-togethers. It adds a lot to the atmosphere. We are friends and we enjoy coming to work. A lot of the credit for this goes to the principal who always knows what's going on but doesn't interfere. He allows the teachers to grow, to do and to decide and the teachers can depend on him. This was the way it also was when I was young and just started teaching. At the same time, it's clear that the teacher has responsibility."

Format of studies

When the students start at the school in 10th grade, they are divided into classes based on the results of the mathematics exams held in the summer, the results of their tests in middle school and results of the Chief Inspector tests held in ninth grade. Based on their grades, the students are divided into classes according to the number of study units in mathematics. There are three classes of five study units in math and the rest of the classes take three units. During 10th grade, the teachers get to better know the students and at the end of the year, a staff meeting is held for placement in 11th grade. In 11th grade, the students are divided into classes defined by the study track/major. Division is made according to their achievements and

preferences. The students carry out all their studies, including the core curriculum, within the framework of the track. In other words, the grade is not comprised of heterogenic homerooms that split up into tracks or ability groups (the great number of students and the small amount of space rule this out) but rather, is organized around the tracks during their entire time at school.

Special cases are solved individually. So, for example, when a group of students that was classified as three units-of-math students, and insisted on studying four units, the school made sure that this group had its own teacher. In one case, the school allowed a student who wished to do so, to study physics despite the fact that the level of his grades was not suited to the track (the student completed his studies with a grade of 80 in physics, and math at the 4 unit level). In other words, despite the relatively rigid structure of assignment to classes based on mathematics ability, the school makes a great effort to reach every student and respond to his specific academic needs. The school will help a student who later plans on studying in Jordan and needs 10 study units in a specific subject or a gifted student who does not want to study a particular subject at a particular level, etc.

If a student wants to broaden his study of one of the core subjects, he can. All the students study Arabic and Hebrew at the four unit level. As much as possible, the staff attempts to reduce the number of students who study three units of English because that level is insufficient for university admission. The school also has tracks referred to as "Rescue" – life sciences, geography, environmental studies – for those students having difficulty meeting the requirements of other tracks.

HaGalil High School also operates a learning center called "Third Chance" where, after completing 12th grade, each student has the opportunity to relearn one subject he is missing in order to complete his matriculation certificate. Classes are held during the month of July and the teachers are those employed by the Ministry of Education (not through the municipality). The student receives a new pre-grade on the basis of the summer course. The school has a coordinator whose job it is to map the students and to track how many points are missing for receipt of a matriculation certificate; generally, it is she who locates the students for this program. If necessary, the coordinator convinces the student to complete the matriculation certificate and is in touch with the parents.

The experiment – Civil Society

Ten years ago, HaGalil received authorization to become an experimental school and today, also serves as a dissemination center. The experiment offers career

advancement opportunities for teachers within the school (for example, they can become a discipline area principle) which are not normally open to them in other frameworks. This option instills teachers with motivation and inspiration and develops a sense of belonging.

The aim of the experiment is to transform the school into more than simply an institution for the purpose of receiving a matriculation certificate. The experiment is an opportunity to define the school's role from an educational-individual perspective, not only on the basis of academic achievement. It is important to the staff that the students like the school and their peers and want to come to school and to demand things of it. The school also wanted to take advantage of the years at high school to acquaint the students with the society beyond its boundaries and to create a project based on experiential study – this was how the civil society program was created.

The program divides all 10th grade students (including RTM and gifted) into groups and within the framework of their research work, they are asked to propose a solution to a problem they face in areas of their lives. At the end of 10th grade, the students present their work to the entire grade, the administration, experimental staff, and parents. The staff and the principal make certain to be present at each one of the presentations. The students expect it and it is important to the administration and teachers to show respect for the work invested. At the end of the process, the students receive a matriculation grade for what is considered the third unit of study in civics.

In the students' words

12th grade student: "I am not from Nazareth, I live in the nearby village. I moved to Hagalil because I heard a lot of good things about the school and its level of studies. It was a challenge for me. I came to the school in 11th grade and I'm the type of person for whom it is difficult to quickly adjust. In the beginning it was hard to get used to the teachers. There are a lot of kids. I didn't know anyone in my class. What helped me were the teachers. They knew that I'm not from Nazareth and they helped me a lot. The students became closer to me. The teachers related to me in a good way. [They made me] feel part of the class, the school, the city."

12th grade student: "In middle school, all my grades were very high. In the first semester here, my grades really fell. Everything was new: The atmosphere, [studying] physics for matriculation, math, computers – I never learned computers before. The teachers really encouraged us, they told us that the first test doesn't determine anything, that the material is new and difficult but we must move

forward and not to be afraid. Now I am in the "outstanding" class, studying five units of physics, math and computers and my grades are high."

12th grade student, gifted class: "Everything is special in this school. I came here from the Al-Mutran School (a private Christian school) because I heard about the gifted class […] there is a different atmosphere here than in my previous school. [In my class] there are 16 students and this is a big difference from 40. The teachers connect to each student, there is a good relationship with the teachers. I didn't have this in my previous school. Teachers and students have laughs between classes. It's something special."

The students said that the only change they would make in the school would be reducing the number of students. The principal also said that were he to receive additional funds, the first thing he would do is reduce the number of students per class.

Dror Experimental Education Campus, Lev HaSharon Regional Council

Summary of visit to the high school
November 17, 2013[27]

The Dror Experimental Education Campus is a heterogeneous six-year school belonging to the Lev HaSharon regional council. The school has 2,400 students, all of whom come from the 18 surrounding agricultural settlements located near the school. As the only secondary school in the area, it is obligated to accept all the students living within the region as well as students from Pardesia, with no admission exams. The school's dropout rate is negligible (0.3%). On average, 85%-89% of the students are entitled to a matriculation certificate. The administrative structure includes a middle school principal, a high school principal, and a general manager. Two hundred teachers are employed by the school (100 in middle school and 100 in high school). There is an average of 30 to 35 students per class. The level of violence in the school is low. A significant proportion of the school's students are member of the "Agricultural Settlement Members" youth movement.

Each grade has a Regular Track to Matriculation (RTM) for students who need some help to obtain a matriculation level certificate, a Challenge track with remedial help for weaker students with the aim of having them sit for the matriculation exams, and a special education class (numbering about 14 students).

[27] The summary is based on a conversation with the high school principal, Ms. Keren Edri, and with two teachers and on conversations with several 11th grade students.

All the special education teachers were trained for their work with this population. In addition, special needs children (hearing and vision impaired, students on the autism spectrum, and other physical disabilities) are mainstreamed into regular classes. The school employs a special education counselor who coordinates treatment for these students (creating individualized work programs, guiding teachers, etc.)

Following one of the two experiments they ran in the past (today, the Dror Education Campus is no longer experimental), the school does not use bells to mark lesson changes and lessons last one and a half ours (with no recess). The regional library is located at the school.

The school is unique in the wide range of subjects offered in which the students can sit for the matriculation exams. In total, there are about 70 different academic combinations the students can study (for example, dance and physics, Spanish and theater, Land of Israel Studies and biology). From the school's perspective, the broad offering is the main tool addressing the heterogeneity among the students.

Mechanisms that enable differential treatment of students

Self-management: Dror is self-managed. At the start of each year, it receives a budget from the regional council for each student and there is freedom of action in managing everything related to use of the funds. For example, this latitude is expressed in opening and closing study tracks, appointing consultants in special areas (such as appointing a special advisor for the area of special education), funding a position of psychologist for the school, a mentor for new teachers. From this viewpoint, the great number of students constitutes an advantage expressed in (relatively) large financial resources. Another advantage is the school's physical size (it sits on an area of roughly 20 acres) which enables flexibility in the number of subjects that can be studied simultaneously as well as flexibility in the number of students per class.

Format of studies: The format of studies at Dror is somewhat different that the standard at other schools. Studies in middle school take place in heterogeneous classes: Special needs students (with difficulties, and outstanding students) are separated for part of the time in order to enable academic response to their specific needs. Students with difficulties receive remedial assistance and outstanding students (who are not gifted but identified internally by the school) leave their homeroom class lesson once a week for special classes. Gifted students study in special, dedicated frameworks. In middle school, there are two levels of science

lessons – the nuclear level (the most basic) and the regular. The science classes are smaller and number 26 to 27 students.

The composition of the classes is different in high school and the administration creates new homeroom classes. The students study only the core curriculum in their homeroom class. For the rest of the time, the students are divided into study tracks, chosen by them (selected tracks) and according to their level (in math and English). Every student chooses two tracks, with the exception of the mainstreamed, special education, RTM and Challenge students. Students in these classes choose one major track and for the rest of the time they receive help in the core curriculum. In addition to the study of majors, students can choose to write a final paper (in place of one track), to participate in a computer project conducted at the Weizmann Institute (five units in addition to the regular studies) or to hold a recital (a scope of five units). The sciences teachers expose their students to the Science Olympics (in physics, biology and chemistry).

Choosing a study track: The selection process begins in ninth grade when students are exposed to different subjects. In the transition from ninth to tenth grades, the students are assigned to different majors according to their preferences and based on earlier selection tests. In the first semester of 10th grade, the school allows transfer to other tracks, but in general, the number of students changing tracks is small. Parents are responsible for partially funding the study tracks. With the support of the parents committee, the school runs a welfare committee that helps students whose parents cannot afford the school expenses.

From a conversation we had with four 11th grade students, we learned that the students greatly appreciate the wide range of subject offerings and feel that the range of subjects and the many combinations of subjects make it possible for them to study what really interests them.

Study of the core curriculum in the high school is not spread over three years as is standard, but taught in a concentrated manner during one year. So, for example, literature is studied in 11th grade and all the civics hours needed for the matriculation exam are studied in 12th grade. According to the school, studying in this way enables the students to focus: They learn in a more thorough manner (because more hours are devoted to each topic) and they remember more of the material they need for the test.

The school developed and implements a **management by objectives** (MBO) program. The program is based on a future-to-present management approach – defining goals and conducting oneself in light of the outcome desired. According

to the program, each student in the school is required to choose an objective for attainment. The objective can be personal, social, related to the army, or anything else. The goal is for the students to learn to lead their lives and to set goals for themselves and not to "roll from one place to the next" with no defined plan or goal. The process of choosing a goal is carried out together with the homeroom teacher and the parents, who are also partners in realizing the goal. One student, for example, set a goal of serving in the military intelligence corps. In order to realize the objective, his homeroom teacher got him in touch with the school and regional council officials responsible for the military and together they checked into the qualifications needed and the steps that should be taken in order to realize the objective.

In addition, each student at the school has an **individual work plan** whose aim is to track the student's academic status in each subject. The plan is constantly updated and is known to the student and his parents. At any given moment, it is possible to retrieve information on each student's academic obligations. The individual work plan ensures that no child will "fall between the cracks" and that more than one person is monitoring the student during his studies and will ensure that they are properly conducted. The size of the school is also an advantage here: The multiplicity of students enables employment of people filling many different roles and this ensures that a relatively large number of adults will "see" the students.

The school developed what is referred to in its internal language as a "Participatory Tapestry." The tapestry can include work with entities outside school. In this framework, close work relations are maintained with the regional council and mainly with its head and the director of the education department. Several times a year, roundtable meetings are held with them where different topics connected to school life are discussed. In addition, the council head and the education department director visit the school fairly frequently. Parents also participate in the tapestry. The school enlists them to help with, for example, reading to or writing for children with learning disabilities when they take tests. The school is also in touch with the "Agricultural Settlement Members" youth movement. The Participatory Tapestry makes it possible for the school to connect between the students' daily life in school and their lives in after-school hours.

The school initiated the establishment of the "**Dror Nucleus**," a group volunteering a year of pre-army service and which operates in a format similar to that of the "Oded Nucleus" – a nucleus of agricultural settlement members doing a year of pre-army service. The Dror Nucleus provides social guidance for at-risk students

and is primarily intended for students who are not youth group members. The nucleus members work with students who have difficulties and they are responsible for activities during school recesses.

In summary, the relatively high responsiveness to heterogeneity among the students is made possible specifically by the size of the school (while the large number of students also has its disadvantages). The size translates into financial resources and into the school resources. A consequence of the size is the ability to offer a large number of academic majors and unique combinations of subjects for majors (tracks) and to employ professionals to fill many different functions in the school, ensuring that the relatively high number of adults will monitor the students. This visibility is also made possible as a result of the school's collaborative approach toward outside entities. Clearly, the school's self-management is a central feature in its ability to realize the administration's and staff's priorities.

Leo Baeck Education Center

Visit Summary
Tuesday, January 29, 2013[28]

Background

The Leo Baeck Education Center was established 75 years ago by Rabbi Dr. Meir Elk. Dani Fesler, the current general manager, is the school's third manager since its establishment. Fesler has been serving as general manager since 1998 following his service in a series of teaching and management roles at the school. Rabbi Reuven Samuels managed the school from 1974 to 1998 and serves as head of the school's board of directors until today. Since its founding in 1938, "Leo Baeck" continues to be limited corporation. The school is run by a board of directors, under which is the general manager who manages the age divisions, the administrative division, the temple and the community center.[29]

The Leo Baeck Education Center operates along three major axes that are based on the conception of "school, community center and temple." The school

[28] The summary is based on conversations with the school's general manager, Mr. Dani Fesler, conversation with the principals of the three age divisions (elementary, youth and high school), a meeting with the director of the community center and a summarizing discussion in the presence of the high school's social involvement coordinator, the principal of the gifted classes and the principal of special education. During our visit we also toured the school's special building and saw its connection to the community center.

[29] Organizationally, the community center belongs to the Community Centers Corporation but from a pedagogical (and also physical) standpoint, it is very connected to the school.

aspires to academic excellence but also maintains a meaningful connection to the community. The Leo Baeck Community Center offers programs to 25,000 households, most of whom are new immigrants and low socio-economic status veteran Israelis who make use of its facilities. The community center operates eight branches located in the neighborhoods around the education center and works in close cooperation with the school: Community workers participate in projects conducted by the school and its students contribute their part to the community center's activities (more about the connection between the school and the community center below).

The school also has a strong connection to Reform Judaism, mainly to the value of Tikkun Olam – repairing the world. While most of the students do not define themselves as religious, they come from families to whom Judaism is important. The school employs three full-time rabbis (one for each age division), prayers are routinely held at the school as well as Friday night Sabbath services and End of Sabbath services. All high school students are required to study Judaism of (at least) one unit. Non-Jewish students maintain an ongoing dialogue with the staff on these topics and at any rate, they are not subject to religious coercion.

The students' socio-economic background: In the elementary and youth divisions, 60% to 70% of the students come from low and middle socio-economic backgrounds and the rest from a high socio-economic background. About 10% of the students in each age division receive an academic scholarship.

Except for the RTM (Regular Track to Matriculation – for students needing help to matriculate) classes, the special education classes and the gifted classes, all the school's classes are heterogeneous. In the past (during two grade cohorts), the school had experience with exclusive homogeneous classes but the staff felt that the science class attracted the outstanding students and created an atmosphere wherein anything that was not science-related was considered mediocre. The conclusion was that homogeneity is destructive to the institution and does not allow the grade to conduct itself as a single unit. Today, study in homogeneous groups takes place only for math and English (from the middle of seventh grade) and in "Excellent," and after school program, where students make the choice.

The Leo Baeck Education Center places strong emphasis on teacher empowerment and staff development. A large portion of the staff has a social work background and this is evident in the school discourse. For example, seeing the student and his needs is holistic and when necessary, the teachers act as case managers for certain students. Nearly all the staff members have a Master's degree.

In-service education takes place in the school and is developed by the staff. Their emphasis is on applying what is learned in line with the needs of the school. The teachers have a strong sense of support, discourse and dialogue among themselves and with the administration. Finding/hiring teachers takes place through several channels: ongoing contact with teacher-training programs, focused recruitment of school graduates and continued employment of retired teachers. Owing to its status as a limited corporation, the school can also dismiss teachers.

The age divisions

The Leo Baeck Education Center educates 2,200 students, ages eight months to 21 years (including special education students with communication disorders along the autism spectrum who study at the school until grade 14). In consequence, there is a difference in the types of supervision for the age divisions and in the amount of tuition.

The Preschool Division (8 months to 6 years)

The community center (adjacent to the school) operates the preschool division where 200 children are registered. The preschool runs from 7:00 a.m. to 5:00 p.m. Registration is on the basis of available space but preference is given to siblings. As a rule, most of the preschool attendees continue to the school's elementary division.

The Elementary Division (1st to 7th grades)

Three hundred students study in this division. The school day lasts until 3:30 p.m. and includes lunch and enrichment activities. The preschool children are the first to be accepted into the elementary division and also siblings. The rest of the children are accepted on the basis of available places. In the preschool and elementary divisions, the supervision is classified as "recognized but not official" and the parents pay tuition. The tuition in these divisions ranges from 800 to 2,500 NIS per month, based on age.

There is no requirement for students entering first grade to meet any cognitive level. When there is a behavioral problem for which the school cannot provide a solution, it refers the students to another suitable framework.

About 10% of the elementary division students are diagnosed as suffering from ADHD. More than 10% of the students have undergone didactic or psycho-didactic diagnosis and their learning difficulties have been mapped. Two students

have been mainstreamed on an individual basis (with an aide) into a regular classroom.

On average, the students in the elementary division study 12 hours more than regular schools. Each day opens and closes with the homeroom teacher's meeting with the class and is devoted to considering and reflecting. During the final 20 minutes of each day there is a "sounding board" meeting devoted to reflecting on the course of the day. During the week, there are four assemblies in which the entire grade participates. The long school day is utilized for the purpose of the children's emotional and physical enrichment. Within this framework, the children choose a weekly lesson from a list of enrichment courses (that includes, for example, ceramics, soccer, knitting, chi-kung, cinema, sport).

Handling heterogeneity in the classroom varies in response to the need: Preparing teaching material on time, use of mentoring, differentiated instruction, taking children out of the classroom to receive help, mainstreaming teachers, individual hours, and individual work with students.

The teachers in the elementary division work 40 hours weekly and sign an individual contract. Their salaries are similar to those of teachers employed in the public sector.

The Youth Division (7th to 9th grades)

The youth division numbers 700 students and its status classification is "officially recognized." The implication is that all the students of the elementary division as well as all the students living within the school's registration precinct are accepted to the division. Parents do not pay tuition. About seven percent of the students, including Druze students, who attend the school are from outside Haifa. Students who live outside the registration precinct are admitted on the basis of exams in math and the sciences and a personal interview. Students from the Druze sector must pass a test in Hebrew and undergo a personal interview.

In the youth division there are between seven to ten classes per grade. Each grade has a gifted class and a special education class which includes students diagnosed on the autism spectrum.

The school maintains a rich academic support system for students who need it: An after-school math study center, learning in small groups with a remedial teacher, a mentoring students project, a project to distill skills for excellence, a "learning how to learn" project, a University of Haifa program to help students in English, marathons in English and math for ninth grade students, an "Empowerment"

program to develop self-control, a technology-science leadership project and a humanities program to impart teaching and skills and strategies to make personal contact and develop teacher-student and student-student dialogue.

Alongside the academic support system, the school runs an emotional-social support structure that includes two psychologists, a social worker, truant officer, student coordinator, a "City without Violence" program coordinator, three mainstreaming teachers, an advisor and coordinator for each grade, a Challenges program operator and a coordinator for the Empowerment program.

The Upper Division (10th to 14th grades)

About 1,000 students attend the upper division and like the elementary division, it is classified as "recognized but not official." Ninety-five percent of the upper division students are graduates of the youth division and another 100 students are accepted to the division on the basis of their grades. About eight percent of the students, including Druze students, come from outside Haifa.

The principal of the upper division came to Leo Baeck as a student and since that time, has filled most of the positions in the division including running the youth division for many years.

The 10th through 12th grades have eight regular classes, a gifted class and an RTM class. Alongside these, each grade has one or two communication disorders classes. These students complete their studies after grade 14, at age 21.

The school's aim is for every student in the upper division to receive a "Quality" matriculation certificate (with more units of more subjects required for university admission) and a "Social" matriculation certificate (having studied and demonstrated social involvement and study). Ninety percent of the students are entitled to a matriculation certificate; 70% study four to five units of math; 97% study four to five units of English. About 50% of the students receive significant help and reinforcement during their studies. Throughout the year, the students can repeatedly re-take exams, as much as needed in order to realize their academic potential.

Leo Baeck offers a wide range of subjects for matriculation: Beyond the core curriculum and the regular science subjects, students can study Judaism, computer science, theater, social sciences, communications, physical education, "field-nation-society" studies, French, Russian, German, Spanish, art, music, geography, electronics, and Druze heritage. The school encourages broadening studies in the humanities, not only the sciences.

Due to the municipality's opposition, the school does not offer a technology major.

The 10th to 12th grade students participate in social involvement programs: A "personal commitment" program in 10th grade (30 hours training and workshops and 80 hours in the field), "civic commitment" in 11th grade (30 hours training and 60 hours in the field), and "social maturity" in 12th grade (30 hours training and 60 field hours). For entitlement to a social matriculation certificate, the students participate in one of 70 programs in community involvement. The certificate is based on development of leadership behavior, participation in social projects, and upper division students leading youth division projects.

Within the framework of the academic support system, the school gives courses and offers individual hours as part of the "Courage to Change" program, supplements teachers through the Haifa municipality's Unit for Educational Empowerment and through the Ministry of Education's mainstreaming hours, and also retains students.

Each grade has a full-time advisor. In addition, the school employs a psychologist and an achievement coordinator. Each student has an individual program that is structured together with the student and via an ongoing mapping program – academic and social mapping for each student takes place every two months.

In addition, all the students maintain an "on a personal note" notebook wherein correspondence between the teacher and students is recorded.

Special education

In the 2012-2013 academic year, there were more than 70 students diagnosed along the autism spectrum (mainly PDD and Asperger's) attending Leo Baeck. These students study in 11 classes classified as communication classes for a period of eight years (grades 7 to 14 – until age 21). Special education classes have long days (until 4:00 p.m.) and continue throughout the year, including during vacations.

The variance between the students in these classes is very large. In the special education classes, there are mainly social skills disorders, communication skills disorders, narrow range of interest and gaps in the level of functioning in different areas.

The special education system in the Leo Baeck upper division strives to bring young people with communication disorders to a point where they can have maximum

quality of life as adults. The system is based on the belief in the students' power to guide themselves toward independence by reducing dependence on outside assistance.

The special education classes are led by a large team of special education teachers, a teaching support assistance team and a para-medical team including occupational therapists and emotional therapists.

The community center

The community center director is a Leo Baeck graduate and the father of a youth division student. The community center serves a heterogeneous population from both the socio-economic and country of origin standpoints. It has 200 employees, 150 volunteers, 60 students and 75 high school students involved in personal commitment projects.

The sports center run by the community center has more than 2,000 members. The community center's annual budget is 16 million shekels; 70% of the budget is generated through its own income. It runs seven nurseries and preschools for 188 children aged six months to six years.

The community center is very involved in community work and runs eight branches in community centers located in southwest Haifa. For the past 20 years, it has been running a bi-national summer camp and other co-existence programs and also serves a special needs population. The branches include after school clubs for at-risk children (Jewish and Arab), an Empowerment Center for challenged youth, a Parenting and Guidance Center for the Ethiopian community, and more. The activities in the various branches are a concrete expression of the social message the Leo Baeck Education Center advocates – many of the Education Center students volunteer and are active at the different community branches. As a result of the activity taking place in the branches, vulnerable populations receive nurturing and empowerment, a process that leads to assimilation into Israeli society.

The connection between the community center and the school (that is, between formal and informal education) is very tight. The buildings are physically joined while the connections are pedagogic, fundamental and based on a holistic view of the child throughout all hours of the day. The community center staff participates in the administration meetings of the different divisions, the center's youth coordinator is a significant presence within school life and serves as a "magnet" for students who have difficulties, or are difficult. The community center also

provides multiple options for expression for children who need it (music, art, sport) within the framework of activities in the various branches and the sports center.

In the students' words

An RTM student, 12th grade: I began my studies here in the youth division. I'm in the RTM class and what makes it special is that we study in small groups […] The teachers invest in us and do everything they can for us. The teachers make sure we are socially involved in grade activities because generally, the RTM classes are not. I've been diagnosed with learning difficulties and I have a matriculation certificate with an average of 80-85. In 10th grade, I was in a very hard class and we didn't believe in ourselves. Our homeroom teacher believed in us in a way that is impossible to describe. My mother didn't believe that I would succeed and pleaded that all I needed to do was to complete 12 years of education.

12th grade student: I came from a very small school and I was uneasy about Leo Baeck's size. It later turned out that the size opens the world and makes a lot possible. I study an expanded program with chemistry, theater and history. The social aspect is highly emphasized. I'm chair of the morale team, chair of the Hearts project and more… otherness is not noticeable, it's part of us. For example, we have PDD students studying with us and I discovered people who, even if they are different, are unusually smart and educated.

9th grade student, communication class: We study and work hard. I am mainstreamed into a regular class for six-seven subjects. I'm going through a process and am learning social skills that help me in my life after school. The staff is very supportive and most of them have a sense of humor.

12th grade student, a new immigrant from France: There is a big difference between high school in France and here. Here the basis is respect among students. You have to respect everyone and one person is equal to the next. There is a special program for new immigrants in text-rich subjects. All the immigrants study these subjects together in one class and each one learns at his own pace and level. The teachers support the students very much and give each one the tools to succeed. The basis is the cohesiveness of the class and the cohesiveness among the students. They speak to everyone as equals.

11th grade student from Daliat el Carmel: I "represent" ethnic diversity [laughs]. I came here for academic reasons but I learned very quickly that Leo Baeck is much more. The teachers relate to us in an outstanding way. There is a very wide range

of subjects. I'm in the electronics track in cooperation with the navy. The track includes five units of math and physics. I feel that I am realizing my potential in everything related to academics. I am socially involved in the "Ghetto Fighters" Kibbutz. Few people in Israel know the Druze but I don't feel that I represent the community, only myself. The connection between the students here is on an individual basis, not on the basis of religious background.

12th grade student, previously in the gifted class: In 7th to 9th grades I was in the gifted class but in 10th grade I decided that I want to change and move to a regular class. The strongest sense that I got from the school is that everyone can find himself. There is no feeling of a machine that turns out templates. There is a lot of flexibility and choice of what to do during the years. The teachers don't pressure us. I really found myself academically and particularly, socially. We have a lot of opportunities to do things and to influence. I'm interested in spokesmanship and publicity and I have many opportunities to gain experience in these, for example in the Young Speaker competition, debating and the "Blue and White" project – a project in which youth explain issues to youth from abroad.

Appendix B: Abstracts of the Scientific Literature Reviews Commissioned by the Committee

The Relationship between Socio-Emotional Status and Academic Achievement among Students

Dr. Dafna Hadar-Pecker

School is a significant element in the lives of children and youth since it serves as a meeting place for different aspects of their lives – academic, emotional and social. This review discusses the reciprocal influences that exist between these aspects and specifically, between the student's socio-emotional functioning and her/his academic achievement.

Traditionally, most efforts have been invested in cognitive achievement and in ways to ensure optimal performance (Zeidner, 2010, in Hebrew). Since academic success demands more than academic skills and competencies (DiPerna & Elliott, 2002), research studies have examined the relationship between student achievement and different academic variables, including: social competencies and emotional abilities, perceptions of self, motivational factors and degree of involvement in learning. These and other constructs can be seen as desirable educational outcomes in and of themselves and which may in turn, promote students' academic achievement and impact upon their overall functioning both in school and out.

The present review, thus, seeks to present theoretical factors and models alongside empirically-based research that examines the relationships between various variables connected to socio-emotional and academic functioning in school. First, due to the recognized importance of perceptions of self (Eccles, 2004), in this review we will relate to different perceptions of self that are important in academic life, including: academic self-perception and academic self-efficacy, perceptions related to student motivation including attribution styles and achievement goals. The review suggests that these factors have a direct influence on students' engagement in learning and on the emotions they arouse during the process, and on their achievements.

In light of the interrelationship that exists between emotional functioning and achievement and due to the fact that the school environment confronts the student with different challenges which arouse both positive and negative emotions, various emotional abilities found to be essential for adaptive functioning in school

will be examined. These include: emotional intelligence, regulation of emotion and emotional resilience. The review indicates that the student's emotional abilities have considerable weight with respect to how their feelings, thoughts and behavior are managed and this, in consequence, affects their socio-emotional state as well as their engagement in learning and academic achievement. The review also shows that achievement affects the students' self-perception and the way they experience school.

Daily coping with school demands takes place within a social context and this has a definitive influence on students' performance and achievements as well as on their emotional functioning. The review presents different aspects that are related to social functioning, including the sense of belonging and acceptance in the peer group; also discussed is the interrelationship that exists between social functioning and academic performance, which interface in a meaningful way during various collaborative teaching methods. It would appear that collaborative learning affords students real-time practice of social skills whose acquisition further promotes academic achievement.

The manner in which the education system relates to learners' cognitive diversity shapes the learning environment and has a significant impact on different emotional, motivational and social aspects related to learning and achievement. While different approaches stress the benefits of difference and heterogeneity and exploit this diversity in the service of learning, other methods view it as a disadvantage and seek to reduce it by dividing the school and the classes into tracks, proficiency clusters and ability and achievement groupings. Therefore, different ways of responding to cognitive diversity will be reviewed while raising fundamental educational issues and presenting research that demonstrates the different effects these approaches have on students.

Finally, identification of various factors underlying functioning in school as well as empirical examination of the interrelationships that represent a basis for developing various interventions. Thus, in reviewing the different relationships, research will be presented that has examined the impact of different intervention and teaching methods on social and emotional facets and a chapter will be devoted to describing specific interventions developed over the years. The review shows that while different interventions emphasize academic goals and focus on providing a direct response to cognitive diversity, other interventions place academic goals right alongside goals in the socio-emotional realm, or focus exclusively upon the latter. This, based on the research-supported assumption that advancing students in this area is likely to advance them in academic areas as well and moreover, to contribute to their success and general development.

What solutions do education systems in selected countries offer for the challenge of diversity among pupils?

Lilach Grunfeld-Yona

This review presents the way the education systems of Finland, Sweden, Britain, Canada, Estonia and Holland cope with differences and gaps between pupils that stem from personal, socio-economic, cultural, ethnic and linguistic diversity. Policymakers in these countries found that social disparities pose a threat to the country's strength thus assigning the education system a central role in reducing them. A key strategy in the process of reducing the disparities was to create an egalitarian and high-quality education system that is accessible and available to all. As the review shows, the countries were successful, each in its own way, in working to reduce disparities while maintaining a high level of education (or leading a significant process to raise the level of education). Another central strategy that comes to light is adopting a policy of integrating pupils who come from diverse socio-economic, cultural, ethnic and linguistic backgrounds.

The review discusses perspectives and interpretations of the concept of diversity, presents central policy principles for addressing disparities between pupils, and describes the way in which policy is translated into intervention within the education system. This comparative review of policies identifies "inclusive education" as a key concept. This concept refers to the need to address all pupils by boosting cooperation between cultures and communities and reducing exclusion in the education system. This view also includes creating a shared vision for all pupils, and making changes to the content, approaches and structures of the system.

The review discusses many other subjects that stem from the desire to address the diversity among pupils, including: the various approaches and interpretations of the concepts of "multiculturalism" and "multicultural society," free versus restricted choice of schools by parents and pupils, social welfare policy in the education system (the funding of transportation, nutrition, school books), distribution of resources and differential allocation by indexes of need, the training of teachers and the autonomy of teachers and principals, issues pertaining to the supervision of schools, policies of integrating pupils with special needs, solutions for children with social/emotional needs, and the role of parents.

Data on the education system in Israel appears at the end of the review, enabling comparison, albeit a partial one, with the data stemming from the different countries reviewed.

Optimal models for dealing with diversity among pupils

Prof. Yehudit Judy Dori and Dr. Zehavit Cohen

Diversity among students is expressed in both a demographic aspect, such as gender or origin, and an educational aspect, such as learning achievements or learning style. This review examines optimal educational models for addressing diversity among pupils in Israel and in the world, on a local or system-wide level. The models were analyzed according to a range of categories from the literature and field of research; these categories relate to the implementation of models with various positive outputs, from a policy or research perspective. The goal of the models described in this review is to address the diversity of pupils; the models focus on the field of general studies, as well as the scientific, mathematical or linguistic fields, in a range of countries and in various age groups.

The need to address diversity is of crucial importance for the pupils' future, in order to prepare them for higher education, the choice of a profession, and future positions in the work force. The review discusses how to deal with diversity among pupils and raises key questions: Is diversity a problematic educational situation that we should try to reduce – for example, by adapting schools or educational tracks to distinguish between pupils? Should the education system focus on strengthening the unique characteristics of each individual in the classroom and school in order to advance the learning and educational objectives of the entire class?

The review presents models that adopt various approaches for dealing with diversity – through encouragement and support for underachievers; by formulating uniform standards for all pupils that will provide equal learning opportunities; and via specific intervention programs based on particular background variables that create disparity among pupils.

The review also presents recommendations for adapting the various models to the education system in Israel, in accordance with the different characteristics that exist today with the goal of helping to promote the achievements of all pupils.

Together or separate: different, contradicting or complementary approaches?

Prof. Liora Linchevski

The various approaches to teaching mathematics in middle schools derive from different objectives, worldviews, learning theories, school structure, and – no less

importantly – from the needs and priorities of the education system. Therefore, decisions and proposals pertaining to the organization of the learning group, work methods, emphases, and materials should be structured and examined according to and subject to these criteria.

About twenty years ago, the Ministry of Education decided to do away with ability groupings in mathematics. As an alternative, the ministry recommended teaching mathematics in a heterogeneous classroom, at least during the early stages of middle school. This decision created the need for changes to support math teachers – the development of new programs of study, methods of instruction, ways of organizing the classroom, and suitable means of evaluation, control and feedback.

Based on this recommendation, the "Together and Separate" program was developed. This program was designed to address the disparities among the pupils within the framework of the heterogeneous classroom.

Approximately ten years ago, some math teachers and education policymakers began to doubt whether teaching mathematics in a heterogeneous classroom in middle school, in the established format and with the schools' available resources, indeed serves the intended objectives. Consequently, the Division for Secondary Education in the Ministry of Education decided to re-examine this organizational and instructional format. During this reexamination process two "extreme" populations were identified as groups whose needs were not met by the existing system – one includes the most talented math pupils, who have the ability and motivation to invest in enrichment studies in mathematics that are designed to develop mathematical thinking above and beyond what can be expected from a regular middle school population. The second population includes the pupils who have difficulty learning mathematics and struggle to attain minimal achievements in this subject. Yet despite these difficulties, most of these pupils could undoubtedly meet the demands of middle school and high school at a matriculation level of (at least) three units if they receive appropriate didactic attention. In the absence of such attention, they will fail math at the middle school stage and will not be able to take advantage of their abilities and achieve what would enable them to succeed in tenth grade.

Therefore, the Division for Secondary Education initiated the "Realization of Potential and Excellence in Mathematics" program. The program was designed to provide a solution for pupils at these two extremes outside the framework of the heterogeneous classroom. One of the pillars of the program is the way of organizing the pupils: the "Realization of Potential" pupils study in a separate

group; the "Excellence" pupils study in a separate group; and the rest of the pupils in the class study in a moderately heterogeneous group.

The two programs – "Together and Separate" and "Realization of Potential and Excellence" – were developed and launched by the Unit for Research in Mathematics Education at the Hebrew University of Jerusalem in almost consecutive periods, by the same team.

Clearly, there seem to be significant differences in how the two programs view the learning group and its role in the development of the individual learner. Nonetheless, all of the quantitative, qualitative, formal and informal indexes point to the success of both programs. The question arises: how could this be possible? Is it possible to run any program in the education system, any program and its opposite, and attain – in all of these programs – verified achievements in the critical indexes?

In order to provide an answer, even if only a partial one, for this challenging question, the two programs are presented and compared in this review. This comparison finds that in critical aspects the two programs are more similar than dissimilar, and thus it is not surprising that both are considered to be a success story. As to the question of the educational worldview – this will remain open to the reader's judgment and worldview.

Appendix C: Agenda for the Symposium on "Handling Heterogeneity among Students in the Israeli Education System"

8:15 – 9:00	**Assembly & registration**
9:00 – 9:15	**Greetings: Prof. Menahem Yaari** Chair, Steering Committee, Initiative for Applied Education Research
9:15 –10:30	**First session: Decision-making in the education system** Chair: Prof. Mario Mikulincer, Interdisciplinary Center Herzliya
	Prof. Jonathan Cohen, Hebrew University: Value conflicts in the teachings of Isaiah Berlin and Michael Rosenak **Dr. Varda Shiffer**, Van Leer Institute: On the disparity between outputs and results, or between good intentions and results, in the activities of non-profits and foundations in the field of education **Prof. Ofra Mayseless**, Chair, Pedagogic Secretariat, Ministry of Education: Both are possible – On the dialectic of achievement and educating from the depths of the soul
10:30-11:00	**Coffee break**
11:00-12:35	**Second session: Student heterogeneity and academic achievement** Chair, Dr. Yifat Ben David-Kolikant, Hebrew University
	Prof. David Mioduser, Tel Aviv University: Technology in the kindergarten **Dr. Chava Shane-Sagiv**, Mandel Leadership Institute: "I didn't understand," "What did you say?" "Where are we?": On dealing with differences between students in the classroom **Prof. Judy Dori, and Dr. Zahavit Cohen, Technion**: Heterogeneity in education: Optimal educational models for coping on a system-wide or local basis **Ms. Mira Yuval**, Principal, Carmel-Zevulun School: Providing equal opportunities and maximizing personal abilities – the "Carmel-Zevulun" vision in practice
12:35-13:30	**Lunch break**

13:30-14:45	**Third session: Difference as a human trait** Chair: Prof. Rivka Eisikovits, University of Haifa
	Prof. Moshe Israelashvili, Tel Aviv University: Emotional resilience and heterogeneity among students **Ms. Rivka Mendel**, Principal, Hazav Junior High: Individualized Education for Growth and Leadership – from theory to practice **Mr. Muhana Fares**, In charge of Druze and Circassian Education, Ministry of Education: The cultural difference of Druze students
14:45-15:15	**Break**
15:15-16:45	**Fourth session: Heterogeneity and economic inequality** Chair: Prof. Abraham Arcavi, Weizmann Institute of Science
	Prof. David Berliner, Arizona State University Income inequality and school achievement: Lessons learned from the USA **Ms. Yaffa Pass**, director of the ministry's Secondary Education Division: Closing remarks

Appendix D: Committee Member Bios

Abraham Arcavi (Committee Chair), professor in the Department of Science Education at the Weizmann Institute; he served as department head from 2001 to 2005. He did his post-doctoral work at the University of California, Berkeley; his current research focuses mainly on teaching and learning mathematics in middle school and high school.
Prof. Arcavi holds a Ph.D. degree in mathematics education from the Weizmann Institute of Science, received in 1986.

Dorit Aram, associate professor in the Department of School Counseling and Special Education in the School of Education at Tel Aviv University; from 2008-2011, she was head of the Special Education program and also served as co-chair of the Israel Association for Language and Literacy. In the coming academic year, she will head the department's Educational Counseling program. Prof. Aram is a member of the board of both the Israel Association for Language and Literacy and the World Organization for Early Childhood Education (OMEP). She studies the nature of parent and kindergarten teachers' interaction with children during conversation, reading a book and writing, and is examining its impact on emergent literacy and the social-emotional development of normally developing children as well as those with special needs and children from low socio-economic backgrounds.
Prof. Aram holds a Ph.D. degree in education from Tel Aviv University, received in 1998.

Yifat Ben-David Kolikant, senior lecturer in the School of Education at the Hebrew University of Jerusalem. She did her post-doctoral work at Northwestern University from 2004-2005. In 2009, she was a visiting professor at Stanford University. Dr. Ben-David Kolikant's research focuses on examining the tripartite relationship of students, school learning and technology in the information era. Mainly, her research revolves around two inter-related questions: (1) How does students' knowledge of subjects outside of school impact on their school learning? And, (2) what pedagogies are suited to the information age and the needs of students and what role does technology play?
Dr. Ben-David Kolikant holds a Ph.D. degree in science teaching from the Weizmann Institute of Science, received in 2002.

Jonathan (Johnny) Cohen, professor in the School of Education at Hebrew University; from 2009-2011, Prof. Cohen served as the chairman of the Department of Education and he is currently the director of the School of Education. He is a Mandel Institute Jerusalem Fellows graduate and a senior staff member at the Mandel Leadership Institute. He conducts research in the areas of philosophy of education in general and the philosophy of Jewish education, in particular, hermeneutics and education and theories of curricula.
Prof. Cohen holds a Ph.D. degree in Jewish thought and education from the Hebrew University of Jerusalem, received in 1991.

Rivka Eisikovits, professor in the Department of Educational Leadership and Policy, Division of Education, Society and Culture at the University of Haifa. Since 2010, she has been the department head. Prof. Eisikovits is on the editorial board of "Mifgash – Journal for Social Educational Work," "Race, Ethnicity and Education," "Children and Youth Services Review," and "Journal of Social-Educational Work." She was a member of the evaluation committee for research proposals submitted to the Ministry of Education's Chief Scientist's Office. Her areas of expertise include anthropology and education. In recent years, she has been studying immigrant youth and young adults, the interaction between immigration and globalization and the impact of these processes on formal and informal education.
Prof. Eisikovits holds a teaching certificate from the Hebrew University of Jerusalem. She has a Ph.D. degree in educational and cultural anthropology from the University of Minnesota, received in 1978.

Barbara Fresko, professor at the Beit Berl Academic College, head of the M.S. program in planning and evaluation studies. From 2005 to 2011, she headed the college's research authority and she is currently the the Mofet Institute's committee chair for publication of educational monographs. Prof. Fresko's expertise is in research methodology and program evaluation. In recent years, her main area of research interest has been teacher training.
Prof. Fresko holds a Ph.D. degree in education from Tel Aviv University, received in 1994.

Ronnie Karsenty, associate researcher in the Science Teaching Department at the Weizmann Institute of Science. Dr. Karsenty lectures in several frameworks in the area of training teachers of mathematics. At the Davidson Institute of Science Education, she founded the SHLAV Project for advancing secondary school students with low achievements in mathematics and headed the project for a period of eight years. She currently directs a new project in the Department of Science Teaching that involves filming and analyzing math lessons and using them in teacher training. Dr. Karsenty specializes in secondary school students' processes of mathematical thinking, particularly students at risk, in alternative approaches to teaching math to low achievers, in models of support for math teachers' professional development, and in measurement and evaluation of math achievements of secondary school studies.
Dr. Karsenty holds a Ph.D. degree in mathematics education from the Hebrew University in Jerusalem, received in 2002.

Michael Katz, senior lecturer in psychology and education at the University of Haifa. From 1998 to 2001, Dr. Katz was chairman of the Department of Education and also chaired the M.A. committee in the Department of Psychology and in the Department of Counseling and Human Development. Dr. Katz was an editor of the Studies in Administration and Organization in Education journal and was guest editor of the Studies in Education journal. He is a member of the steering committee of the "Matriculation Exams 2000 – The 22 Schools Project." At chief education officer headquarters (Israel Defense Forces), he heads the research section of the "Raful's Youth" project. Dr. Katz specializes in statistics and quantitative research and his research addresses theories of measurement, mathematics and logic fundamentals, decision-making models and vague systems.
Dr. Katz holds a Ph.D. degree from the University of Oxford, received in 1976.

Mona Khoury-Kassabri, senior lecturer in the School of Social Work at the Hebrew University of Jerusalem; she did her post-doctoral work at the University of Chicago. She was a visiting researcher at the University of Toronto's School of Social Work. Dr. Khoury-Kassabri is a member of the Hebrew University School of Social Work's teaching committee and since 2007 she has been a member of the sub-committee of the Planning and Budgeting Committee to Promote Higher Education in Arab Society. She conducts research in the areas of violence in schools, juvenile delinquency, children's rights, and bullying on the internet.
Dr. Khoury-Kassabri holds a Ph.D. degree in social work from the Hebrew University of Jerusalem, received in 2002.

Mario Mikulincer, professor in the School of Psychology at the Interdisciplinary Center Herzliya and since 2007, the School's dean. In 2004, he was awarded the EMET Prize in psychology for his unique contribution to researching personality and social psychology. From 1995 to 1999, he headed the Department of Psychology at Bar-Ilan University and from 2004 to 2006, he was dean of Bar-Ilan University's regional colleges. Prof. Mikulincer is a co-founder of the Peleg-Bilig Center for the Study of Family Wellbeing and directed the center from 2002 to 2006. Since 2010, he has been an editor of the Journal of Social and Personal Relationships.
Prof. Mikulincer holds a Ph.D. degree in psychology from Bar-Ilan University, received in 1995.

David Mioduser, professor in the School of Education at Tel Aviv University, serves as head of the Science and Technology Education Center at the university and is a past chairman of the Department of Mathematics, Sciences and Technology Education in the School of Education. His research concerns the cognitive aspects and learning processes in the encounter between learners and technology, and focuses on two main fields: one – young children's development of conceptions, skills and technological thinking, and the second – current technology-integrated learning. Prof. Mioduser participates in projects taking place in educational institutions in the country's center and the periphery. During recent years he has been a research partner in international studies conducted under the auspices of the European Union, the OECD and the IEA on integrating up-to-date technology in teaching and learning.

Ruth Ottolenghi, former head of the Secondary Education Division at the Ministry of Education. Ms. Ottolenghi taught mathematics and physics at secondary schools in Jerusalem; served as vice principal of the Hebrew University High School; established and directed the Sieff and Marks (Six-Year) High School in Jerusalem; under the auspices of the Van Leer Institute, directed a project for Jewish and Arab teachers; worked at the Mandel School for Educational Leadership; and later directed the school. She was the coordinator of the National Taskforce for the Improvement of Education (the Dovrat Commission). She is a member of the Initiative for Applied Education Research's steering committee.
Ms. Ottolenghi holds an M.A. degree in educational administration from Boston University (U.S.), received in 1966.

Tali Tal, associate professor at the Technion in the Department of Education in Science and Technology; she heads the environment and informal science education group and serves as the chair of the ecological garden's "green campus." She did her post-doctoral work at the University of Michigan. Prof. Tal is an associate editor of the Journal of Research in Science Teaching, a member of the board of the Israeli Society of Ecology and Environmental Sciences and a member of the board of directors of the Society for Nature Protection. Her areas of research interests include meaningful learning in school and in informal settings (museum, nature), science education for everyone and environmental education.
Prof. Tal holds a D.Sc. degree from the Technion, received in 1998.

Naomi Mandel-Levi (Academic Coordinator) holds an MA in Political Science from the University of British Columbia, Vancouver (2001) and a PhD in Political Science from the Hebrew University of Jerusalem (2008).
Dr. Mendel has been involved in the preparation of political science curriculums and in the development of learning programs for multicultural groups. She has guided children and youths in various educational settings, among them, the Israel National Council for the Child, the Karev Educational Program, and the Israeli Civics and Democracy Educational Centers.